

## Bulletin 925F

## SPME Applications Guide

The SPME Applications Guide is a bibliographic resource of published technical articles about solid phase microextraction. With the continued growth of SPME, and its expansion into environmental, food, forensic, and other fields, we recognize the need for an organized bibliography. This guide should serve a useful purpose in your SPME research and analyses.

This guide is for general information only. We have made every attempt to make the information as complete and accurate as possible. Where entries are missing, information was not available at the time of printing.

NOTE: Because of copyright restrictions, Supelco cannot provide copies of the articles listed. If you desire copies, please refer to the publications cited.

## Using This Guide

This guide is organized in an easy-to-use format. The references are grouped into application areas (see the Table of Contents) with the new references placed at the end of each area in bold. The *Analyte/Matrix* column identifies the class of analytes and the sample matrix. The *Literature Reference* column provides the title of the article, journal reference, and authors. The next column describes the SPME fiber and conditions used in the sample extraction. The last column indicates the instrument used in the analysis.

## Key to Abbreviations

| Abbrev. | Description                         |
|---------|-------------------------------------|
| AED     | atomic emission detection           |
| DVB     | divinylbenzene                      |
| ECD     | electron capture detection          |
| FID     | flame ionization detection          |
| FPD     | flame photometric detection         |
| FTD     | flame thermionic detection          |
| GC      | gas chromatography                  |
| HPLC    | high pressure liquid chromatography |
| ICP     | inductive coupled plasma            |
| MS      | mass spectrometry                   |
| MSD     | mass selective detection            |
| NPD     | nitrogen/phosphorus detection       |
| PAD     | photodiode-array detection          |
| PDMS    | polydimethylsiloxane                |
| PICI    | positive ion chemical ionization    |
| SIM     | selective ion monitoring            |
| TCD     | thermionic-selective detection      |
| TED     | thermal energy detection            |
| VIS     | visible spectrophotometry           |

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## Application Area

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## SPME Application Guide 7th Edition

(New references added to the 7th edition are in bold)

| Analyte /<br>Matrix                               | Literature Reference                                                                                                                                                                                                                                  | SPME Fiber /<br>Extraction<br>Conditions              | Instrument             |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|------------------------|
| <u>Books</u>                                      |                                                                                                                                                                                                                                                       |                                                       |                        |
|                                                   | Techniques for Analyzing Food Aroma,<br>Marcel Decker ISBN: 0-8247-9788-4, Marsili, R.                                                                                                                                                                | Supelco Cat. # 26589-U                                |                        |
|                                                   | Solid Phase Microextraction: A Practical Guide<br>Edited by SueAnn Scheppers Wercinski<br>Marcel Decker ISBN: 0-8247-7058-7                                                                                                                           | Supelco Cat. # 26610-U                                |                        |
|                                                   | Solid Phase Microextraction: Theory and Practice<br>Edited by Janusz Pawliszyn<br>VCH, New York, 275pp (1997)                                                                                                                                         | Supelco Cat. # 26591-U                                |                        |
|                                                   | Applications of Solid Phase Microextraction<br>Edited by Janusz Pawliszyn<br>RSC Chromatography Monographs ISBN 0-85404-525-2<br>Royal Society of Chemistry 1999                                                                                      | Supelco Cat. # 26611-U                                |                        |
|                                                   | Applied SPME, 1999, 364-371 Royal Society of<br>Chemistry, Cambridge, UK Coden: 67TUA8<br>Talon, R, Montel, M.                                                                                                                                        |                                                       |                        |
| <u>Foods, Flavors, &amp; Fragrances</u>           |                                                                                                                                                                                                                                                       |                                                       |                        |
| 601 Aroma compounds<br>in food                    | Developments in extraction techniques and their<br>application to analysis of volatiles in food:<br><i>Trends-Anal-Chem, May 2000, 19(5), 322-329</i><br>Sides, S., Robards, K., Helliwell, S.                                                        | Review article                                        | GC                     |
| 602 Contaminants<br>in Food                       | Application of SPME in Food Analysis<br><i>J. Chromatogr. A (2000), 880(1+2), 35-62</i><br>Kataok, H., Lord, H., Pawliszyn, J.                                                                                                                        | Review article                                        | GC, LC, MS             |
| 2593 PAHs in<br>tea infusion                      | <b>Use of headspace SPME coupled to LC for the analysis of PAHs<br/>in tea infusions</b><br><b><i>J Chromatogr A 1164, #1-2, 10-17 (2007)</i></b><br><b>Vinas, P.; Campillo, N.; Aguinaga, N.; Perez-Canovas, E.;</b><br><b>Hernandez-Cordoba, M.</b> | <b>60µm PDMS/DVB<br/>60 min @ 90 °C<br/>headspace</b> | <b>LC-fluorimetric</b> |
| 784 Catechins, caffeine<br>in tea                 | Automated in-tube solid phase microextraction coupled<br>with HPLC-ES-MS for the determination of catechins<br>and caffeine in tea<br><i>Analyst (Cambridge, U. K.) (2000) 125(12), 2216-2222</i><br>Wu, J. C.; Xie, W.; Pawliszyn, J.                | polypyrrole capillary                                 | LC-ES-MS               |
| 2557 Sorbic, benzoic<br>acids in food<br>dressing | <b>Simultaneous determination of sorbic and benzoic acids in food<br/>dressing by headspace SPME and gas chromatography</b><br><b><i>J. Chromatogr., A 1117, #1, 109-114 (2006-06-02)</i></b><br><b>Dong, C. Z.; Mei, Y.; Chen, L.</b>                | <b>85µm polyacrylate<br/>headspace</b>                | <b>GC-FID</b>          |
| 2199 Sorbic, benzoic<br>acids in<br>beverages     | <b>Headspace SPME applied to the simultaneous determination of<br/>sorbic and benzoic acids in beverages</b><br><b><i>Anal. Chim. Acta (2006) 562. #1, 23-29</i></b><br><b>Dong, Chunzhou; Wang, Wenfang</b>                                          | <b>65µm PDMS-DVB<br/>headspace</b>                    | <b>GC-FID</b>          |
| 834 Caffeine<br>in beverages                      | Caffeine determination in beverages by SPME and GC-MS<br><i>Ind. Bevande (2000) 29(170) 595-597, 605</i><br>Guidotti, Maurizio; Panzironi, Laura                                                                                                      |                                                       |                        |
| 8 Caffeine and flavors<br>in coffee/tea/cola      | Solventless Determination of Caffeine in<br>Beverages Using SPME with Fused Silica Fibers<br><i>J. Chromatogr. 603: 185-191 (1992)</i><br>Hawthorne, S., Miller, D., Arthur, C., Pawliszyn, J.                                                        | uncoated fiber<br>5 min                               | GC-MS                  |
| 2461 Phthalic acid esters                         | <b>Headspace SPME of phthalic acid esters from vegetable oil</b>                                                                                                                                                                                      | <b>100µm PDMS</b>                                     | <b>GC/ECD</b>          |

|      |                                             |                                                                                                                                                                                                                                                                            |                                                      |          |
|------|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|----------|
|      | in vegetable oil                            | employing solvent based matrix modification<br><i>Anal. Chim. Acta</i> 582, #1,24-33 (1-16-2007)<br>Holadova, K.; Prokupkova, G.; Hajslova, J.; Poustka, Jan                                                                                                               | headspace                                            |          |
| 2751 | Volatiles from free Fatty acids             | Headspace-(HS-SPME) analysis of oxidized volatiles from free fatty acids (FFA) and application for measuring hydrogen donating antioxidant activity<br><i>FOOD CHEM.</i> 105, #1, 414-420 (2007)<br>JaeMin Lee; Dong-Hwan Kim; Pahn-Shick Chang; JaeHwan Lee               | headspace                                            | GC       |
| 2875 | Alcohol hydrolases                          | Reaction design for evaluation of the substrate range of hydrolases<br><i>Biocatalysis and Biotransformation</i> 26, #3, 228-234 (2008)<br>Antoniotti, Sylvain; Fernandez, Xavier; Dunach, Elisabet                                                                        | headspace                                            | GC-MS    |
| 2471 | Fatty acids in solid fats                   | Physicochemical and volatiles characterization of trans-free solid fats produced by lipase-catalyzed interesterification.<br><i>J Food Sci</i> 72, #6, E368-74 (2007 Aug)<br>Lee, J H; Akoh, C C; Lee, K-T                                                                 | headspace                                            | GC       |
| 2209 | Volatiles in Sesame oil                     | Identification of volatile degradants in formulations containing sesame oil using SPME/GC/MS<br><i>J. PHARM. BIOMED. ANAL.</i> 44, #2, 450-455 (28 JUN 2007)<br>Chen, W.; Zhou, P.; Wong-Moon, K. C.; Cauchon, N. S.                                                       | headspace                                            | GC-MS    |
| 2671 | Off-flavours in nuts                        | SPME-GC and sensors as rapid methods for monitoring lipid oxidation in nuts.<br><i>Food Additives and Contaminants</i> 24, #11, 1219-1225 (2007)<br>Pastorelli, S; Torri, L; Rodriguez, A; Valzacchi, S; Limbo, S; Simoneau, C.                                            | headspace                                            | GC-FID   |
| 2726 | Flavors in camellia oil                     | Endogenous biophenol, fatty acid and volatile profiles of selected oils<br><i>FOOD CHEM.</i> 100, #4, 1544-1551 (2007)<br>Haiyan, Z.; Bedgood, Jr D. R.; Bishop, A. G.; Prenzler, P. D.; Robards, K.                                                                       | headspace                                            | GC       |
| 2275 | Flavors in canola oil and caprylic acid     | Sensory evaluation of butterfat-vegetable oil blend spread prepared with structured lipid containing canola oil and caprylic acid<br><i>J Food Science</i> 70 #7, S406-S412 (2005)<br>Kim, B.; Shewfelt, Robert L.; Lee, Hyoungil; Akoh, Casimir C.                        | headspace                                            |          |
| 2158 | Volatile oxidative products of canola oil   | Evaluation of oxidative stability of canola oils by headspace analysis<br><i>JAOC</i> , 82, #12, 869-874 (2005)<br>Richards, Amy; Wijesundera, Chakra; Salisbury, Phil                                                                                                     | headspace                                            | GC       |
| 2157 | Volatile flavors in flaxseed oil            | Sensory and oxidative quality of screw-pressed flaxseed oil<br><i>JAOC</i> , 82, #12, 887-892 (2005)<br>Wiesenborn, D.; Kangas, N.; Tostenson, K.; Hall, C.; Chang, K.                                                                                                     | headspace                                            | GC       |
| 2305 | Volatiles in Poppy seed oil                 | Analysis of volatile compounds and triglycerides of seed oils extracted from different poppy varieties ( <i>Papaver somniferum</i> L.)<br><i>J Ag Food Chem</i> 53, #21, 8310-8316 (2005)<br>Krist, S.; Stuebiger, G.; Unterweger, H.; Bandion, F.; Buchbauer, G.          | DVB/Car 50/30µm headspace                            | GC/MS    |
| 2693 | Hexanal & pentane in liquid infant foods    | A headspace SPME method of use in monitoring hexanal and pentane during storage: Applications to liquid infant foods and powdered infant formulas.<br><i>Food Chem.</i> 101, #3, 1078-1086 (2007)<br>Garcia-Llatas, G.; Lagarda, M. J.; Romero, F.; Abellan, P.; Farre, R. | headspace                                            | GC/MS    |
| 32   | Flavors in coffee/fruit juice/vegetable oil | Solid Phase Microextraction for Flavor Analysis<br><i>J. Agric. Food Chem.</i> 42: 1925-1930 (1994)<br>Peppard, T., Yang, X.                                                                                                                                               | 100µm PDMS<br>10 min                                 | GC/GC-MS |
| 603  | Volatiles in vegetable oil                  | Analysis of volatile contaminants in vegetable oils by headspace SPME with Carboxen-based fibers.<br><i>J. Chromatogr.</i> 873 (2000): 79-94<br>Page, B., Lacroix, G.                                                                                                      | 75µm Carboxen/PDMS<br>30-45 min @ 100°C<br>headspace | GC-MS    |
| 39   | Halogenated volatiles in food               | Application of SPME to the Headspace GC Analysis of Halogenated Volatiles in Selected Foods<br><i>J. Chromatogr.</i> 648 (1): 199-211 (1993)                                                                                                                               |                                                      | GC       |

|      |                                                 |                                                                                                                                                                                                                            |                                                                            |           |
|------|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-----------|
| 41   | Fatty acids C2-C10<br>in water                  | Determination of Fatty Acids Using SPME<br>Anal. Chem: 67(23): 4396-4403 (1995)<br>Pan, L., Adams, M., Pawliszyn, J.                                                                                                       | 85µm polyacrylate<br>Low pH, salt<br>derivative: 1-pyrene-<br>diazomethane | GC/GC-MS  |
| 2646 | Volatiles from<br>flavonol<br>glycosides        | Chemical composition and volatile constituents of <i>Anthyllis barba-jovis</i><br><b>NAT. PROD. RES. 21, #5, 418-425 (01 MAY 2007)</b><br>Pistelli, L.; Noccioli, C.; Bertoli, A.; Scapecchi, G.; Potenza, D.              | headspace                                                                  | GC-MS     |
| 2176 | Volatile organics<br>from artificial<br>flavors | Headspace solid-phase microextraction analysis of artificial flavors<br><i>J Sci of Food and Agri., (2005) 85, #25, 2645-2654</i><br>Coleman, William M.; Dube, Michael F.                                                 | headspace<br>30 min                                                        | GC-MS     |
| 42   | Flavors in<br>corn oil                          | Measuring Flavors Using SPME<br>Food Quality January/February 1995, pp40-41<br>Mindrup, R.                                                                                                                                 | 100µm PDMS<br>40°C, 45 min                                                 | GC-MS     |
| 925  | Flavors, off-flavors<br>in food                 | Sample preparation for the analysis of flavors and<br>off-flavors in foods<br><i>J. Chromatogr A, 2000, 873(1), 3-11</i><br>Wilkes, J., Conte, E., Kim, Y., Holcomb, M., Sutherland, J.<br>Miller, D.                      | Review article                                                             |           |
| 883  | Flavors in<br>food                              | Recent application of SPME for monitoring flavor<br>components in foods<br><i>Food Testing &amp; Analysis Feb./March 2000, 17-20</i><br>Mindrup, R.                                                                        | 75µm Carboxen/PDMS<br>65µm DVB/PDMS                                        | GC-MS     |
| 181  | Flavors in<br>coffee, potato<br>chip            | SPME Associated with Microwave Assisted<br>Extraction of Food Products<br><i>J. High Res. Chromatogr. 20 (4): 213-216 (1997)</i><br>Wang, Y., Bonella, M., Khaled, M., McNair, H.                                          | 100µm PDMS<br>pH 2, salt<br>headspace<br>10 min                            | SIM GC-MS |
| 60   | Sulfur volatiles in<br>truffle aroma            | Headspace SPME Analysis of Volatile Organic Sulfur<br>Compounds in Black and White Truffle Aroma<br><i>J. Agric. Food Chem, 43 (8): 2138-2143 (1995)</i><br>Pelusio, F., Nilsson, T., Tino, R., Larsen, B., Montnarell, L. |                                                                            |           |
| 830  | Sulfur compounds<br>from egg shell              | Changes of aroma in shell eggs<br><i>Czech J. Food Sci (2000) 18, 231-233</i><br>Adamiec, J.; Dolezal, M.; Mikova, K.; Davidek, J                                                                                          |                                                                            |           |
| 831  | Sulfur compounds                                | Limitations to the use of SPME for quantitation<br>of mixtures of volatile organic sulfur compounds<br><i>Anal. Chem (2001) 73(7) 1646-1649</i><br>Murray, R. A.                                                           |                                                                            |           |
| 2245 | Aroma<br>compounds<br>of Bulgogi                | Aroma active compounds of Bulgogi<br><i>Journal of Food Science (2005) 70 #8, C517-C522</i><br>Ko, H.; Kim, T.; Cho, I.; Yang, J; Kim, Y.; Lee, H.                                                                         |                                                                            | GCO       |
| 604  | Aroma compounds<br>in fermented<br>cucumbers    | Determination of major aroma impact compounds in<br>fermented cucumbers by SPME-GC-MS-<br>Olfactometry detection<br><i>J. Chromatogr. Sci. (2000), 38(7), 307-314</i><br>Marsili, R., Miller, N.                           | 75µm Carboxen/PDMS<br>20min @50°C<br>NaCl added                            | GC-MS     |
| 61   | Flavors in<br>cinnamon bark                     | SPME of Flavor Compounds -- A Comparison of Two Fiber<br>Coatings and Discussion of the Rules of Thumb for Adsorption<br>LC-GC 13 (11): 882-886 (1995)<br>Yang, X., Peppard, T.                                            | 100µm PDMS,<br>85µm polyacrylate<br>120°C<br>headspace                     | GC-FID    |
| 62   | Flavors in<br>apple essence,<br>seeds, candy    | SPME and Chiral Gas Chromatography Separations<br>LC-GC 13 (9): 734-740 (1995)<br>Mani, V., Woolley, C.                                                                                                                    | 100µm PDMS<br>30°C or 40°C<br>headspace                                    | GC-FID    |

|      |                                                  |                                                                                                                                                                                                                                                                                                      |                                              |        |
|------|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|--------|
| 2544 | Aroma compounds from spices                      | HS-SPME analysis of the volatile compounds from spices as a source of flavour in 'Campo Real' table olive preparations<br><i>Flavour and Fragrance J. 22, #4, 265-273 (JUL-AUG 2007)</i><br>Perez, R. A.; Navarro, T.; de Lorenzo, C.                                                                | 65µm PDMS/DVB headspace                      | GC-MS  |
| 2578 | Volatiles in potherb mustard                     | Analysis of volatile components during potherb mustard (Brassica juncea, Coss.) pickle fermentation using SPME-GC-MS<br><i>LWT - Food Science and Technology 40, #3, 439-447 (2007)</i><br>Zhao, Dayun; Tang, Jian; Ding, Xiaolin                                                                    | headspace                                    | GC-MS  |
| 772  | Volatiles in mustard paste                       | Analysis of volatile constituents of mustard paste by GC/MS w/SPME and simultaneous distillation and extraction<br><i>Fenxi Huaxue (2000) 28(12) 1489-1492</i><br>Liu, B.                                                                                                                            | 100µm PDMS<br>30min @ 70°C<br><br>in Chinese | GC-MS  |
| 2437 | Volatiles in vanilla extracts                    | Comparison of headspace-SPME-GC-MS and LC-MS for the detection and quantification of coumarin, vanillin, and ethyl vanillin in vanilla extract products<br><i>Food Chem 107, #4, 1701-1709 (15 APR 2008)</i><br>De, Jager L. S.; Perfetti, G. A.; Diachenko, G. W.                                   | headspace                                    | GC-MS  |
| 854  | Volatiles in vanilla extracts                    | Analysis of the volatile components in vanilla extracts and flavourings by SPME and gas chromatography<br><i>J Ag Food Chem (2000) 48(12), 5802-5807</i><br>Sostaric, T.; Boyce, M. C.; Spickett, E. E.                                                                                              | 85µm polyacrylate<br>40min @ 20°C            | GC-MS  |
| 829  | Volatiles of distillers grains                   | Analysis of headspace compounds of distillers grains using SPME in conjunction with GC/MS and TGA.<br><i>J Cereal Sci. (2001) 33(2), 223-229</i><br>Staff, C., Biswas, S.                                                                                                                            | 75µm Carboxen/PDMS<br>60min<br>headspace     | GC-MS  |
| 2211 | Essential oil of Xanthogalum purpurascens Lallem | Comparison of essential oil of Xanthogalum purpurascens Lallem. Obtained via different isolation techniques<br><i>J. Essent. Oil Res. 18 #2, 181-184 (2006)</i><br>Baser, K.H.C.; Duran, A.; Ozek, G.; Ozek, T.; Sagiroglu, M.                                                                       |                                              | GC-MS  |
| 878  | Essential oils in hops                           | SPME of hop volatiles Potential use for determination and verification of hop varieties<br><i>J. Chromatogr A 918 (2001) 159-167</i><br>Kovacevic, M., Kac, M.                                                                                                                                       | 100µm PDMS<br>30min @ 70°C<br>headspace      | GC-MS  |
| 63   | Essential oils in hops                           | Determination of Essential Oils in Hops by Headspace SPME<br><i>J. Agric. Food. Chem, 44: 1768-1772 (1996)</i><br>Field, J., Nickerson, G., James, D. Heider, C.                                                                                                                                     | 100µm PDMS<br>50°C, 4 hr                     | GC-FID |
| 2860 | Volatiles from Essential oils                    | Comparison of liquid-liquid extraction with headspace methods for the characterization of volatile fractions of commercial hydrolats from typically Mediterranean species<br><i>J. Chromatogr A 1193, 1-2, 37-49 (Jun 6 2008)</i><br>Barboni, T.; Costa, J.; Desjobert, J.; Leandri, C.; Paolini, J. |                                              | GC-MS  |
| 605  | Essential oils in yarrow                         | Production of Yarrow (Achillea millefolium L.) in Norway: Essential Oil Content and Quality<br><i>J. Agric. Food Chem, (2000) 48 No,12, 6205-6209</i><br>Rohloff, J., Skagen, E., Steen, A., Iversen, T.                                                                                             | 100µm PDMS<br>40min @ 50°C<br>headspace      | GC-MS  |
| 2917 | Volatiles from plants                            | Inheritance of aroma compounds in a model population of Fragaria<br><i>Plant Breeding 127, #1, 87-93 (FEB 2008)</i><br>Olbricht, K.; Grafe, C.; Weiss, K.; Ulrich, D.                                                                                                                                | headspace                                    | GC-MS  |
| 2679 | Essential oils in aromatic plants                | Comparison of different extraction methods for the determination of essential oils and related compounds from aromatic plants and optimization of solid-phase microextraction/gas chromatography.<br><i>Anal Bioanalyt Chem 387, #6, 2207-2217 (2007 )</i><br>Richter, J.; Schellenberg, I.          | headspace                                    | GC-MS  |
| 221  | Essential oils in Virginia cedar oil             | A Comparison of Selected Analytical Approaches to the Analysis of an Essential Oil                                                                                                                                                                                                                   | 100µm PDMS<br>10-120 sec                     | GC-MS  |

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|------|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|--------|
|      |                                             | <i>Flavour and Fragrance Journal</i> 12 (1): 1-8, (1997)<br>Coleman, W., Lawrence, B.                                                                                                                                                                                                                 | headspace                                  |        |
| 396  | Essential oils in Virginia cedar oil        | Automatic Injection SPME-Chiral-GC-MSD Analysis of Essential Oils<br><i>J.Chromatographic Sci.</i> , Vol. 36, Dec. 1998, 575-578<br>Coleman, W., Perfetti, T., Lawrence, B.                                                                                                                           | 7µm PDMS<br>6 sec<br>headspace<br>stirring | GC-MS  |
| 444  | Volatiles in sunflower oil                  | Identification of Volatile Compounds in Sunflower Oil by Headspace SPME and Ion-Trap GC/MS<br><i>J. High Resolut. Chromatogr.</i> (1998), 46(7), 2744-2747<br>Keszler, A., Heberger, K., Gude M.                                                                                                      | 100µm PDMS                                 | GC-MS  |
| 841  | Volatiles in sunflower oil                  | Mechanism of volatile compound production during storage of sunflower oil<br><i>J Ag Food Chem.</i> (2000) 48(12), 5981-5985<br>Keszler, A., Kiska, T. Nemeth, A..                                                                                                                                    | 100µm PDMS<br>40 min @ 25°C<br>headspace   | GC-MS  |
| 2832 | pentachlorophenol in water                  | <b>A preliminary feasibility study for pentachlorophenol column sorption by almond shell residue</b><br><i>Chem. Eng. J.</i> 136, #2-3, 188-194 (Mar 1 2008)<br>Alves, A.; Estevinho, B.N.; Ribeiro, E.; Santos, L.                                                                                   |                                            | GC-MS  |
| 2658 | Aldehydes in bitter almonds & cinnamon bark | Determination of some aldehydes by using SPME-HPLC w/ UV detection.<br><i>J AOAC Int</i> 90, #6, 1689-94 (2007 Nov-Dec)<br>Kumar, Ashwini; Singh, Baldev; Malik, Ashok Kumar; Tiwary, Dhananjay K                                                                                                     | 65µm PDMS/DVB                              | LC-UV  |
| 2184 | Volatiles from oat flakes                   | <b>Analysis of volatile aldehydes in oat flakes by SPME-GC/MS</b><br><i>Polish J Food and Nutrition Sci.</i> (2005) 14, #4, 389-395<br>Klensporf, Dorota; Jelen, Henryk H.                                                                                                                            | headspace<br>DVB/Carboxen                  | GC-MS  |
| 569  | 12 Aldehydes in sunflower oil/water         | Influence of extraction parameters and medium on efficiency of SPME sampling in analysis of aliphatic aldehydes<br><i>J-Chromatogram-A.</i> 11 Jun 1999; 845(1-2): 337-347<br>Keszler, -A; Heberger, -K                                                                                               | 100µm PDMS<br>30 min @ 40°C<br>headspace   | GC-MS  |
| 447  | Xylene in palm oil                          | Determination of trace xylene in contaminated palm oil by SPME and capillary GC<br>Fenxi Huaxue (1999), 27(6), 676-678<br>Chen, W., Guo, C., Hu, C.                                                                                                                                                   | 100µm PDMS<br>1 min. 60°C<br>headspace     | GC-FID |
| 2757 | Aroma volatiles in olive oil                | <b>A 3-year study on quality, nutritional and organoleptic evaluation of organic and conventional extra-virgin olive oils</b><br><i>JAOCS</i> 85, #2, 151-158 (2008)<br>Ninfali, P.; Bacchiocca, M.; Biagiotti, E.; Esposto, S.; Servili, M.; Montedoro, G.; Rosati, A.                               |                                            | GC/MS  |
| 2672 | Aroma volatiles in food                     | <b>Aromagrams - Aromatic profiles in the appreciation of food quality</b><br><i>FOOD CHEM.</i> 101, #2, 845-872<br>Plutowska, B.; Wardencki, W.                                                                                                                                                       | review article                             |        |
| 2147 | Aroma volatiles in olive oil                | <b>Analysis of single-cultivar extra virgin olive oils by means of an Electronic Nose and HS-SPME/GC/MS methods</b><br><i>Sens Actuators, B Chem</i> , (2006) 114, #2, 674-680<br>Cimato, A.; Dello Monaco, D.; Distante, C.; Epifani, M.; Sani, G.; Siciliano, P.; Taurino, A.M.; Zuppa, M.          | headspace                                  | GC/MS  |
| 803  | Volatiles in olive oil                      | Volatile compounds of virgin olive oil evaluated by SPME<br>An application in the discrimination of virgin olive oils according to the cultivar and area<br><i>Proceedings of the Phytochemical Society of Europe</i> (2000) Vol. 46, 211-220<br>Servili, M; Montedoro, G; Selvaggini, R; Taticchi, A |                                            |        |
| 577  | Dimethyl disulfide & methanethiol in butter | Volatile reduced sulfur compounds in butter by SPME<br><i>J-Dairy-Res.</i> Feb 1999; 66(1): 115-123<br>Shooter, -D; Jayatissa, -N; Renner, -N                                                                                                                                                         | 85µm polyacrylate<br>10 min. @ 30-35°C     | GC-EID |
| 338  | Benzene, toluene in vegetable oil           | Determination of benzene & toluene in vegetable oil by SPME/HPLC<br><i>J. Commod. Sci.</i> (1999), 38(1), 3-14                                                                                                                                                                                        | headspace                                  | HPLC   |

|      |                                                                    |                                                                                                                                                                                                                                                                      |                                                                |                         |
|------|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|-------------------------|
| 606  | Volatiles<br>in vegetable oil                                      | Headspace SPME use for the Characterization of volatile compounds in vegetable oils of different sensory quality<br><i>J. Agric Food Chem</i> , (2000), 48(6), 2360-2367<br>Jelen, H., Obuchowska, M., Zawirska-Wojtasiak, R.                                        | Carboxen/DVB/PDMS<br>20-60°C<br>headspace                      | GC-FID                  |
| 885  | Stereoisomers<br><br>Pulegone enantiomers                          | Different stereoselectivity in the reduction of pulegone<br><br>by <i>Mentha</i> species<br><i>Planta Medica</i> (2001) 67(3) 260-262<br>Mosandl, A.; Beck, T.; Fuchs, S.                                                                                            |                                                                | GC-MS                   |
| 2724 | Aldehydes in<br>beer                                               | Determination of stale aldehydes in beer by headspace SPME and automatic precolumn derivatization.<br><i>Fenxi Shiyanshi</i> 26, #4, 38-41(2007)<br>Wu, Q. -J.; Chen, H. -L.; Yang, Z. -X.                                                                           | 65µm PDMS/DVB<br>headspace<br>60min @ 60°C<br>PFBOA derivative | GC-MS<br><br>in Chinese |
| 2393 | NDMA in<br>beer                                                    | Solid-phase microextraction of N-nitrosodimethylamine in beer<br><i>Food Chemistry</i> 107, #3, 1348-1352 (2008)<br>Perez, D. M.; Alatorre, G. G.; Alvarez, E. B.; Silva, E. E.; Alvarado, J. F. J                                                                   | 65µm PDMS/DVB<br>headspace                                     | GC-MS                   |
| 2219 | Aroma<br>from Beers                                                | High gravity fermentations for low calories beer production<br><i>Journal of Biotechnology</i> (2005) 118 Suppl. 1, S152<br>Piddocke, Maya; Sorensen, Thomas; Pedersen, Sven; Olsson, Lisbeth                                                                        |                                                                | GC                      |
| 2558 | Flavors in<br>beer                                                 | Method optimization by SPME in combination with GC-MS for analysis of beer volatile fraction<br><i>J. Chromatogr., A</i> 1121, #2, 145-153 (2006-07-21)<br>Pinho, O.; Ferreira, M.; Santos, L.                                                                       | 75µm Carboxen<br>headspace                                     | GC-MS                   |
| 106  | Flavors in<br>beer                                                 | Characterization of Beer Samples Using SPME-GC Analysis<br>Supelco Reporter Vol. 16, #4, pg. 7<br>Vas, G.                                                                                                                                                            | 100µm PDMS<br>10 min                                           | GC-FID                  |
| 2716 | Sulfur compounds<br>in beer                                        | Comparison of headspace and direct single-drop microextraction and headspace SPME for the measurement of volatile sulfur compounds in beer and beverage by GC-FPD<br><i>J. Chromatogr. A</i> 1125, #1, 133-137 (2006-08-25)<br>Xiao, Q.; Yu, C. H.; Xing, J.; Hu, B. | headspace                                                      | GC-FPD                  |
| 607  | Sulfur compounds<br>in beer                                        | Determination of sulfur compounds in beer using headspace SPME and GC analysis with pulsed FPD detector<br><i>J. Chromatogr. A</i> (2000), 872(1+2), 203-213<br>Hill, P., Smith, R.                                                                                  | 65µm Carboxen/PDMS<br>32min @45°C<br>headspace                 | GC-FPD                  |
| 100  | Flavors<br>in vodka                                                | Characterization of Commercial Vodkas by SPME-GC/MS<br><i>J. Sci. Food Agric.</i> 70: 380-388 (1996)<br>Ng, L., Hupe, M., Harnois, J., Moccia, D.                                                                                                                    | 100µm PDMS<br>1 hr                                             | GC-MS                   |
| 202  | Methylcyclopentadienyl<br>manganese<br>tricarbonyl<br>in beverages | Determination of Methylcyclopentadienyl Manganese Tricarbonyl in Beverages by SPME<br><i>Food Addit. Contam.</i> 14 (3): 301-307 (1997)<br>Forsyth, D., Dusseault, L.                                                                                                |                                                                |                         |
| 2538 | Attractants of<br>onion aphids                                     | Onion aphid ( <i>Neotoxoptera formosana</i> ) attractants, in the headspace of <i>Allium fistulosum</i> and <i>A-tuberosum</i> leaves<br><i>J Applied Entomology</i> 131, #1, 8-12 (FEB 2007)<br>Hori, M.                                                            | headspace                                                      | GC-MS                   |
| 395  | Aroma volatiles<br>in onion                                        | Determination of Fresh Onion ( <i>Allium Cepa</i> L) Volatiles by SPME Combined with GC/MS<br><i>Z Lebedsm Unters Forsch A</i> (1998) 207: 39-43<br>Jarvedpaa, E., Zhung, Z., Huopalahti, R., King, J.                                                               | 100µm PDMS<br>1 min<br>headspace                               | GC-MS                   |
| 799  | Aroma volatiles<br>in onion                                        | Possible advantage of various sample transfer techniques for fast GC-MS analysis of true onion volatile:<br><i>J. Chromatogr. A</i> (2000), 896(1+2), 117-124<br>Arnault, I.; Mondy, N.; Cadoux, F.; Auger, J.                                                       | 100µm PDMS,<br>85µm polyacrylate<br>2min, headspace            | GC-MS                   |
| 954  | Fatty acids,<br>in whey products                                   | Analysis of free fatty acids in whey products by SPME<br><i>J Agric Food Chem</i> , 2001, 49, 3993-3998<br>Tomaino, R., Parker, J., Larick, D.                                                                                                                       | 30µm PDMS<br>40 min @ 110°C                                    | GC-FID                  |

|      |                                        |                                                                                                                                                                                                                                                                                  |                                                          |             |
|------|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|-------------|
|      |                                        |                                                                                                                                                                                                                                                                                  | headspace                                                |             |
| 816  | Fatty acids, lactones in cheese        | Determination of free fatty acids and lactones in cheese by solid phase microextraction (SPME)<br><i>Aust. J. Dairy Technol.</i> , (1998), 53(2), 140<br>Wijesundera, C., Drury, L., Walsh, T.                                                                                   |                                                          |             |
| 2298 | Sesquiterpenes in cheese               | <b>Traceability of Asiago mountain cheese: A rapid, low-cost analytical procedure for its identification based on solid-phase microextraction</b><br><i>Journal of Dairy Science</i> (2005) 88 #10, 3426-3434<br>Favaro, G.; Magno, F.; Boaretto, A.; Bailoni, L.; Mantovani, R. | PDMS headspace                                           | GC/MS       |
| 2256 | Flavors from cheese-based products     | <b>Application of SPME GC-MS and multivariate analysis for resolving flavor problems with cheese-based products</b><br><i>Abstracts of Papers Am Chem Society</i> (2004) 228, #1, U74<br>Marsili, Ray T.                                                                         | headspace                                                | GC/MS       |
| 2689 | Aroma from white surface mould cheeses | <b>Application of SPME-GC method for analysis of the aroma of white surface mould cheeses</b><br><i>J Food Nutrition Research</i> 46, #2, 84-90 (2007)<br>Vitova, E.; Loupancova, B.; Stoudkova, H.; Zemanova, J.                                                                | headspace                                                | GC          |
| 101  | Flavors in cheese                      | SPME for Cheese Volatile Compound Analysis<br><i>J. Food Sci.</i> 61: 1118-1129 (1996)<br><i>J. Food Sci.</i> 61: 1118-1129 (1996)                                                                                                                                               | 100µm PDMS, polyacrylate<br>60°C, 20 min                 | GC, GC-MS   |
| 788  | Volatiles in cheese                    | Solid-Phase Microextraction-Mass Spectrometry: A New Approach to the Rapid Characterization of Cheeses<br><i>Anal. Chem</i> (2001) 73(5), 1030-1036<br>Peres, Christophe; Viallon, Christine; Berdague, Jean-Louis                                                               |                                                          | GC-MS       |
| 826  | Volatiles in Emmental cheese           | Use of preconcentration techniques applied to a Mass Spectrometer based "Electronic Nose".<br><i>Analysis</i> (2000) 28(8), 743-749<br>Bosset, J.; Escher, F.; Schaller, E.; Zenhausem, S.; Zesiger, T.                                                                          |                                                          | GC-MS       |
| 2294 | Aromas in cheese                       | <b>Cooperation between wild lactococcal strains for cheese aroma formation</b><br><i>Food Chemistry</i> 94 #2, 240-246 (2006)<br>Amarita, F.; de la Plaza, M.; Fernandez de Palencia, P.; Requena, T.; Pelaez, C                                                                 | headspace                                                | GC/MS       |
| 380  | Aroma volatiles in cheese              | Pattern Recognition of Swiss Cheese Aroma Compounds by SPME/GC and an Electronic Nose<br><i>Milchwissenschaft</i> (1998) 53 (5) 259-263<br>Jou, K., Harper, W.                                                                                                                   | 85µm polyacrylate<br>40°C, 30 min<br>headspace           | GC-FID      |
| 449  | Aroma volatiles in cheese              | Cryo-trapping/SPME/GC analysis of cheese aroma<br><i>Talanta</i> (1999) 48(4), 747-753<br>Jaillais, B., Bertrand, V., Auger, J.                                                                                                                                                  | 100µm PDMS<br>4 min @ 20°C<br>headspace                  | GC-FID, EMS |
| 187  | Volatiles in whey protein              | A Study of Volatile "Trapping" in Spray-Dried Whey Protein Concentrate by Crushing and/or Vacuuming and Detection by SPME/GC-MS<br><i>Food Res. Int.</i> 29: 495-504 (1996)<br>Stevenson, R., Chen, X.                                                                           |                                                          | GC-MS       |
| 379  | Volatiles in whey protein              | Use of SPME of Volatile Compounds in Whey Protein Concentrates<br><i>Milchwissenschaft</i> (1998) 53 (4) 209-212<br>Yang, J., Li, W., Harper, W.                                                                                                                                 | 85µm polyacrylate<br>40°C, 30 min<br>headspace, stirring | GC-MS       |
| 450  | Volatiles in whey protein              | Headspace sampling of whey protein concentrate solutions using SPME<br><i>Food Res. Int.</i> (1999), 31(5), 371-379<br>Le Quanch, M., Chen, X., Stevenson, R.                                                                                                                    | headspace                                                | GC-MS       |
| 422  | Flavors in protein                     | Isolation of Flavor Compounds from Protein Material<br><i>ACS Symp. Ser.</i> (1998), 705 (Flavor Analysis), 107-115<br>Mills, O., Broome, A.                                                                                                                                     |                                                          |             |
| 102  | Flavors in                             | Qualitative and Quantitative Analysis of Flavor Additives on Tobacco Products Using SPME-GC-MS                                                                                                                                                                                   | Carbowax/DVB                                             | GC-MS       |



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|------|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------|
|      | tobacco                                     | J. Agric. Food Chem. 45: 844-849 (1997)<br>Clark, J., Bunch, J.                                                                                                                                                                                                                                                     | 95°C, 15 min<br>headspace                                     |                 |
| 137  | Phenols in tobacco smoke                    | Quantitative Determination of Phenols in Mainstream Smoke with SPME-GC Selected Ion Monitoring MS<br>J. Chromatogr. Sci. 34: 272-275 (1996)<br>Clark, J., Bunch, J.                                                                                                                                                 | Polyacrylate<br>Buffer, 1 hr                                  | GC-MS           |
| 608  | Acetates in Cigarette tobacco               | Quantitative analysis of acetates in cigarette tobacco using SPME and GC-MS<br><i>J. Chromatogr. Sci.</i> (2000), 38(4), 137-144<br>Watxon, C., Ashley, D.                                                                                                                                                          | 75µm Carboxen/PDMS<br>5min. Headspace                         | GC-MS           |
|      |                                             | Derivatization of SPME GC-MS Determination of                                                                                                                                                                                                                                                                       |                                                               |                 |
| 369  | Carboxylic acid esters in tobacco           | Organic Acids in Tobacco<br>J. Chromatographic Science, Vol. 35, (1997) 209-212<br>Clark, J., Bunch, J.                                                                                                                                                                                                             | 85µm polyacrylate<br>15 min, stirring<br>MeOH-HCl derivatives | GC-MS           |
| 2216 | Volatiles of tobacco flavor                 | <b>Comparison of simultaneous distillation extraction and SPME for determination of volatile constituents in tobacco flavor</b><br><i>J Cent South Univ Technol Eng</i> 12 #5, 546-551 (2005)<br>Guo, Fang-Qiu; Huang, Lan-Fang; Wei, Wan-Zhi; Zhong, Ke-Jun                                                        | headspace                                                     | GC-MS           |
| 822  | Alkenylbenzenes flavor compounds in tobacco | SPME of alkenylbenzenes and other flavor-related compounds from tobacco for analysis by selected ion monitoring GC-MS<br><i>J. Chromatogr. A</i> , 858 (1999) 79-89<br>Stanfill, S., Ashley, D.                                                                                                                     | 65µm Carbowax/DVB<br>2min @ 95°C                              | GC-MS           |
| 2200 | Pesticides in honey                         | <b>SPME and GC w/ atomic emission detection for multiresidue determination of pesticides in honey</b><br><i>Anal. Chim. Acta</i> (2006) 562. #1, 9-15<br>Aguinaga, N.; Campillo, N.; Hernandez-Cordoba, M.; Penalver, R.                                                                                            |                                                               | Atomic emission |
| 931  | Pesticide residues in honey                 | SPME applied to the analysis of pesticide residues in honey using GC with ECD<br>J. Chromatogr. A (1998), 829(1-2), 269-277<br>Jiménez, J., Bernal, J., del Nozal, G., Martin, M., Mayorga, A.                                                                                                                      | 100µm PDMS,<br>60min @ 70°C<br>immersed<br>agitated           | GC-ECD          |
| 431  | Phenols in honey                            | Application of SPME in Determination of Phenol in Honey<br>Riv. Sci. Aliment, (1997) 26(3/4), 97-102<br>Conte, L., Botolomeazzi, R., Moret, S., Sibaini, A., Marcazzan, G.                                                                                                                                          |                                                               |                 |
| 2703 | Aroma volatiles from multifloral honey      | <b>Determination of volatile organic compound patterns characteristic of five unifloral honey by SPME-GC-MS coupled to chemometrics.</b><br><i>J. Agric. Food Chem.</i> 54, #19, 7235-7241 (2006-09-20)<br>Baroni, M. V.; Nores, M. L.; Diaz, M. P.; Chiabrande, G. A.; Fassano, J. P.; Costa, C.; Wunderlin, D. A. | headspace                                                     | GC-MS           |
| 2520 | Aroma volatiles from multifloral honey      | Screening of volatile composition from Portuguese multifloral honeys using headspace SPME-GC-quadrupole mass spectrometry<br><i>Talanta</i> 74, #1, 91-103 (NOV 15 2007)<br>Pontes, M.; Marques, J. C.; Camara, J. S.                                                                                               | 50/30µm DVB/CAR<br>45 min @ 60°C<br>headspace                 | GC-MS           |
| 2380 | Aroma volatiles from citrus honey           | Aroma investigation of unifloral Greek citrus honey using SPME-GC-MS<br><i>Food Chem.</i> 100, #1, 396-404 (2007)<br>Alissandrakis, E.; Tarantilis, P. A.; Harizanis, P. C.; Polissiou, M                                                                                                                           | headspace                                                     | GC-MS           |
| 2918 | Volatiles from unifloral honey              | Headspace volatiles from unifloral honeys of <i>Satureja montana</i> L. and <i>Salvia officinalis</i> L. of Croatian origin isolated by SPME<br><i>Planta Medica</i> 3, #9, 896 (AUG 2007)<br>Jerkovic; Marijanovic, Z.; Jelic, M.                                                                                  |                                                               |                 |
| 2352 | Volatiles from sage honey                   | Volatile profile of Croatian lime tree ( <i>Tilia</i> sp.), fir honeydew ( <i>Abies alba</i> ) and sage ( <i>Salvia officinalis</i> ) honey<br><i>Food Technology and Biotechnology</i> 45 # 2, 156-165 (APR-JUN 2007)<br>Lusic, D.; Koprivnjak, O.; Curic, D.; Sabatini, A.; Conte, L.                             | headspace                                                     | GC-MS           |

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|------|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|--------------|
| 433  | Volatile organics in honey                   | Identification of Volatile Organic Compounds Present in Different honeys Through SPME and GC/MS<br>Ind. Aliment., (1998), 37(368), 351-356<br>Guidotti, M., Vitali, M.                                                                         |                                                                | GC-MS        |
| 109  | Aroma volatiles in carbonated cola beverages | Comparison of Dynamic Headspace Concentration on Tenax with SPME for Analysis of Aroma Volatiles<br>J. Agric. Food Chem. 45: 2638-2641 (1997)<br>Elmore, S., Erbahdir, M., Motttram, D.                                                        | 100µm PDMS,<br>85µm polyacrylate<br>60°C, 30 min<br>headspace  | GC-MS        |
| 2433 | Aroma volatiles in brewed coffee             | <b>Discrimination between defective and non-defective Brazilian coffee beans by their volatile profile</b><br><b>FOOD CHEM. 106, #2, 787-796 (15 JAN 2008)</b><br><b>Mancha, Agresti P. D. C.; Franca, A. S.; Oliveira, L. S.; Augusti, R.</b> | <b>50/30µm DVB/CAR headspace</b>                               | <b>GC-MS</b> |
| 349  | Aroma volatiles in brewed coffee             | SPME Applications in Gas Chromatography Olfactometry<br><br>Dilution Analysis<br>J. Agric. Food Chem. 1999, 47, 1616-1618<br>Deibler, K., Acree, T., Lavin, E.                                                                                 | 100µm, 30µm, 7µm PDMS<br>1-90 min<br>headspace, stirring       | GC-FID       |
| 119  | Aroma in food products                       | Solid Phase Microextraction: A Valuable Problem Solver<br>Food Product Design December 1996, pp 73-77<br>Marsili, R.                                                                                                                           | various fibers & extraction conditions                         |              |
| 128  | Flavor volatiles in fruit juice              | Analysis of Flavor Volatiles Using Headspace SPME<br>J. Agric. Food Chem. 44: 2187 (1997)<br>Steffen, A., Pawliszyn, J.                                                                                                                        | 85µm polyacrylate<br>60 min, salt added<br>headspace, stirring | GC-FID       |
| 609  | Aroma compounds in Brazilian fruit           | Screening of Brazilian fruit aromas using SPME-GC-MS<br>J. Chromatogr. A., 873(1), 117-127<br>Augusto, F., Valenta, A., dosSantos, T., Rivellino, S.                                                                                           | various fibers<br>headspace                                    | GC-MS        |
| 425  | Volatiles in fruit                           | Analysis of Volatile Fruit Components by Headspace<br>Solid Phase Microextraction<br>Food Chem. (1998), 63(2), 281-286<br>Ibanez, E., Lopez-Sebastian, S., Ramos, E., Tabera, J., Reglero, G.                                                  | 100µm PDMS<br>30 min @ 30°C<br>headspace                       | GC-MS        |
| 872  | Phenolics in fruits                          | Sample preparation in the determination of phenolic compounds in fruits<br><i>Analyst (Cambridge, U. K.) (2000) 125(5) 989-1009</i><br>Antolovich, M.; Prenzler, P.; Robards, K.; Ryan, D.                                                     | review article                                                 |              |
| 130  | Flavor volatiles in fruit beverage           | Flavor Volatiles in Fruit Beverage with Automated SPME<br>Food Test. Anal. 2(3), pp16-18 (1996)<br>Penton, Z.                                                                                                                                  | 100µm PDMS,<br>85µm polyacrylate<br>20 min, headspace          | GC-FID       |
| 424  | Oxidative byproducts in citrus hystrix oil   | Changes in Citrus Hystrix Oil During Autoxidation<br><br>Dev. Food Sci. (1998), 40 (Food Flavors: Formation, Analysis and Packaging Influences), 707-718<br>Pudil, F., Wijaya, H., Janda, V., Volfova, J., Valentova, H., Porkorny, J.         |                                                                |              |
| 893  | Monoterpenes in orange juice                 | Degradation of monoterpenes in orange juice by gamma radiation<br>J. Ag Food Chem. (2001) 49(5) 2422-2426<br>Fan, Xuetong; Gates, Robert A                                                                                                     | 100µm PDMS<br>60°C, 20 min<br>headspace, stirring              | GC-MSD       |
| 2632 | Aroma compounds orange juice                 | <b>Effect of pulp reduction and pasteurization on the release of aroma compounds in industrial orange juice.</b><br><b>J Food Sci 72, #8, S535-43 (2007 Oct)</b><br><b>Berlinet, C; Guichard, E; Fournier, N; Ducruet, V</b>                   | <b>headspace</b>                                               | <b>GC-MS</b> |
| 2472 | Flavor compounds orange beverage emulsion    | SPME for headspace analysis of key volatile compounds in orange beverage emulsion.<br><b>Food Chemistry 105, #4, 1659-1670 (2007)</b><br><b>Mirhosseini, H.; Salmah, Y.; Nazimah, S. A. H.; Tan, C. P.</b>                                     | <b>75µm Carboxen Headspace</b><br><b>15 min @ 45°C</b>         | <b>GC</b>    |

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|------|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|-----------------|
|      |                                                             |                                                                                                                                                                                                                                                                            | <b>15% NaCl</b>                                      |                 |
| 358  | Flavor compounds in orange juice                            | Optimization of SPME Analysis for Headspace Flavor Compounds of Orange Juice<br>J. Agric. Food Chem. 1998, 46, 2744-2747<br>Jia, M., Zhang, H., Min, D.                                                                                                                    | 100µm PDMS<br>60°C, 20 min<br>headspace, stirring    | GC-FID          |
| 451  | Flavor compounds in orange juice                            | Pulsed electric field processing effects on flavor compounds and microorganism of orange juice<br>Food Chem (1999), 65(4), 445-451<br>Jia, M., Zhang, Q, Min, D.                                                                                                           |                                                      |                 |
| 561  | Flavor compounds in orange juice                            | Volatiles from Unpasteurized and Excessively heated orange juice with SPME and GC Olfactometry<br>J. Food Science, Vol.64, N0.5, 1999, 800-803<br>Bazemore, R., Goodner, K. Rouseff, R.                                                                                    | 75µm Carboxen/PDMS<br>30 min Headspace<br>40°C       | GC-MS           |
| 359  | Flavors in fruit juices                                     | Comparison of Gas-Sampled and SPME-Sampled Static Headspace for the Determination of Volatile Flavor Compounds<br>Anal. Chem. Vol. 71, No. 1, January 1, 1999, pg 23-27<br>Miller, M., Stuart, J.                                                                          | 65µm PDMS/DVB<br>40°C, 30 min<br>headspace           | GC-MS           |
| 131  | Flavor volatiles in apples                                  | Solid Phase Microextraction for Quantitative Headspace Sampling of Apple Volatiles<br>Anal. Chem. 68: 4114 (1996)<br>Matich, A., Rowan, D., Banks, N.                                                                                                                      | 100µm PDMS<br>30 min<br>headspace                    | GC-MS           |
| 203  | Flavor volatiles In apples                                  | Rapid Analysis of Volatile Flavor Compounds in Apple Fruit Using SPME & GC-Time-of-Flight Mass Spec<br>J. Agric. Food Chem. 45: 1801-1807 (1997)<br>Song, J., Gardner, B., Holand, J., Beaudry, R.                                                                         | 100µm PDMS<br>2-8 min<br>headspace                   | GC-FID          |
| 433  | Volatiles in red delicious apples                           | Volatile Production and Fruit Quality During Development of Superficial Scald in Red Delicious Apples<br>Food Res. Int. (1997), 30(2), 95-103<br>Paliyath, G., Whiting, M., Stasiak, M., Murr, D., Clegg, G.                                                               |                                                      |                 |
| 899  | Aroma compounds in strawberries                             | Influence of packaging on the aroma stability of strawberry syrup during shelf life<br>J. Agric. Food Chem. 49(5): 2290-2297 (2001)<br>Ducruet, V Feigenbaum, A; Fournier, N; Guichard, E; Saillard, P.                                                                    | 100µm PDMS<br>60 min @ 50°C<br>headspace<br>agitated | GC-FID          |
| 383  | Flavor volatiles in tomato, strawberry                      | Application of SPME and GC/Time-o-Flight Mass Spectrometry for Rapid Analysis of Flavor Volatiles in Tomato and Strawberry Fruits<br>J. Agric. Food Chem. 46: 3721-3726 (1998)<br>Song, J., Fan, L., Beaudry, R.                                                           | 65µm PDMS/DVB<br>23°C, 12 min<br>headspace           | GC-MS           |
| 452  | Flavor volatiles in tomato, strawberry, raspberries, apples | A new concept for the measurement of total volatile compounds of food<br>Z. Lebenam. Unters. Forsch A, 1999, 208(4), 254-258<br>Azodanlou, R., Darbellay, c., Luisier, J., Villettaz, J., Amode, R.                                                                        |                                                      |                 |
| 2797 | Fungicides in tomatoes                                      | <b>Pesticide analysis in tomatoes by solid-phase microextraction and micellar electrokinetic chromatography</b><br><i>J. Chromatogr., A 1185, #1, 151-154 (MAR 21 2008)</i><br>Ravelo-Perez, L.; Hernandez-Borges, J.r; Borges-Miquel, T.; Angel Rodriguez-Delgado, Miguel | 65µm PDMS/DVB<br>immersed                            |                 |
| 2839 | Aroma volatiles from tomato                                 | <b>Study of the volatile composition of tomato during storage by a combination sampling method coupled with GC-MS</b><br><i>J Science of Food and Agriculture 88, #1, 116-124 (Jan 2008)</i><br>Zhang, Zhuo-Min; Zeng, Dan-Dan; Li, Gong-Ke                                | headspace                                            | GC-MS           |
| 2684 | Aroma volatiles from tomato                                 | <b>Aroma volatiles of tomatoes and tomato products evaluated by SPME</b><br><i>Flavour and Fragrance J. 22, #5, 395-400 (2007)</i><br>Markovic, K.; Vahcic, N.; Kovacevic Ganic, K.; Banovic, M.                                                                           | headspace                                            | GC-MS<br>GC-FID |
| 2478 | Aroma volatiles from tomato                                 | <b>A preliminary study of plant aroma profile characteristics by a combination sampling method coupled with GC-MS</b><br><i>Microchemical Journal 86, #1, 29-36 (JUN 2007)</i><br>Zhang, Zhuo-Min; Li, Gong-Ke                                                             | headspace                                            | GC-MS           |

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|------|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|---------|
| 2357 | Allelochemical compounds in tomato plants | SPME method for in vivo measurement of allelochemical uptake<br><i>J Chem Ecol</i> 34, #1, 1-6, 70-75 (Jan-2008)<br>Loi, Rebecca X; Solar, Marissa C; Weidenhamer, Jeffrey D                                                                                                     |                                                                         | GC      |
| 2820 | Volatiles from aromatic plant             | Aroma-active compounds of <i>Elsholtzia splendens</i> using AEDA and HS-SPME-GC-O dilution analysis<br><i>Flavour and Fragrance J.</i> 23, #1, 58-64 (JAN-FEB 2008)<br>Choi, Hyang S.; Min, Kyung C.                                                                             | headspace                                                               | GC-MS   |
| 387  | Flavor volatiles in tomato                | Comparison of Three Sample Preparation Techniques for the Determination of Fresh Tomato Aroma Volatiles<br>Book: Flavor Science: Recent Developments, Buttery & Shadhidi, Washington, DC, 1998 p. 289-292<br>Krumbein, A., Ulrich, D.                                            | 100µm PDMS<br>30°C, 10 min<br>headspace<br>salt added                   | GC-MS   |
| 766  | Volatiles in tomato                       | Volatile emissions of tomato<br>Mededelingen Faculteit Landbouwkundige en Toegepaste Biologische Wetenschappen Universiteit Gent<br>(1999) 64(4), 159-161<br>Maes, K; Debergh, P; Sandra, P; Vercammen, J                                                                        | headspace                                                               |         |
| 933  | Volatiles in tomato                       | Critical aspects for the reliable headspace analysis of plants cultivated in vitro<br><i>Phytochemical Analysis</i> (2001) 12(3), 153-158<br>Maes, K; Debergh, P; Sandra, P; Vercammen, J<br>Pham-Tuan, Hai                                                                      | headspace                                                               |         |
| 400  | Flavor volatiles in tomato juice          | Effect of Thermal Treatment in the Headspace Volatile Compounds of Tomato Juice<br>Istituto di Indstrie Agrarie, University of Perugia, via S. Costnazo I-06126, Perugia-Italy<br>Servili, M., Selvaggini, R., Begliomini, A., Montedoro, G.                                     | 65µm Carbowax/DVB<br>35°C, 30 min<br>CaCl added                         | GC-MS   |
| 780  | Flavor volatiles in tomato juice          | Relationships between the volatile compounds evaluated by SPME and the thermal treatment of tomato juice: optimization of the blanching parameters<br><i>Food Chemistry</i> (2000) 71(3), 407-415<br>Servili, M.; Selvaggini, R.; Taticchi, A.; Begliomini, A. L.; Montedoro, G. | 65µm Carbowax/DVB<br>29°C, 15 min                                       | GC-EIMS |
| 214  | Strawberries & apples in fruit homogenate | Solid-Phase Microextraction: Artifact Formation and Its Avoidance<br><i>Chromatographia</i> 46: 63-66 (1997)<br>Verhoeven, H., Beuerle, T., Schwab, W.                                                                                                                           | 85µm polyacrylate<br>30 sec<br>immersion                                | GC-MS   |
| 132  | Aroma volatiles in strawberry             | Analysis of Strawberry Aroma by SPME<br><i>Dtsch. Lebensm - Rundsch.</i> 91: 349 (1995)<br>Ulrich, D., Eunert, S., Hober, E., Rapp, E.                                                                                                                                           |                                                                         |         |
| 590  | Aroma volatiles in strawberries           | A new concept for the measurement of total volatile compounds of food.<br><i>Z-Lebensm-Unters-Forsch-A.</i> Apr 1999; 208(4): 254-258<br>Azodanlou-R; Darbellay,C; Luisier,JL; Villettaz,JC; Amado,R                                                                             | PDMS, CW/DVB,<br>PDMS/DVB<br>polyacrylate<br>30 min @ 25°C<br>headspace | GC-FID  |
| 2496 | Aroma volatiles from dried banana powder  | Comparison of volatiles of banana powder dehydrated by vacuum belt drying, freeze-drying and air-drying<br><i>Food Chemistry</i> 104, #4, 1516-1521 (2007)<br>Wang, J.; Li, Yuan Zhi; Chen, Ren Ren; Bao, Jin Yong; Yang, Gong                                                   | headspace                                                               | GC-MS   |
| 133  | Aroma volatiles in banana                 | Evaluation of the Solid Phase Microextraction of Aroma Compounds in Banana<br><i>Collog.-Inst. Nat. Rech. Agron.</i> 75 (Bioflavour 95) 117 (1995)<br>Picque, D., Normand, A., Corrieu, G.                                                                                       |                                                                         |         |
| 750  | Flavor volatiles in cantaloupe            | Identification of volatile compounds in cantaloupe at various developmental stages using SPME<br><i>J Agric Food Chem</i> 2001, 49(3), 1345-1352                                                                                                                                 | 100µm PDMS<br>12.5 min headspace                                        | GC-MS   |

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|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|--------|
|                                           | Beaulieu, J., Grimm, C.                                                                                                                                                                                                                                                                       | sat. salt, agitated                                   |        |
| 150 Pyrazines                             | SPME of Pyrazines in Model Reaction Systems<br>J. Sci. Food Agric. 72: 91 (1996)<br>Ibanez, E., Bernhard, R.                                                                                                                                                                                  |                                                       |        |
| 2895 Pyrazines                            | <b>Formation of pyrazines and a novel pyrrole in Maillard model systems of 1,3-dihydroxyacetone and 2-oxopropanal</b><br><i>J Agric Food Chem</i> 56, #6, 2147-2153 (MAR 26 2008)<br>Adams, An; Polizzi, Viviana; van Boekel, Martinus; De Kimpe, N.                                          | headspace                                             | GC-MS  |
| 934 Pyrazines                             | Solid-phase microextraction with aqueous immersion for analysis of Maillard-generated pyrazines in model reaction system<br><i>Diss. Abstr. Int., B</i> 2000, 61(5), 2287<br>Cai, Yanxuan                                                                                                     |                                                       |        |
| 356 Menthol (natural)                     | SPME-GC-Mass Selective Detection Analysis of Selected Sources of Menthol<br>J. Chromatogr. Sci. (1998), 36(8) 401-405<br>Coleman, W., Lawson, S.                                                                                                                                              | 65µm Carboxen/PDMS<br>50°C, 20 sec<br>headspace       | GC-MS  |
| 453 Menthol, menthone food/pharmaceutical | Determination of menthol and menthone in food and pharmaceutical products by SPME-GC<br>J. Chromatogr., A 1999, 847 (1+2), 161-169<br>Ligor, M., Buszewski, B.                                                                                                                                | ethoxy dimethylsiloxane<br>15 min @ 30°C<br>immersed  | GC-FID |
| 610 Aroma in perfume                      | Measurement of gas-liquid partition coefficient and headspace concentration profiles of perfume materials by SPME and capillary GC-MS<br><i>J. Chromatogr. Sci.</i> (2000), 38(9), 377-382<br>Liu, Z. Wene, M.                                                                                | 7µm PDMS<br>10 min headspace                          | GC-MS  |
| 611 Flavor compounds in oatmeal           | Contribution of volatiles to the flavor of oatmeal<br><i>J. Sci Food Agric.</i> 1/15/2000, 80(2);, 247-254<br>Zhou, M, Robards, K., Helliwell, S., Glennie-Hommes, M.                                                                                                                         | 100µm PDMS<br>water solution @ 100°C<br>headspace     | GC-MS  |
| 894 Flavor compounds in oats              | Changes in the volatile profile of oats induced by processing<br><i>J. Agric. Food Chem.</i> 49 (5): 2125-2130 (2001)<br>Robards, Kevin; An, Min; Helliwell, Stuart; Sides, Alasdair                                                                                                          | 100µm PDMS<br>30SEC @ 25°C<br>headspace               | GC-MS  |
| 309 Flavors in food products              | SPME for the Analysis of Flavors<br>Techniques for Analyzing Food Aroma, pp81-112,<br>Food Sci. Technol., New York (1997)<br>Harmon, A.                                                                                                                                                       | various fibers<br>& conditions                        |        |
| 388 Volatiles in consumer products        | Analysis of Volatile Fragrance and Flavor Compounds by Headspace SPME Combined with Gas Chromatography/Mass Spectrometry<br>J. Chem. Educ. 1999, 76(2), 245-248<br>Galipo, R., Canhoto, A., Walla, M., Morgan, S.                                                                             | 100µm PDMS<br>30 min<br>headspace                     | GC-MS  |
| 760 Flavor volatiles in beverages         | Solid Phase Microextraction for the enantiometric analysis of Flavors in Beverages<br><i>J. AOAC Intl, Vol. 84, No. 2, 2001, 479-485</i><br>Ebeler, S., Sun, G., Datta, M., Stremple, P., Vicker, A.                                                                                          | 85µm Polyacrylate<br>60 min., headspace<br>salt added | GC-MS  |
| 2771 Rose oxide in white wine             | <b>Stereoselective formation of the varietal aroma compound rose oxide during alcoholic fermentation</b><br><i>J. AOAC Intl, Vol.56, No. 4, 1371-1375 (FEB 27 2008)</i><br>Koslitz, Stephan; Renaud, Lauren; Kohler, Marcel; Wuest, Matthias                                                  | headspace                                             | GC/MS  |
| 2233 Carbonyls in wine                    | <b>Monitoring of the principal carbonyl compounds involved in malolactic fermentation of wine by SPME and positive ion chemical ionization GC/MS analysis</b><br><i>J. Mass Spectrom.</i> 40 #12, 1558-1564 (2005)<br>Dalla Vedova, A.; Flamini, R.; Ongarato, S.; Panighel, A.Perchiazzi,N.; | 65um DVB (PFBOA) derivatives<br>5min @ 50C            | GC/MS  |

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| <b>2904 Carbonyls</b>                                               |                                            | <b>Analysis of carbonyl compounds via headspace SPME with on-fiber derivatization and GC-ion trap tandem MS determination</b>                                                                                                                                                                               |                                                              | <b>GC-ITMS</b>    |
|                                                                     | <b>biological samples and foodstuffs,</b>  | <b>of their O-(2,3,4,5,6-pentafluorobenzyl)oxime derivatives</b><br><i>Anal. Chim. Acta</i> <b>617</b> , #1-2, 119-131 (Jun 9 2008)<br><b>Bokuz, U.; Fischer, Ulrich; Ganss, S.; Kopp, B.; Potouridis, T.;</b>                                                                                              | <b>PFBHA derivatives</b>                                     |                   |
| 891                                                                 | Volatile carbonyls in alcohols             | Comparison of extraction techniques for GC determination of volatile carbonyl compounds in alcohols.<br><i>Fresenius' J. Anal. Chem.</i> (2001) 369(7-8) 661-665<br>Wardencki, W.; Namiesnik, J.; Orlita, J.                                                                                                |                                                              | GC-ECD            |
| 903                                                                 | Carbonyls in water                         | Determination of carbonyl compounds in water by derivatization SPME and GC analysis<br><i>J. Chromatography A</i> 1998, 809, 1-2, 75-87<br>Bao, M., Pantani, F., Griffini, O., Burrini, D., Santianni, D., Barbieri, K.                                                                                     | PFBHA derivatives                                            | GC                |
| <b>Development of a dynamic headspace SPME procedure coupled to</b> |                                            |                                                                                                                                                                                                                                                                                                             |                                                              |                   |
| <b>2817 Organic content in alcoholic beverage</b>                   |                                            | <b>GC-qMSD for evaluation the chemical profile in alcoholic beverages</b><br><i>Analytica Chimica Acta</i> <b>609</b> , #1, 82-104 (FEB 18 2008)<br><b>Rodrigues, F.; Caldeira, M.; Camara, J. S.</b>                                                                                                       | <b>various fibers headspace</b>                              | <b>GC-qMSD</b>    |
| 454                                                                 | Organic content in alcoholic beverage      | Research on alcoholic beverages at Alko's control Lab<br>Kem.-Kemi, 1999, 26(2), 95-97<br>Lehtonen, P.                                                                                                                                                                                                      |                                                              | GC-MS             |
|                                                                     |                                            | Analysis of free fatty acids, higher alcohols and                                                                                                                                                                                                                                                           | Finnish                                                      |                   |
| 455                                                                 | Alcohols, esters, free fatty acids in Sake | esters in sake by headspace-SPME<br>Nippon Jojo Kyokaishi (1999), 94(3), 252-257<br>Utsunomiya, H.                                                                                                                                                                                                          | Japanese                                                     |                   |
| <b>2867 Oxazole fungicide in malt beverages</b>                     |                                            | <b>Solid-phase microextraction for the GC-MS determination of oxazole fungicides in malt beverages</b><br><i>Anal. Bioanal. Chem.</i> <b>391</b> , #3, 1425-1431 (2008)<br><b>Aguinaga, N.; Campillo, N.; Hernandez-Cordoba, M.; Martinez-Castillo, N.; Vinas, Pilar</b>                                    | <b>100µm PDMS<br/>70µm CW-DVB immersion<br/>60°C, 30 min</b> | <b>GC-MS(SIM)</b> |
| 312                                                                 | Flavor volatiles in malt beverages         | Headspace Gas Chromatography Profiles of Fruit-Flavored Malt Beverages, Using SPME<br><i>J. Am. Soc. Brew. Chem.</i> 55 (3): 112-118 (1997)<br>Constant, M., Collier, J.                                                                                                                                    | 100µm PDMS<br>45°C, 45-60 min headspace                      | GD-FID            |
| <b>2906 Flavor volatiles in beer wort</b>                           |                                            | <b>Optimisation of a complete method for the analysis of volatiles involved in the flavour stability of beer by SPME-GC-MS</b><br><i>J. CHROMATOGR. A</i> <b>1190</b> , #1-2, 342-349 (May 9 2008)<br><b>De Schutter, D.; Delvaux, F.; Delvaux, F.; Saison, D.</b>                                          | <b>headspace<br/>PFBHA derivative</b>                        | <b>GC-MS</b>      |
| <b>2422 Flavor volatiles in beer wort</b>                           |                                            | <b>Optimisation of wort volatile analysis by headspace SPME in combination with gas chromatography and mass spectrometry</b><br><i>J. CHROMATOGR. A</i> <b>1179</b> , #2, 75-80 (01 FEB 2008)<br><b>De, Schutter D. P.; Saison, D.; Delvaux, F.; Derdelinckx, G.; Rock, J.; Neven, H.; Delvaux, F.</b>      | <b>headspace</b>                                             | <b>GC-MS</b>      |
| 313                                                                 | Alcohols, esters in beer                   | Solid Phase Microextraction for the Analysis of Some Alcohols and Esters in Beer: Comparison with Static Headspace Method<br><i>J. Agric. Food Chem.</i> 46 (4): 1469-1473 (1998)<br>Wasowicz, E., Kaminski, E., Jelen, H., Wlazly, K.                                                                      | 85µm polyacrylate<br>50°C, 30 min headspace<br>salt added    | GC-FID            |
| <b>2818 Dimethyl sulfide in water</b>                               |                                            | <b>Laboratory inter-comparison of dissolved dimethyl sulphide (DMS) measurements using purge-and-trap and SPME techniques during a mesocosm experiment</b><br><i>Marine Chemistry</i> <b>108</b> , #1-2, 32-39 (JAN 1 2008)<br><b>Vogt, M.; Turner, S.; Yassaa, N.; Steinke, M.; Williams, J.; Liss, P.</b> | <b>headspace</b>                                             | <b>GC-MS</b>      |
|                                                                     |                                            | Headspace SPME for the analysis of dimethyl                                                                                                                                                                                                                                                                 |                                                              |                   |

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|------|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|-----------------|
| 456  | Dimethyl sulfide in beer                         | sulfide from beer<br>J. Agric. Food Chem. 1999, 47(7), 2505-2508<br>Scarlată, C. Ebeler, S.                                                                                                                                                                                                   | 65µm Carboxen/PDMS<br>15 min @ 30°C<br>headspace<br>1.5gm NaCl | GC-FPD          |
| 612  | Volatiles in whiskies                            | Characterization of whiskies using SPME with GC-MS<br><i>J.Chromatogr. A</i> (2000) 896, 351-359<br>Fitzgerald, G., James, K., MacNamara, K., Stack, M.                                                                                                                                       | 85µm polyacrylate<br>35 min<br>headspace                       | GC-MS           |
| 2368 | Volatiles in palm sap                            | <b>Changes in volatile compounds of palm sap (<i>Arenga pinnata</i>) during the heating process for production of palm sugar</b><br><i>Food Chemistry</i> 102, # 4, 1156-1162 (2007)<br>Ho, C. W.; Aida, W. M. Wan; Maskat, M. Y.; Osman, H.                                                  | headspace                                                      | GC-MS           |
| 953  | Volatiles in sugar cane spirits                  | A headspace SPME method for the determination of some secondary compounds of Brazilian sugar cane spirits by GC<br>J Agric Food Chem, 2001, 49, 3533-3539<br>Nonato, E., Carazza, F., Silva, C. Carvalho, C., Cardeal, Z                                                                      | 85µm polyacrylate<br>25 min @ 60°C<br>headspace<br>2.5g NaCl   | GC-FID          |
| 2765 | Fatty acid ethyl esters in spirits               | <b>Determination of volatile fatty acid ethyl esters in raw spirits using SPME and GC</b><br><i>Anal. Chim. Acta</i> 613, #1, 64-73 (April 14 2008)<br>Plutowska, Beata; Wardencki, Waldemar                                                                                                  | headspace                                                      | GC-FID          |
| 2732 | Aroma volatiles in rum                           | Characterization of rum using solid-phase microextraction with GC-MS<br><i>Food Chemistry</i> 104, # 1, 421-428 (2007)<br>Pino, J. A                                                                                                                                                          | 100µm PDMS<br>35 min @ 35°C<br>headspace                       | GC-MS           |
| 2502 | Aroma volatiles in whiskeys                      | <b>Comparison of two extraction methods for evaluation of volatile constituents patterns in commercial whiskeys. Elucidation of the main odour-active compounds</b><br><i>Talanta</i> 74, #1, 78-90 (Nov 15 2007)<br>Caldeira, M.; Camara, J.S.; Marques, J.C.; Perestrelo, R.; Rodrigues, F. | 75µm Carboxen<br>headspace                                     | GC-MS           |
| 2621 | Aroma volatiles in pear products                 | <b>Aroma of dehydrated pear products</b><br><i>LWT - Food Sci. Technol.</i> 40, #9, 1578-1586 (November 2007)<br>Komes, Drazenka; Kovacevic Ganic, Karin; Lovric, Tomislav                                                                                                                    | headspace                                                      | GC-MS           |
| 595  | Aroma volatiles in Brandy                        | Changes in odor of Bartlett pear brandy influenced by sunlight irradiation.<br><i>Chemosphere. Mar</i> 1999; 38(6): 1299-1303<br>Kralj-Cigic, I.; Zupancic-Kralj, L                                                                                                                           | 100µm PDMS<br>15 min @ 40°C                                    | GC-EIMS         |
| 613  | Aroma compounds in brandy                        | Analysis of brandy aroma by SPME and liquid-liquid extraction<br><i>J. Sci. Food Agric. Apr</i> 2000, 80(5), 625-630<br>Ebeler, S., Terrien, M., Butzka, C.                                                                                                                                   | 100µm PDMS<br>30 min @ 50°C<br>Headspace                       | GC-FID          |
| 2830 | Resveratrol isomers in wine, musts, fruit juices | <b>A comparison of SPME and stir bar sorptive extraction coupled to HPLC for the rapid analysis of resveratrol isomers in wines, musts and fruit juices</b><br><i>Anal. Chim. Acta</i> 611, #1, 119-125 (Mar 17 2008)<br>Campillo, N.; Hernandez-Cordoba, M.; Hernandez-Perez, M.; Vinas, P.  | 50 µm CW/TPR<br>immersion<br>30 min @ 40°C                     | LC-Fluorimetric |
| 2780 | Aroma volatiles in wine                          | <b>Differentiation of "claret", Rose, Red and Blend wines based on the content of volatile compounds by headspace SPME-GC</b><br><i>Eur. Food Res. Technol.</i> 226, #6, 1317-1323 (April 2008)<br>Cabredo-Pinillos, S.; Cedron-Fernandez, T.; Saenz-Barrio, C.                               | 65µm CW/DVB<br>Headspace                                       | GC-FID          |
| 2410 | Off-flavors in wine                              | <b>Rapid headspace SPME-GC-MS assay for the quantitative determination of some of the main odorants causing off-flavours in wine</b><br><i>J. Chromatogr., A</i> 1141, #1, 1-9 (2007-02-02)<br>Boutou, S.; Chatonnet, P.                                                                      | headspace                                                      | GC-MS           |
| 2514 | Aroma volatiles in wine                          | <b>Analysis of aromatic components in kiwifruit wine by GC-MS with SPME</b><br><i>J Northwest A &amp; F University - Natural Science Ed.</i> 35, #6, 89-93 (2007)<br>Guo Jing; Yue TianLi; Yuan YaHong; Gao ZhengPeng                                                                         | headspace                                                      | GC-MS           |
| 827  | Aroma volatiles in wine                          | Optimization of headspace SPME for analysis of wine aroma compounds<br><i>Am Journal Enology and Viticul</i> (2000) 51(4), 379-382<br>Zoecklein, B. W.; Whiton, R. S                                                                                                                          | headspace                                                      |                 |
| 2859 | Aroma volatiles in wine                          | <b>Use of an array of metal oxide sensors coupled with SPME for characterisation of wines. Study of the role of the carrier gas</b><br><i>Sens Actuators, B Chem</i> 132, #1, 125-133 (May 28 2008)                                                                                           | headspace                                                      | GC-MS           |

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| 901                                                                       | Aroma volatiles in wine         | Discrimination of wine aroma using an array of conducting polymer sensors in conjunction with SPME technique<br><i>Sens Actuators, B Chem</i> (2001) 77(1-2), 401-408<br>De Saja, J.A.; Fernandez, J.A.; Guadarrama, A.; Iniguez, M.; Souto, J                                                       |                                                                          |           |
| 896                                                                       | Aroma volatiles in wine         | Effect of cultural practices and environmental factors on fruit and wine quality<br><i>Agriculturae Conspectus Scientificus</i> 2001 66(1) 13-20<br>Bravdo, Ben Ami                                                                                                                                  |                                                                          | GC-MS     |
| 135                                                                       | Aroma volatiles in wine         | Systematic Optimization of the Analysis of Wine Bouquet Components by SPME<br><i>J. High Res. Chromatogr.</i> 19: 257-262( 1996)<br>Garcia, D., Magnaghi, S., Danzer, K.                                                                                                                             | 85µm polyacrylate<br>15 min<br>immersion, stirring<br>pH 4, salt added   | GC-FID    |
| <b>Rapid headspace SPME-GC-TOF/MS method for qualitative profiling of</b> |                                 |                                                                                                                                                                                                                                                                                                      |                                                                          |           |
| 2340                                                                      | Aroma volatiles in ice wine     | ice wine volatile fraction I. Method development and optimization.<br><i>J Chromatogr A</i> 1147 # 2, 213-223 (2007)<br>Setkova, Lucie; Risticevic, Sanja; Pawliszyn, Janusz                                                                                                                         | 50/30µm DVB/CAR<br>5 min @ 45 C<br>headspace<br><br>3 mL, 1gm salt added | GC-TOF/MS |
| 2356                                                                      | Aroma volatiles in ice wine     | Rapid headspace SPME-GC-TOF/MS method for qualitative profiling of ice wine volatile fraction. II: Classification of Canadian and Czech ice wines using statistical evaluation of the data<br><i>J Chromatogr A</i> 1147 # 2, 224-240 (2007)<br>Setkova, Lucie; Risticevic, Sanja; Pawliszyn, Janusz | 50/30µm DVB/CAR<br>5 min @ 45 C<br>headspace                             | GC-TOF/MS |
| <b>Rapid headspace SPME-GC-TOF/MS method for qualitative</b>              |                                 |                                                                                                                                                                                                                                                                                                      |                                                                          |           |
| 2411                                                                      | Aroma volatiles in ice wine     | profiling of ice wine volatile fraction. III: Relative characterization of Canadian and Czech ice wines using self-organizing maps.<br><i>J Chromatogr A</i> 1147 # 2, 241-253 (2007)<br>Setkova, Lucie; Risticevic, Sanja; Pawliszyn, Janusz                                                        |                                                                          |           |
| 2564                                                                      | Organotin compounds             | Optimization of the SPME procedure for the ultra-trace determination of organotin compounds by GC-inductively coupled plasma-MS<br><i>J. Anal. At. Spectrom.</i> 21, #9, 970-973 (2006-08-25)<br>Bianchi, F.; Careri, M.; Maffini, M.; Mangia, A.; Mucchino, C.                                      | Car/DVB 30/50µm<br>2 cm length                                           | GC-ICP-MS |
| 2421                                                                      | Organotin in brandies and wines | Organotin speciation in French brandies and wines by SPME-GC-Pulsed flame photometric detection<br><i>J. CHROMATOGR. A</i> 1180, #1-2, 122-130 (08 FEB 2008)<br>Heroult, J.; Bueno, M.; Potin-Gautier, M.; Lespes, G.                                                                                | 100µm PDMS<br><br>30 min<br>headspace<br>ethylated derivative            | GC-FPD    |
| 798                                                                       | trans-ResverAtrol in wine       | Gas-phase post-derivatization following SPME for rapid determination of trans -resveratrol in wine by GC-MS<br><i>Analytica Chimica Acta</i> (2000) 424(1), 19-25<br>Luan, T. G.; Li, G. K.; Zhang, Z. X.                                                                                            | 22°C<br>headspace<br>silyl derivative                                    | GC-MS     |
| 201                                                                       | Procymidone residue in wine     | Comparison of Two Recent Solventless Methods for the Determination of Procymidone Residues in Wines: Solid-Phase Microextraction-GC-MS and ELISA Tests<br><i>J. Agric. Food Chem.</i> 45: 1519-1522 (1997)<br>Urruty, L., Montury, M., Braci, M., Fournier, J., Dournel, J.                          | 100µm PDMS<br>30 min<br>immersion<br>stirring                            | GC-MS     |
| 2242                                                                      | Favor compounds in plum wine    | Reveal the diversity of commercial spontaneously-fermented plum wines in their components by using single strain yeast-fermented plum wine<br><i>Taiwanese J Agr Chem Food Sci.</i> 43 #3, 162-170 (2005)<br>Lin, Shih-Bin; Wu, Yo-Ping; Shen, Fang-Ling                                             |                                                                          | HPLC      |
| 936                                                                       | Aroma volatiles in wine         | Qualitative and quantitative analyses of volatile organic compounds in wines using SPME-GC<br><i>Chem. Anal. (Warsaw, Pol.)</i> (2001) 46(2) 215-224<br>Buszewski, B; Ligor, M.                                                                                                                      |                                                                          |           |



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| 314  | Aroma volatiles<br>in wine                                        | Investigation of Wine Bouquet Components by SPME-<br>Capillary GC, Using Different Fibers<br><i>J. High Resolut. Chromatogr.</i> 20 (12): 665-668 (1997)<br>De La Calle Garcia, D., Feller, K., Reichbacher, M.,<br>Danzer, K., Hurlbeck, C., Bartzsch, C.               | 85µm polyacrylate<br>30 min<br>immersion<br>stirring                    | GC-FID         |
| 428  | Aroma volatiles<br>in wine                                        | Analysis of Wine Bouquet Components Using Headspace<br>SPME-Capillary Gas Chromatography<br><i>J. High Resolut. Chromatogr.</i> (1998), 21(7), 373-377<br>De La Calle Garcia, D., Feller, K., Reichbacher, M., Danzer, K.,<br>Hurlbeck, C., Bartzsch, C.                 | 85µm polyacrylate<br>60 min<br>headspace<br>stirring                    | GC-MS          |
| 824  | Aroma volatiles<br>in wine                                        | Classification of wine samples according to origin and<br>grape varieties on the basis of inorganic and organic<br>trace analysis<br><i>American Lab</i> , Oct. 1999, Vol. 31(20) 26-33<br>Danzer, K., De La Calle Garcia, D., Thiel, G., Reichbacher, M.,               | 85µm polyacrylate<br>60 min<br>headspace<br>stirring<br>salt added      | GC-MS          |
| 2145 | 2,4,6-Trichloro-<br>anisole, 2,4,6-<br>tribromoanisole<br>in wine | <b>Determination of 2,4,6-trichloroanisole &amp; 2,4,6-tribromoanisole<br/>on ng /L to pg/L levels in wine by SPME-GC-MS</b><br><i>J. Chromatogr. A</i> , 1111, #1, 71-75 (2006)<br>Gustafsson, I.-B.; Jonsson, S.; Lindstrom, G.; Uusitalo, T.;<br>Van Bavel, B.        | <b>headspace</b>                                                        | <b>GC-HRMS</b> |
| 94   | Trichloroanisole<br>in wine                                       | Analysis of Cork Taint in Wine and Cork Material at<br>Olfactory Sub-Threshold Levels by SPME<br><i>J. Agric. Food Chem.</i> 45: 1995-1997 (1997)<br>Fisher, C., Fischer, U.                                                                                             | 100µm PDMS<br>20°C, 30 min<br>salt added                                | SIM-GC-MS      |
| 385  | Trichloroanisole<br>in wine                                       | Detection of Cork Taint in Wine Using Automated SPME in<br>Combination with GC-MS-SIM<br>Book chapter 15: ACS Symposium Series 1999, Oxford<br>University Press, "Flavor Analysis Development in<br>Isolation and Characterization"<br>Butzke, C., Evans, T., Ebeler, S. | 100µm PDMS,<br>85µm polyacrylate<br>45°C, 25 min<br>headspace           | GC-MS-SIM      |
| 2821 | Aroma volatiles<br>in model wine                                  | <b>Protection of some aroma volatiles in a model wine medium by sulphur<br/>dioxide and mixtures of glutathione with caffeic acid or gallic acid</b><br><i>Flavour and Fragrance Journal</i> 23, #1, 35-39 (JAN-FEB 2008)<br>Roussis, Ioannis G.; Sergianitis, Spyros    |                                                                         | GC-MS          |
| 2384 | Sulfur volatiles<br>in wine                                       | <b>Concurrent quantification of light and heavy sulphur volatiles in wine<br/>by headspace SPME-GC-MS</b><br><i>Rapid Commun. Mass Spectrom.</i> 21, #5, 707-714 (2007-03-15)<br>Fedrizzi, B.; Magno, F.; Moser, S.; Nicolini, G.; Versini, G.                           | <b>CAR/DVB 30/50µm<br/>2 cm length<br/>headspace</b>                    | GC-MS          |
| 377  | Sulfides, disulfides<br>in wine                                   | Headspace SPME Analysis of Volatile Sulfides and<br>Disulfides in Wine Aroma<br><i>J. Chromatogr. A</i> 808 (1998) 211-218<br>Mestres, M., Busto, O., Guasch, J.                                                                                                         | 100µm PDMS,<br>85µm polyacrylate<br>30°C, 15 min, salt<br>headspace     | GC-FPD         |
| 406  | Sulfides, disulfides<br>in wine                                   | Headspace SPME of Sulfides and Disulfides Using<br>Carboxen/PDMS Fibers in the Analysis of Wine Aroma<br><i>J. Chromatogr. A</i> , 835 (1999) 137-144<br>Mestres, M., Sala, C., Marit, M., Busto, O., Guasch, J.                                                         | 75µm Carboxen/PDMS<br>25°C, 30 min<br>headspace<br>stirring, salt added | GC-FPD         |
| 614  | Benzothiazoles<br>in wine                                         | Analysis of benzothiazole in Italian wines using<br>SPME-GC-MS<br><i>J. Agric. Food Chem.</i> (2000), 48(4), 1239-1242<br>Bellavia, V., Natangelo, M., Fanelli, R., Rotilio, D.                                                                                          | 65µm Carbowax/DVB<br>15min @ 50°C<br>headspace                          | GC-MS          |
| 363  | Aroma volatiles<br>in wine                                        | Similarities in the Aroma Chemistry of Gewurztraminer<br>Variety of Wines and Lychee (Litchi chinensis Sonn.) Fruit<br><i>J. Agri. Food Chem.</i> 1999, 47, 665-670<br>Ong, P., Acree, T.                                                                                | 100µm PDMS<br>15 min<br>headspace                                       | GC-MS          |
| 427  | Volatiles                                                         | Fast Screening Method for Wine Headspace Compounds<br>Using SPME and Capillary GC Technique                                                                                                                                                                              | headspace                                                               |                |

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|      | in wine                                           | Am. J. Enol. Vitic. (1998), 49(1), 100-104<br>Vas, G., Koteleky, K., Farkas, M., Ddobo, A., Vekey, K.                                                                                                                                                                                |                                                          |         |
| 397  | Aroma volatiles<br>in wine                        | Determination of Volatile Aroma Compounds of<br>Blaufrankisch Wines Extracted by SPME<br>J. Chromatographic Sci., Vol. 36, Oct. 1998, 505-510<br>Vas, G., Gal, L., Harangi, J., Dobo, A., Vekey, K.                                                                                  | 100µm PDMS<br>10 min (headspace)<br>1 hr (immersion)     | GC-MS   |
| 457  | Flavor volatiles<br>in wine                       | Classification of wine samples according to origin<br>and grape varieties on the basis of inorganic and<br>organic trace analysis<br>Am. Laboratory, Oct. 1999, Vol. 31, No. 20, 26-34<br>Danzier, K, DeLaCalle Garcia, D, Thiel, G.,<br>Reichenbacher, M                            | 85µm polyacrylate<br>60-90 min<br>headspace<br>Satr.salt | GC-FID  |
| 458  | Aroma volatiles<br>in wine                        | Examination of aroma production kinetics of<br>different commercial wine yeast in fermenting<br>muscat ottonel wines with the help of SPME<br>headspace sampling and fast GC analysis<br>Acta Aliment, (1999), 28(2), 133-140<br>Vaes, W., Blechschmidt, I., Kovacs, T., Vekey, K.   | 100µm PDMS<br>10 min<br>headspace                        | GC-FID  |
| 582  | Aroma volatiles<br>in wine                        | Improvement of the chemometric variety characterization of<br>wines by improving the detection limit for aroma compound<br>J-High-Resolut-Chromatogr. Jun 1999; 22(6): 322-326<br>Weber,-J; Beeg,-M; Bartsch,-C; Feller,-K-H;<br>De-la-Calle-Garcia,-D; Reichenbaecher,-M; Danzer,-M | 85µm polyacrylate<br>3 hr. , headspace<br>NaCl added     | GC-EMIS |
| 459  | Aroma volatiles<br>in wine                        | Determination of volatiles from red wines made<br>by carbonic maceration using SPME technique<br>Acta Aliment, 1999, 28(1), 95-101<br>Vas, G., Loerincz, G.                                                                                                                          | 100µm PDMS<br>10 min headspace                           | GC-EIMS |
| 2536 | Aroma volatiles<br>from Pinus<br>massoniana twigs | <b>A comparison of the volatiles compounds from Pinus massoniana<br/>twigs extracted by SPME and steam distillation</b><br><i>J Nanjing Forestry University (Natural Sciences Edition)</i><br><b>31, #1, 78-80 (2007)</b><br>Wang Yan; Ye JianRen                                    | headspace                                                | GC/MS   |
| 2634 | Phenolic content<br>in wood                       | Determination of the alkyl- and methoxy-phenolic content in wood<br>extractives by micellar solid-phase microextraction and GC-MS<br><i>Talanta</i> 73, #3, 505-513 (SEP 30 2007)<br>Pino, Vernica; Ayala, Juan H.; Gonzalez, Venerando; Afonso, Ana M.                              | headspace                                                | GC/MS   |
| 2295 | Fragrances<br>from woody<br>material              | Induction of sesquiterpenoid production by methyl jasmonate<br>in aquilaria sinensis cell suspension culture<br><i>J. Essent. Oil Res. (2005) 17 #2, 175-180</i><br>Honda, G.; Ito, M.; Kiuchi, F.; Okimoto, K.; Shimada, Y.; Yagura, T.                                             | headspace                                                | GC/MS   |
| 2528 | Aroma volatiles<br>from oak chips                 | Analysis of French and American oak chips with different toasting<br>degrees by headspace SPME-GC-MS<br><i>Journal of Chromatography A</i> 1173, #1-2, 10-17 (2007)<br>Bozalongo, R.; Carrillo, J.; Fernandez-Torroba, M.; Tena, M.                                                  | Car/DVB 30/50µm<br>headspace                             | GC/MS   |
| 559  | Aroma volatiles<br>from toasted oak               | Monitoring Toasting Intensity of Barrels by<br>Chromatographic Analysis of Volatile<br>compounds from Toasted Oak Wood<br>J. Agric. Food Chem, 1999, 47, 4310-4318<br>Chatonnet, P., Cutzach, I., Pons, M., Dubourdieu, D.                                                           | 100µm PDMS<br>30 min @ 22°C<br>headspace                 | GC-FID  |
| 2663 | Chlorpyrifos in<br>wine                           | <b>Application of SPME for determining residues of chlorpyrifos and<br/>chlorpyrifos-methyl in wine with gas chromatography (GC).</b><br><i>J Institute of Brewing</i> 113, #2, 213-218 (2007)<br>Anli, E.; Vural, N.; Vural, H.; Gucer, Y.                                          | headspace                                                | GC-ECD  |
| 460  | Polyphenolics<br>in red wine                      | Assembly tests of "Nero d'Avola" with wines<br>derived from an allocthonous cultivar:<br>study of polyphenolic and aromatic profiles.<br><i>Ind. Bevande</i> (1999), 28(160), 119-126<br>Papucci, A, Monte, L., D'Agostino, S,<br>Aozzino, P., Avellone, G                           | headspace<br>Italian                                     | GC-MS   |

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| <b>Sample preparation optimization in wine and grapes. Dilution and</b> |                                  |                                                                                                                                                                                                                                |                                                                    |
| 2885                                                                    | Volatiles from wine and grapes   | sample/headspace volume equilibrium theory for headspace SPME<br><i>J Chromatogr A</i> 1192, #1, 25-35 (May 23 2008)<br>Boss, Paul K.; Kalua, Curtis M.                                                                        | headspace GC-MS                                                    |
| <b>Comprehensive two-dimensional gas chromatography with TOF-MS</b>     |                                  |                                                                                                                                                                                                                                |                                                                    |
| 2635                                                                    | Monoterpenoids from white grapes | of monoterpenoids as a powerful tool for grape origin traceability<br><i>J Chromatogr A</i> 1161, #1-2, 292-299 (AUG 17 2007)<br>Rocha, S.; Coelho, E.; Zrostlikova, J.; Delgadillo, I.; Coimbra, M.                           | headspace GC-ToF-MS                                                |
| 2763                                                                    | Volatiles from lignins           | Distinction and identification of lignins based on their volatile headspace composition<br><i>Talanta</i> 75, #2, 594-597 (Apr 15 2008)<br>Delgadillo, Ivonne; Evtuguin, D.; Goncalves, V.; Rocha, S.                          | headspace GC-MS                                                    |
| 775                                                                     | Esters in grape juice            | Monitoring ester formation in grape juice fermentations using SPME coupled with GC-MS<br><i>J. Agric. Food Chem</i> (2001) 49(2), 589-595<br>Vianna, E; Ebeler, S.                                                             | 100µm PDMS<br>1 hr.<br>headspace GC-MS                             |
| 315                                                                     | Styrene in wine                  | Determination of Styrene in Wine by SPME and GC-MS<br><i>Mitt. Klosterneuburg</i> 47 (4): 117-123 (1997)<br>Flak, W., Tschek, G.                                                                                               | GC-MS                                                              |
| 311                                                                     | Methylisocyanate in wine         | SPME Analysis of Methyl Isothiocyanate in Wine<br><i>J. Agric. Food Chem.</i> 45 (8): 3092-3094 (1997)<br>Gandini, N., Riguzzi, R.                                                                                             | 65µm Carbowax/DVB<br>30 min<br>headspace<br>salt added GC-FID, NPD |
| 366                                                                     | Diacetyl in wine                 | Analysis of Diacetyl in Wine Using SPME -GC-MS<br><i>J. Agric Food Chem.</i> 1999, 47, 612-617<br>Hayasaka, Y., Bartowsky, E.                                                                                                  | 60µm Carbowax/DVB<br>24°C, 5 min<br>headspace<br>salt added GC-MS  |
| 2465                                                                    | Pesticides in Wine               | Multiple pesticide analysis in wine by MEKC combined with SPME and sample stacking<br><i>Electrophoresis</i> 28, #22, 4072-4081 (NOV 2007)<br>Borges-Miquel, T.; Hernandez-Borges, J.; Ravelo-Perez, L.; Rodriguez-Delgado, M. | 60µm PDMS/DVB<br>micellar EKC<br>diode-array<br>detection          |
| 2362                                                                    | Pesticides in Wine               | Pesticide analysis in rose wines by micellar electrokinetic chromatography<br><i>J. Sep. Sci.</i> 30, #18, 3240-3246 (Dec. 2007)<br>Borges-Miquel, T.; Hernandez-Borges, J.; Ravelo-Perez, L.; Rodriguez-Delgado, M.           | 60µm PDMS/DVB<br>micellar EKC                                      |
| 316                                                                     | Pesticides in Wine               | Determination of Pesticide Residues in Wine by SPME and GC/MS for Consumer Risk Assessment<br><i>Food Addit. Contam.</i> 15 (3): 280-287 (1998)<br>Vitali, M., Guidotti, M., Giovanazao, R., Cendrone, O.                      | GC-MS                                                              |
| 2611                                                                    | Pesticide residue on vegetables  | Removal of residual pesticides on vegetable using ozonated water<br><i>Food Control (UK)</i> 18, #5, 466-72 (May 2007)<br>Tiangang Luan; Gilbert Yuk Sing Chan; Jiguo Wu; Chongyu Lan; Thomas Wai Hung Lo                      | headspace GC-MS                                                    |
| 615                                                                     | Pesticide residue on vegetables  | Applications of SPME to the Analysis of Pesticide Residues in Vegetables<br><i>Pest. Manag Sci</i> 56: 618-636 (2000)<br>Volante, M., Pontello, M., Volante, L. Cattaneo, M., Bianchi, M., Bianchi, M., Colzani, L.            | 100µm PDMS,<br>60µm Carbowax/DVB<br>50 min GC-ECD<br>GC-NPD        |
| 774                                                                     | Pesticide residue on vegetables  | Study on the method of SPME coupled to GC for determination of organophosphorus pesticide residue in vegetables.<br><i>Ziran Kexueban</i> (2000) 39(4), 509-515<br>Chen, W; Hou, X; Zhang, L; Lin, H; Pan, Ji                  | (in Chinese)                                                       |

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| 432  | Pesticides in food                                 | Some Applications of SPME in the Analysis of Pesticide Residues in Food<br>J. Environ. Sci. Health, Part B (1998), B33 (3), 279-292<br>Volante, M., Cattaneo, M., Bianchi, M., Zoccola, G.                                                                                                                    |                                                          |         |
| 461  | Pesticides on strawberries                         | SPME of pesticide residues from strawberries<br>Food Addit. Contam. (1999), 16(3), 111-117<br>Hut, R., Hennion, B., Urruty, L., Montury, M.                                                                                                                                                                   | 100µm PDMS<br>45 min @ 25°C                              |         |
| 783  | Pesticides on strawberries                         | SPME coupled with HPLC: a complementry technique to SPME GC for the analysis of pesticide residues in strawberries<br>Food Addit. Contam. (2000), 17(11), 915-923<br>Wang, Z.; Hennion, B.; Urruty, L.; Montury, M.                                                                                           | 60µm PDMS/DVB<br>45 min @ 25°C<br>headspace              | LC-UV   |
| 2439 | Pesticides in fruit juices                         | <b>Analysis of carbamate and phenylurea pesticide residues in fruit juices by SPME-LC-MS.</b> Analysis of carbamate and phenylurea pesticide residues in fruit juices by SPME-LC-MS<br><i>J. Chromatogr., A 1147, #2, 135-143 (2007-04-20)</i><br>Sagrati, G.; Manes, J.; Giardina, D.; Damiani, P.; Pico, Y. | 50µm CW/TPR<br>60µm PDMS/DVB<br>90 min @ 20 C            | LC-MS   |
| 2408 | Pesticides in fruit juices                         | <b>Fast screening of pesticide residues in fruit juice by SPME</b><br><i>Food Chemistry 107, #3, 1314-1325 (2008)</i><br>Cortes-Aguado, S.; Sanchez-Morito, N.; Arrebola, F. J.; Frenich, A. G.; Vidal, J. L. M                                                                                               | 10 min                                                   | GC-MS   |
| 2498 | Pesticides in vegetables                           | <b>Screening method for the determination of parts per trillion levels of pesticide residues in vegetables combining SPME-GC-MS</b><br><i>Anal. Lett. 40, #13-15, 2886-2914 (2007-12)</i><br>Cortes Aguado, S.; Sanchez-Morito, N.; Garrido Frenich, A.; Martinez Vidal, J. L.;                               | 65µm PDMS/DVB<br>10 min @ 20 C<br>immersed               | GC-MS   |
| 462  | Organophosphorus pesticides in fruit/fruit juices  | Validation of a SPME method for the determination of organophosphorus pesticides in fruits and fruit juice<br>J. Chromatogr. A (1999), 843(1), 35-42<br>Simplicio, A., Vilas Boas, L.                                                                                                                         | 100µm PDMS<br>3 min<br>immersed                          | GC-FPD  |
| 2358 | Insecticides in honey                              | <b>SPME-HPLC-MS applied to the analysis of insecticides in honey.</b><br><i>Food Addit Contam 25, #1, 59-69 (2008 Jan )</i><br>Blasco, C; Font, G; Picoo, Y                                                                                                                                                   |                                                          | HPLC-MS |
| 929  | Organophosphorus pesticides in honeybees           | Determination of organophosphorus pesticides in honeybees after solid phase microextraction<br><i>J. Chromatogr. A (2001), 922(1-2) 257-265</i><br>Fernandez, M., Padron, C., Marconi, L., Colombo, R. Ghinie, S. Sabatini, A, Girotti, S.                                                                    | 85µm Polyacrylate<br>45min @ 25°C<br>immersed<br>stirred | GC-NPD  |
| 463  | Organochlorine & organophosphorus in water/ethanol | A Systematic Approach to Optimize SPME determination of Pesticides in Ethanol/Water mixtures used as Food Simulates<br>Anal. Chem. (1999), 71(13), 2417-2422<br>Battle, R, Sanchez, C., Nerin, C.                                                                                                             |                                                          |         |
| 616  | Volatiles in water                                 | Evidence for selectivity of absorption of volatile organics compounds by PDMS SPME fiber<br><i>J. Chromatogr. A, (2000) 885, 457-464</i><br>Niedziella, S., Rudkin, S., Cooke, M.                                                                                                                             | 30µm PDMS<br>60min<br>headspace                          | GC-MS   |
| 317  | Aroma volatiles in water traps                     | Analysis of Aroma Release During Microwave Heating<br>J. Agric. Food Chem. 45 (11): 4388-4392 (1997)<br>Roberts, D., Pollien, R.                                                                                                                                                                              | 60µm Carbowax/DVB<br>10 min<br><br>immersion, stirring   | GC-FID  |
| 435  | Aroma volatiles in food products                   | SPME Associated with Microwave Assisted Extraction of Food Products<br>J. High Resolut. Chromatogr. (1997), 20(4), 213-216<br>Wang, Y., Bonilla, M., McNari, H., Khaled, M.                                                                                                                                   |                                                          |         |
| 2400 | 1-naphthylamine from silica gel                    | <b>Application of microwave-assisted desorption/headspace SPME as pretreatment step in the gas chromatographic determination of 1-naphthylamine in silica gel adsorbent</b><br><i>Talanta 71, # , 1993-1997 (2007-03-30)</i><br>Yan, C. T.; Jen, J. F.; Shih, T. S.                                           | 65µm PDMS/DVB<br>headspace                               | GC-FID  |

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| 2870 | Volatiles from dry-cured             | Analysis of volatile compounds of Iberian dry-cured loins with different intramuscular fat contents using SPME-DED<br><i>Meat Science</i> 79, #1, 172-180 (MAY 2008)                                                                                                   | headspace                                                          | GC/MS                   |
| 2583 | Volatiles from dry-cured Iberian ham | Effect of salt content and processing conditions on volatile compounds formation throughout the ripening of Iberian ham<br><i>Eur. Food Res. Technol.</i> 225, #5-6, 677-684 (September 2007)<br>Andres, Ana I.; Cava, Ramon; Muriel, Elena; Ruiz, Jorge; Ventanas, S. | headspace                                                          | GC/MS                   |
| 318  | N-nitrosamines in smoked hams        | Rapid Semi-Quantitative Estimation of N-Nitrosodibutylamine and N-Nitrosodibenzylamine in Smoked Hams by SPME Followed by GC-Thermal Energy Analysis<br><i>J. Chromatogr. A</i> 788(1+2): 131-140 (1997)<br>Sen, N., Seaman, S., Page, B.                              | 85µm polyacrylate<br>10 min<br>headspace<br>stirring<br>salt added | GC-thermal energy or MS |
| 2639 | Volatiles from fermented meat        | Application of spme for analysis of volatile flavors produced by traditional fermented meat<br><i>J. Hunan Agric. Univ. (China)</i> 33, #2, 232-4 (2007)<br>Yu Bing; Zhou Hong-li; Li Zong-jun                                                                         | headspace                                                          | GC/MS                   |
| 2234 | Volatiles from raw beef              | GC-MS techniques for characterization of meat products<br><i>Annu. Int. Meet.</i> , p 7271-7293 (2004)<br>Balasubramanian, S.; Chen, Q.; Gu, H.; Jelen, H.; Logue, C.; Marchello, M.; Nord, R.; Panigrahi, S.                                                          | 75µm Carboxen headspace                                            | GC/MS                   |
| 348  | Flavor volatiles in beef             | Application of SPME to the Analysis of Warmed Over Flavor in Beef<br>Poster Paper, IFT 1999<br>Gruen, I., Fernando, L., Mobley, S.                                                                                                                                     | 100µm PDMS<br>35°C, 10 min<br>headspace                            | GC-MS                   |
| 890  | Atrazine in beef                     | Ethanol-modified subcritical water extraction combined with SPME for determining atrazine in beef kidney.<br><i>J. Ag Food Chem</i> (2001) 49(5) 2175-2180<br>Curren, Meredith S. S.; King, Jerry                                                                      | 60µm Carbowax/DVB<br>30min @ 25°C                                  | GC-MS                   |
| 617  | Aroma compounds in cooked pork       | Two-fiber SPME combined with GC-MS for the analysis of volatile aroma compounds in cooked pork<br><i>J. Chromatogr. A</i> 905(2000), 233-240<br>Elmore, J. Mottram, D., Hierro, E.                                                                                     | Carboxen/PDMS.<br>Carboxen/DVB/PDMS<br>30 min @ 60°C               | GC-MS                   |
| 618  | Hexanal, pentanal in cooked turkey   | A comparison of SPME fibers for measurement of hexanal and pentanal in cooked turkey<br><i>Food Chem Feb. 2000</i> , 68(3), 339-345<br>Brunton, N., Cronin, D., Durcan, R., Monahan, F.                                                                                | Carboxen/DVB/PDMS<br>20 min, headspace @ 40°C                      | GC-FID                  |
| 924  | Volatiles in frog skin               | SPME as a tool for studying volatile compounds in frog skin<br><i>Chemistry and Ecology</i> 2000<br>Smith, B, Zini, C., Pawliszyn, J. Tyler, M., Hayasaka, Y., Williams, B., Caramao, E.                                                                               |                                                                    |                         |
| 423  | Volatiles in meat                    | Comparison of Volatile Analysis of Lipid-Containing and Meat Matrices by SPME and SFE<br><i>ACS Symp. Ser.</i> (1998), 705 (Flavor Analysis), 107-115<br>Snyder, J., King, J., Zhang, Z.                                                                               |                                                                    |                         |
| 2826 | Volatiles from oysters               | Mass spectrometry based sensor strategies for the authentication of oysters according to geographical origin<br><i>J Agric Food Chem</i> , 56, #2, 321-327 (JAN 23 2008)<br><br>Ratel, J.; Berge, Philippe; B., Jean-Louis; Cardinal, Mireille; Engel, E.              |                                                                    | GC-MS                   |
| 2892 | 2-phenoxyethanol in fish             | Development of an SPME-GC-MS/MS procedure for the monitoring of 2-phenoxyethanol in anaesthetised fish<br><i>Talanta</i> 75, #4, 1082-1088 (May 30 2008)<br><br>Hajslova, Jana; Klimankova, Eva; Kocourek, Vladimir; Kolarova, J.; Poustka, Jan; Riddellova, Katerina  | CAR/DVB 30/50 headspace<br><br>60 min at 30 °C                     | GC-MS                   |

Fish and food safety: Determination of formaldehyde in 12

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|--------------------------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|----------------------|
| 2587                                                         | Formaldehyde in fish                               | fish species by SPME extraction and GC-MS analysis<br><i>FOOD CHEM. 100, #3, 1049-1053 (2007)</i><br>Bianchi, F.; Careri, M.; Musci, M.; Mangia, A.                                                                                                                                       | headspace<br>pentafluorobenzyl<br>hydroxyamine<br>derivative  | GC-MS                |
| 2539                                                         | Flavor volatiles in carp fish                      | Analysis of volatile compounds in bighead carp by microwave.<br>Distillation and SPME-GC-MS and olfactometry<br><i>Se Pu 25, #2, 267-71 (2007 Mar)</i><br>Zhao, Qingxi; Xue, Changhu; Xu, Jie; Sheng, Wenjing; Xue, Yong; Li, Z.                                                          | headspace                                                     | GC-MS                |
| 786                                                          | Volatile amines in fish                            | New method for the rapid determination of volatile substances: The SPME-direct method. Part II. Determination of the freshness of fish<br><i>Sens Actuators, B Chem (2001) 72(3), 204-207</i><br>Bene, A.; Hayman, A.; Luisier, J.L.; Reynard, E.; Villettaz, J                           | headspace                                                     | GC-FID, NPD          |
| SPME-GC-MS integrated with chemometrics for detection of     |                                                    |                                                                                                                                                                                                                                                                                           |                                                               |                      |
| 2468                                                         | Volatiles from salmonella infected alfalfa sprouts | <i>Salmonella typhimurium</i> contamination in a packaged fresh vegetable<br><i>Anal. Chim. Acta 581, #1, 63-70 (2 Jan. 2007)</i><br>Siripatrawan, Ubonrat; Harte, Bruce R                                                                                                                | headspace                                                     | GC-MS                |
| 619                                                          | Volatiles from salmonellas infected beef           | SPME/GC of Salmonella-Infected Beef<br><i>J Agric Food Chem, 2000, 48, 2253-2259</i><br>Ogihara, H., Horimoto, Y., Hai, Z., Skura, B., Nakai, S.                                                                                                                                          | 75µm Carboxen/PDMS<br>10 min<br>25% NaCl                      | GC-FID               |
| 393                                                          | Volatiles from processed poultry                   | Use of Digital Aroma Technology and SPME GC-MS to compare Volatile compounds Produced by Bacteria isolated from Processed Poultry<br><i>J. Sci. food Agric. 1998, 78, 343-348</i><br>Arnold, J., Senter, S.                                                                               | 100µm PDMS<br>30 min @ 37°C<br>headspace<br>stirred           | GC-MS                |
| 862                                                          | Allyl isothiocyanate in rats                       | Formation of allyl isothiocyanate from sinigrin in the digestive tract of rats monoassociated with a human colonic strain of Bacteroides thetaiotaomicron<br><i>FEMS Microbiology Letters (2001) 197(1) 99-103</i><br>Rabot, S; Duguay, A; Elfoul, L; Khelifa, N; Quinsac, A; Rimbault, A | headspace                                                     | GC-MS                |
| 253                                                          | Putrescine, cadaverine in borate buffer solution   | An Electrodeposition Device for the Determination of Putrescine and Cadaverine by High-Resolution GC<br><i>J. High Resolut. Chromatogr. 19 (5): 294-297 (1996)</i><br>Conte, E., Miller, D.                                                                                               | carbon fibers<br>0-60 min, immersion<br>stirring<br>pH 8      | HPLC<br>(C18 column) |
| Measurement of volatile oxidation products from milk using . |                                                    |                                                                                                                                                                                                                                                                                           |                                                               |                      |
| 2727                                                         | Oxidative products from milk                       | solvent-assisted flavour evaporation and SPME<br><i>Intl Dairy Journal 17, #7, 746-752 (2007)</i><br>Havemose, M. S.; Justesen, P.; Bredie, W. L. P.; Nielsen, J. H.                                                                                                                      | headspace<br>40°C                                             | GC-MS                |
| 620                                                          | Hexanal, pentanal metabolites in milk              | Shelf-life prediction of processed milk by SPME -MS and multivariate analysis<br><i>J. Agric Food chem (2000), 48(8), 3470-3475</i><br>Marsili, R.                                                                                                                                        | 75µm Carboxen/PDMS<br>20min. @ 50°C<br>headspace              | GC-MS                |
| Comparison of SPME and Dynamic Headspace Methods for         |                                                    |                                                                                                                                                                                                                                                                                           |                                                               |                      |
| 386                                                          | Oxidative byproducts in milk                       | the GC-MS Analysis of Lighted Induced Lipid Oxidation Products in Milk<br><i>J. Chromatogr. Sci. 1999, 37, 17-23</i><br>Marsili, R.                                                                                                                                                       | 75µm Carboxen/PDMS<br>45°C, 15 min<br>headspace<br>salt added | GC-MS                |
| 2274                                                         | Off-flavors in skim milk powder                    | Influence of flavor variability in skim milk powder on consumer acceptability of ingredient applications<br><i>J Food Science 70 #7, S427-S431 (2005)</i><br>Caudle, Alissa D.; Yoon, Youngmo; Drake, Maryanne                                                                            | headspace                                                     | GC/MS                |
| 2301                                                         | Off-flavor compounds in milk                       | Quantitative determination of thermally derived off-flavor compounds in milk using SPME-GC<br><i>J Dairy Science 88 #11, 3764-3772 (2005)</i><br>Vazquez-Landaverde, P. A.; Velazquez, G.; Torres, J. A.; Qian, M.                                                                        | headspace                                                     | GC/MS                |
| 372                                                          | Off-flavors                                        | SPME-MS-MVA as an Electronic Nose for the Study of Off-Flavors in Milk                                                                                                                                                                                                                    | 75µm Carboxen/PDMS                                            | GC-MS                |

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|      | in milk                                | J. Agric. Food Chem. 1999, 47, 648-654<br>Marsili, R.                                                                                                                                                                                                                                                              | 45°C, 12 min<br>headspace                                     |           |
| 2627 | Volatile flavors<br>in milk            | <b>Research advances: Squeezing more shelf life out of milk</b><br><i>J Chem Educ</i> 84, #4, 572-574 (April 2007)<br>King, Angela G.                                                                                                                                                                              | headspace                                                     | GC/MS     |
| 2148 | Odors from<br>peanut milk<br>powder    | <b>Removal of odours from milk prepared from peanut</b><br><i>J Food Sci Technol</i> , 43, #2, 205-209 (2006)<br>Bangoura, Mamadouba; Nong, Zhang Guo                                                                                                                                                              | headspace                                                     | GC/MS     |
| 2369 | Musk compounds<br>in breast milk       | <b>SPE/SPME-GC/MS approach for measuring musk compounds in .</b><br>serum and breast milk<br><i>Food Chemistry</i> 102, #4,1156-1162 ( 2007 )<br>Ho, C. W.; Aida, W. M. Wan; Maskat, M. Y.; Osman, H.                                                                                                              |                                                               | GC/MS     |
| 621  | Chlorinated organics<br>in breast milk | Application of SPME for the rapid analysis of chlorinated<br>organics in breast milk<br>Fresenius, J. Anal.Chem, Jan 2000, 366(1), 106-111<br>Rohrig, L., Meisch, H.                                                                                                                                               |                                                               | GC-ECD    |
| 749  | Acetaldehyde<br>in milk & water        | Flavor threshold for acetaldehyde in milk, chocolate milk, and<br>spring water using SPME-GC for quantification<br>J.Agric.FoodChem 2001, 49(3), 1377-1381<br>vanAardt, M., Duncan, S., Bourne, D., Marcy, J., Long, T.,<br>Hackney, C., Heisey, C.,                                                               | 75µm Carboxen/PDMS<br>45°C, 15 min<br>headspace<br>salt added | GC-FID    |
| 364  | Off-flavors<br>in food                 | Off Flavor and Malodors in Food: Mechanism of Formation<br>and Analytical Techniques<br>Book-Techniques for Analyzing Food Aroma,<br>Marcel Decker ISBN: 0-8247-9788-4<br>Marsili, R.                                                                                                                              | various fibers<br>and conditions                              | GC        |
| 376  | Volatile metabolites<br>in water       | Evaluation of SPME for Analysis of Volatile Metabolites<br>Produced by Staphylococci<br>J. Agric. Food Chem. 1998, 46, 228-234<br>Vergnais, L., Masson, F., Montel, M., Berdague, J., Talon, R.                                                                                                                    | 85µm polyacrylate<br>80°C, 15 min<br>headspace, stirring      | GC-FID    |
| 365  | Volatiles<br>in tea                    | Determination of Volatile Organic Compounds in Tea<br>Industrie de la Bevande XXVI (1997) febralo, 19-22<br>Guidotti, M.                                                                                                                                                                                           | 100µm PDMS<br>50°C, 15 min<br>headspace                       | GC-MS     |
| 2699 | Vitamine K from<br>green tea leaves    | <b>Analysis of vitamin K in green tea leaves and infusions by SPME-GC-FID</b><br><i>FOOD CHEM.</i> 100, #1, 405-411 (2006)<br>Reto, M.; Figueira, M. E.; Filipe, H. M.; Almeida, C. M. M.                                                                                                                          | 7µm PDMS<br>immersion<br>40°C, 45 min                         | GC-FID    |
| 2802 | Pesticides in<br>tea samples           | <b>Application of head-space SPME coupled to comprehensive<br/>two-dimensional GC-TOF-MS for the determination of multiple<br/>pesticide residues in tea samples</b><br><i>Analytica Chimica Acta</i> 611, #2, 163-172 (MAR 24 2008)<br><br>Schurek, J.; Portoles, T.; Hajslova, J.; Riddellova, K.; Hernandez, F. | headspace                                                     | GC-TOF-MS |
| 2378 | Aromatic<br>compounds<br>in green tea  | <b>Analysis of aromatic components in Wuzi green tea by SPME/GC/MS</b><br><i>Xibei Zhiwu Xuebao</i> 27, #2, 371-376 ( FEB 2007)<br>Liu La-ping; Shi Ya-ge; Zhang Rui-ming; Li Lan; Yang Rong                                                                                                                       | in Chinese                                                    | GC-MS     |
| 622  | Polyphenols<br>in green tea            | Comparative Study and Partial characterization of Azorean<br>green Tea Polyphenols<br>J. Food Compos. Anal. (1999), 12(4), 273-287<br>Baptista, J., da P Tavares, J., Carvalho, R.                                                                                                                                 |                                                               |           |
| 319  | Caffeine<br>in tea, coffee             | Quantitative Determination of Caffeine in Beverages,<br>Using a Combined SPME-GC-MS Method<br>J. Chem. Educ. 74 (9): 1130-1132 (1997)<br>Yang, M., Orton, M., Pawliszyn, J.                                                                                                                                        | bare fiber                                                    | GC-MS     |

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| 381  | Aroma volatiles in coffee       | Characterization of Roasted Coffee and Coffee Beverages by SPME-GC and Principal Component Analysis<br>J. Agric. Food Chem. 1997, 45: 4680-4686<br>Bicchi, C., Panero, O., Pellegrino, G., Vanni, A.                                                                                                     | 100µm PDMS,<br>7µm PDMS<br>60°C, 5 min<br>headspace                                       | GC-MS    |
| 302  | Volatile aroma in brewed coffee | Obtention of a Brewed Coffee Aroma Extract by an Optimized Supercritical CO <sub>2</sub> -Based Process<br>J. Agric. Food Chem. 1998, 46, 4011-4016<br>Ramos, E., Valero, E., Ibanez, E., Reglero, G., Tabera, J.                                                                                        | 100µm PDMS<br>60°C, 10 min<br>headspace                                                   | GC-MS    |
| 623  | Aroma volatiles in coffee       | SPME Method Development for Headspace analysis of volatile flavor compounds<br>J. Agri. Food Chem 2000, 48, (6) 2430-2437<br>Roberts, D., Pollien, P., Milo, C.                                                                                                                                          | PDMS/DVB<br>60 min headspace<br>pH 2                                                      | GC-MS    |
| 624  | 2-Acetyl-1-pyrroline in rice    | Screening for 2-Acetyl-1-pyrroline in the Headspace of Rice using SPME/GC-MS<br>J. Agric. Food Chem 2001, 49, 245-249<br>Grimm, C, Bergman, J.C., Delgado, J., Bryant, R.                                                                                                                                | 80µm<br>Carboxen/DVB/PDMS<br>80°C, 15 min<br>headspace<br>.75gm in 100µl H <sub>2</sub> O | GC-MS    |
| 2642 | 2-MIB, geosmin in water         | <b>Removal of geosmin and 2-methylisoborneol (2-MIB) in water from Zuikerbosch Treatment Plant (Rand Water) using β-cyclodextrin polyurethanes</b><br><b>Water SA 33, #2, 223-227 (April 2007)</b><br><b>Krause, R.; Malefetse, T.; Mamba, B.; Mhlanga, S.; Nxumalo, E.; Salipira, K.L.; Sithole, S.</b> | headspace                                                                                 | GC-MS    |
| 464  | 2-MIB, geosmin in water         | Microwave mediated distillation with SPME determination off-flavors, geosmin and methylisoborneol, in catfish tissue<br>J. Chromatogr. A (1999), 833(2), 223-230<br>Zhu, M., Aviles, F., Conte, E., Miller, D., Perschbacher, P.                                                                         | 100µm PDMS<br>25 min<br>immersed<br>salt added                                            | GC-MS    |
| 625  | 2-MIB, geosmin in water         | Microwave Distillation-SPME-GC Analysis of 2-methylisoborneol and Geosmin in Catfish<br>Am-Lab Feb 2000: 32(3), 40-48<br>Lloyd, S., Grimm, C.                                                                                                                                                            | 80µm<br>Carboxen/DVB/PDMS<br>60°C, 20 min<br>heospace                                     | GC-IC-MS |
|      | 2-MIB, geosmin in water         | Analysis of 2-Methylisoborneol and Geosmin in Catfish by Microwave Distillation-SPME<br>J. Agri. Food Chem., 47, No. 1, pg. 164-169, 1999<br>Lloyd, S., Grimm, C.                                                                                                                                        | 100µm PDMS<br>40°C, 15 min<br>saturated salt                                              | GC-MS    |
| 362  | MIB & geosmin in water          | Determination of Geosmin and 2-Methylisoborneol in Water Using SPME and GC-Chemical Ionization/Electron Impact Ionization Ion Trap MS<br>Analyst (Cambridge, U.K.) (1998), 123 (10), 2155-2160<br>McCallum, R., Pendleton, P., Scumann, R., Trinh, M.                                                    | stirring<br>Carboxen/DVB/PDMS<br>60°C, 30 min<br>headspace<br>stirring<br>salt added      | GC-MS    |
| 2429 | MTBE in drinking water          | <b>Evaluating peats for their capacities to extract methyl tertiary butyl ether from contaminated water using SPME-GC</b><br><b>J Environ Sci Health A 43, #2, 132-43 (2008 Feb)</b><br><b>Rizzuti, Anthony M; Cohen, Arthur D; Nguyen, Dung D</b>                                                       | headspace                                                                                 | GC-MS    |
| 2871 | MTBE in drinking water          | <b>Evaluating peats for their capacities to extract methyl tertiary butyl ether from contaminated water using SPME-GC</b><br><b>J EnviSci and Health Part A 43, #6, 672-673 (2008)</b><br><b>Rizzuti, Anthony</b>                                                                                        | headspace                                                                                 | GC-MS    |
| 2531 | VOCs from poultry manure        | <b>Evaluation of zeolite for control of odorants emissions from simulated poultry manure storage</b><br><b>J. ENVIRON. QUAL. 36, #1,184-193 (2007)</b><br><b>Cai, L.; Koziel, J. A.; Liang, Y.; Nguyen, A. T.; Xin, H.</b>                                                                               | headspace                                                                                 | GC-MS    |
| 465  | C2-C10 acid, aldehydes, phenols | Evaluating Peats for their capacities to remove odorous compounds from liquid swine manure using headspace SPME                                                                                                                                                                                          | 85µm polyacrylate<br>20 min @ 72°C                                                        | GC-MS    |



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|                                                                            | in swine manure                                   | J. Environ. Sci. Health, B34(4), 709-748 (1999)<br>Rizzuti, A., Cohen, A., Hunt, P., Vanotti, M.                                                                                                                                                                                                                                    | headspace, pH 2                |              |
| <b>Headspace-SPME-GC as a tool to define an index that establishes the</b> |                                                   |                                                                                                                                                                                                                                                                                                                                     |                                |              |
| <b>2722</b>                                                                | <b>Ethyl esters in wine</b>                       | <b>retention capacity of the wine polymeric fraction towards ethyl esters</b><br><i>J. Chromatogr. A</i> <b>1150</b> , #1-2, 155-161 (2007)<br><b>Rocha, S. M.; Coutinho, P.; Delgadillo, I.; Coimbra, M. A.</b>                                                                                                                    | <b>headspace</b>               | <b>GC</b>    |
| 966                                                                        | Esters in wine                                    | Analysis of esters in wines<br><i>J. Chromatogr. A</i> (2002) 963(1-2), 213-223<br>Rodriguez-Bencomo, J.J.; Conde, J.E.; Rodriguez-Delgado, M.A.; Garcia-Montelongo, F.; Perez-Trujillo, J.P.                                                                                                                                       | Various                        | GC           |
| 967                                                                        | Aroma in onions                                   | Flavor and odor differences between fresh and preserved onions<br><i>J. Chromatogr. A</i> (2002) 963(1-2), 89-93<br>Mondy, N.; Duplat, D.; Christides, J.P.; Arnault, L.; Auger, J.                                                                                                                                                 | Polyacrylate                   | GC-MS        |
| 968                                                                        | Volatiles in olive oil                            | Influence of crushing technique on composition of volatiles in olive oil<br><i>European Journal of Lipid Science and Technology</i> (2002) 104(8), 483-489<br>Servili, M.; Piacquadio, P.; de Stefano, G.; Taticchi, A.; Sciancalepore, V.                                                                                          | 65 um Carbowax/DVB<br>30 mins. | GC-MS        |
| 969                                                                        | Volatiles in dry-cured ham                        | Monitoring volatile compounds during the dry-cured ham ripening process<br><i>J. Chromatogr. A</i> (2002) 963(1-2), 83-88<br>Andres, A.I.; Cava, R.; Ruiz, J.                                                                                                                                                                       |                                |              |
| 970                                                                        | Bisphenol in food packaging                       | Bisphenol type contaminants from food packaging materials in aqueous foods.<br><i>J. Chromatogr. A</i> (2002) 963(1-2), 375-380<br>Nerin, C.; Philo, M.R.; Salafranca, J.; Castle, L.                                                                                                                                               |                                | HPLC         |
| 992                                                                        | Odour compounds in food packaging materials       | Development of headspace SPME, GC-MS method for the identification of odour causing volatile compounds in packaging materials.<br><i>J. Chromatogr. A</i> (2002) 963(1-2), 381-392<br>Ezquerro, O.; Pons, B.; Tena, M.T.                                                                                                            | 75 um carboxen/PDMS            | GC-MS        |
| 996                                                                        | Photooxidative quality changes of havarti cheese. | Response surface models used for prediction of photooxidative quality changes of havarti cheese.<br><i>European Food Research and Technology</i> (2003) 216 (2), 93-98.<br>Stapelfeldt, Henrik; Mortensen, Grith; Sorensen, John.                                                                                                   |                                | GC-MS        |
| 997                                                                        |                                                   | Solid phase micro-extraction technique and its applications in medical analysis.<br><i>Yaoxue Xuebao</i> (2003) 38 (2), 153-158.<br>Liu Zhen-ling; Wu Cai-ying.                                                                                                                                                                     |                                |              |
| 999                                                                        | Volatile compounds from scallops                  | Volatile compounds recovered by solid-phase microextraction from fresh adductor muscle and total lipids from sea scallop ( <i>Placopecten magellanicus</i> ) from Georges Bank (Nova Scotia).<br><i>Journal of Food Science</i> (2002) 67 (6), 2032-2037.<br>Linder, M.; Ackman, R. G.                                              | PDMS/DVB<br>250 C, 2 minutes   | GC-MS        |
| 1007                                                                       | Insecticides in fruit                             | Headspace solid-phase microextraction in combination with gas chromatography-mass spectrometry for the rapid screening of organophosphorus insecticide residues in strawberries and cherries<br><i>J. Chromatogr. A</i> (2003) 993(1-2), 197-203.<br>Albanis, Triantafyllos A.; Lambropoulou, Dimitra A.                            |                                | GC-MS        |
| 1012                                                                       | Mercury in fish                                   | Solid phase microextraction capillary gas chromatography combined with furnace atomization plasma emission spectrometry for speciation of mercury in fish tissues<br><i>Spectrochimica Acta - Part B Atomic Spectroscopy</i> (2003) 58 (3), 427-441.<br>Campos, Reinaldo C.; Grinberg, Patricia; Mester, Zoltan; Sturgeon, Ralph E. |                                | GC-FAPES     |
| <b>2781</b>                                                                | <b>Volatiles in</b>                               | <b>Headspace volatiles of <i>Scutellaria californica</i> A. Gray flowers</b><br><i>J. Essent. Oil Res.</i> <b>20</b> , #2, 169-171 (March/April 2008)                                                                                                                                                                               | <b>headspace</b>               | <b>GC-MS</b> |

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| gray flowers                                    | Dao, Lan; Patterson, Robert; Rodriguez, David; Takeoka, G.                                                                                                                                                                                                                                                                                     |                                |       |
| 2768 Volatiles in lavender flowers              | Analysis of the volatile compounds of flowers and essential oils from <i>Lavandula angustifolia</i> cultivated in northeastern Italy by headspace SPME -GC-MS<br><i>Planta Medica</i> 74, #2, 182-187 (FEB 2008)<br>Da Porto, Carla; Decorti, Deborha                                                                                          | Carboxen/DVB headspace 50 min. | GC-MS |
| 2470 Volatiles in daffodil flowers.             | Use of SPME as a sampling technique for the characterization of volatile compounds emitted from Chinese daffodil flowers.<br><i>J. Anal. Chem. (Transl. Zh. Anal. Khim.)</i> 62, #7, 674-679 (2007-07)<br>Song, G.; Xiao, J.; Deng, C.; Zhang, X.; Hu, Y.                                                                                      | headspace                      | GC-MS |
| 1016 Volatiles in flowers                       | Volatile constituents of the leaves and flowers of <i>Hypericum triquetrifolium</i> Turra<br><i>Flavour and Fragrance Journal</i> (2003) 18 (2), 91-94.<br>Bertoli, Alessandra; Mazzetti, Michele; Menichini, Francesco; Morelli, Ivano; Spinelli, Guido                                                                                       |                                | GC-MS |
| 1017 Volatile byproducts in wine                | Evolution of volatile byproducts during wine fermentations using immobilized cells on grape skins.<br><i>Journal of Agricultural and Food Chemistry</i> (2003) 51 (8), 2402-2408.<br>Komatis, Michael; Kanellaki, Maria; Koutinas, Athanasios; Mallouchos, Athanasios                                                                          |                                |       |
| 1018 Terpenoids from hemlock                    | Analysis of terpenoids from hemlock ( <i>Tsuga</i> ) species by solid-phase microextraction/gas chromatography/ion-trap mass spectrometry.<br><i>Journal of Agricultural and Food Chemistry</i> (2003) 51 (8), 2115-21120.<br>Lagalante, Anthony F.; Montgomery, Michael E.                                                                    |                                | GC-MS |
| 1027 Volatiles from meats                       | Volatile components associated with freshly cooked and oxidized off-flavours in turkey breast meat.<br><i>Flavour and Fragrance Journal</i> 2002) 17 (5), 327-334.<br>Brunton, N. P.; Cronin, D. A.*; Monahan, F. J.                                                                                                                           |                                | GC-MS |
| 1044 Volatiles and semi-volatile in cigarettes. | Analysis of volatile and semivolatile composition in cut tobacco and total particulate matter of cigarettes with SPME-GC-MS.<br><i>Fenxi Shiyanshi</i> (2002) 21 (5), 31-35.<br>Li, R.; Wang, L.; Li, Q.; Tong, X. D.                                                                                                                          | 85 um Polyacrylate             | GC-MS |
| 2376 2-ethylhexanoic acid in baby food          | <b>Survey of 2-ethylhexanoic acid in baby food</b><br><i>Food Additives and Contaminants</i> 24, #7, 792-797 (JUL 2007)<br>Ezerskis, Z.; Pastorelli, S.; Contini, C.; Simoneau, C.                                                                                                                                                             |                                |       |
| 1052 Oxidation of infant formula                | Comparison of mass spectrometry-based electronic nose and solid phase microextraction gas chromatography-mass spectrometry technique to assess infant formula oxidation.<br><i>Journal of Agricultural and Food Chemistry</i> (2003) 51 (9), 2790-2796.<br>Guy, Philippe A.; Fenaille, Francois; Fumeaux, Rene; Milo, Christian; Visani, Piero |                                | GC-MS |
| 1053 Aroma compounds                            | Formation of aroma compounds from ribose and cysteine during the maillard reaction.<br><i>Journal of Agricultural and Food Chemistry</i> (2003) 51 (9), 2714-2721.<br>Cerny, Christoph; Davidek, Tomas                                                                                                                                         |                                | GC-MS |
| 2497 Volatile compounds rapeseed oil            | <b>A headspace-SPME-MS method for monitoring rapeseed oil autoxidation</b><br><i>J Am Oil Chemists' Society</i> 84, #6, 509-517 (JUN 2007)<br>Jelen, H. H.; Mildner-Szkudlarz, S.; Jasinska, I.; Wasowicz, E                                                                                                                                   | headspace                      | GC-MS |
| 1055 Volatile compounds hazelnut oil.           | Solid-phase microextraction for studies on the enantiomeric composition of filbertone in hazelnut oils.<br><i>Journal of Agricultural and Food Chemistry</i> (2003) 51 (9), 2496-2500.<br>Ruiz del Castillo, M. L.; Blanch, G. P.; Flores, G.; Herraiz, M.                                                                                     |                                |       |
| 1063 Volatile compounds from tea leaves.        | Changes in lipoxygenase activity and volatile compounds of fresh tea leaves during early growing season.<br><i>Agricultural Chemistry and Biotechnology</i> (2003) 46 (1), 23-27.<br>Park, Seung-Kook; Kim, Hyun-Jeong; Lee, Sang-Jun; Roh, Jin-Chul; Ryu, Sung-Kwon                                                                           |                                | GC-MS |

|      |                                                      |                                                                                                                                                                                                                                                                                                                       |                                              |           |
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| 1064 | Volatile compounds from kimchi.                      | Optimization of solid-phase microextraction for the analysis of the headspace volatile compounds in kimchi, a traditional Korean fermented vegetable product.<br><i>Journal of Food Science</i> (2003) 68 (3), 844-848.<br>Min, D. B.; Kang, J. H.; Lee, J. H.                                                        | 100 µm PDMS                                  |           |
| 1077 | Volatile phenols in wine.                            | Optimisation of headspace solid-phase microextraction for the analysis of volatile phenols in wine<br><i>Journal of Chromatography A</i> (2003) 995 (1-2), 11-20.<br>Castro Mejias, Remedios; Garcia Barroso, Carmelo; Garcia Moreno, Ma. De Valme; Natera Marin, Ramon                                               | Carbowax/DVB                                 |           |
| 2344 | Off-flavours from cork                               | <b>Simultaneous headspace SPME analysis of off-flavour compounds from <i>Quercus suber</i> L. cork.</b><br><i>J. Sci. Food Agric.</i> 87, #4, 632-640 (2007-03)<br>Neto, P. V.; Rocha, S. M.; Silvestre, A. J. D.                                                                                                     | headspace                                    | GC-MS     |
| 2424 | Chloroanisoles from cork.                            | <b>Fast and sensitive method to determine chloroanisoles in cork using an internally cooled solid-phase microextraction fiber</b><br><i>J. Chromatogr., A</i> 1138, #1-2, 10-17 (2007-01-05)<br>Carasek, E.; Cudjoe, E.; Pawliszyn, J.                                                                                | 65 µm PDMS/DVB<br>75 min @ 85°C<br>headspace | GC-TOF-MS |
| 1065 | Chloroanisoles from cork.                            | Optimization of headspace sampling using solid-phase microextraction for chloroanisoles in cork stoppers and gas chromatography-ion-trap tandem mass spectrometric analysis.<br><i>Journal of Separation Science</i> (2003) 26 (5), 369-375.<br>Musci, Marilena; Bianchi, Federica; Careri, Maria; Mangia, Alessandro | 75 µm Carboxen/PDMS                          | GC-MS-MS  |
| 1066 | Volatile free fatty acids in ewe cheese.             | Solid-phase microextraction in combination with GC-MS for quantification of the major volatile free fatty acids in ewe cheese.<br><i>Analytical Chemistry</i> (2002) 74 (20), 5199-5204.<br>Pinho, O.; Ferreira, I. M. P. L. V. O.*; Ferreira, M. A.                                                                  | 85 µm polyacrylate                           | GC-MS     |
| 1067 | Pyrimethanil and kresoxim-methyl in green groceries. | Determination of pyrimethanil and kresoxim-methyl in green groceries by headspace solid-phase microextraction and gas chromatography-mass spectrometry.<br><i>Journal of Chromatography, A</i> (2002) 975 (2), 355-360.<br>Navalon, A.; Prieto, A.; Araujo, L.; Vilchez, J. L.*                                       | 85 µm polyacrylate                           | GC-MS     |
| 1080 | Aroma compounds in mango.                            | Distribution of aroma volatile compounds in different parts of mango fruit.<br><i>Journal of Horticultural Science &amp; Biotechnology</i> (2003) 78 (2), 131-138.<br>Singh, Zora; Lalel, H. J. D.; Tan, S. C.                                                                                                        |                                              | GC-MS     |
| 1081 | Odors from overripe mango.                           | Identification of odors from overripe mango that attract vinegar flies, <i>Drosophila melanogaster</i> .<br><i>Journal of Chemical Ecol</i> (2003) 29 (4), 899-909.<br>Zhu, Junwei; Baker, Thomas C.; Park, Kye-Chung                                                                                                 |                                              | GC-EAD    |
| 1083 | Methyl jasmonate                                     | Prediction correlation of vapor pressure for methyl jasmonate<br><i>Journal of Food Engineering</i> (2003) 59 (4), 431-433.<br>Acevedo, C.; Sanchez, E.; Simpson, R.; Young, M.E.                                                                                                                                     |                                              | GC-MS     |
| 2545 | Volatiles from mulberry leaves                       | <b>Analysis of volatile chemical composition in mulberry leaves using microwave assisted extraction associated with SPME</b><br><i>Chemistry and Industry of Forest Products</i> 27, #3, 107-110 (2007)<br>Li JieHong; Chen DaiWu                                                                                     | headspace                                    | GC-MS     |
| 2436 | Fenitrothion in poplar leaves                        | <b>Quantification of fenitrothion and its main metabolites in poplar leaves by isotope dilution GC-MS coupled with SPME</b><br><i>J. Chromatogr. A</i> 1177, #1, 170-174 (Jan 4 2008)<br>Barrio, R.; Goicolea, M.; Millan, S.; Rodriguez, E.; Sampedro, M.; Sanchez, A.; Unceta, N.                                   |                                              | GC-MS     |

|      |                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                              |                    |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|--------------------|
|      | Changes in volatile compounds of small gamma -irradiated fresh cilantro leaves during cold storage.                                                                                                                                                                                                                                                                                                                                  |                                                              |                    |
| 1085 | Volatile compounds from cilantro<br><i>Journal of Agricultural and Food Chemistry (2002) 50 (26), 7622-7626.</i><br>Fan, X. T.; Sokorai, K. J. B.                                                                                                                                                                                                                                                                                    |                                                              | GC-MS              |
| 1086 | Ethanol in Tequila<br>Tequila authenticity assessment by headspace SPME-HRGC-IRMS analysis of carbon-13/carbon-12 and oxygen-18/oxygen-16 ratios of ethanol.<br><i>Journal of Agricultural and Food Chemistry (2002) 50 (26), 7520-7523.</i><br>Aguilar-Cisneros, B. O.; Lopez, M. G.; Richling, E.; Heckel, F.; Schreier, P. *                                                                                                      |                                                              | GC-MS              |
| 1087 | Butyltin compounds in alcoholic beverages<br>Survey on the presence of butyltin compounds in Chinese alcoholic beverages, determined by using headspace solid-phase microextraction coupled with gas chromatography-flame photometric detection.<br><i>Journal of Agricultural and Food Chemistry (2002) 50 (23), 6683-6687.</i><br>Liu, J. Y.; Jiang, G. B.*                                                                        |                                                              | GC-MS              |
| 1088 | Ethanediol and diethyl disulfide in wine.<br>Synthesis and stable isotope dilution assay of ethanethiol and diethyl disulfide in wine using solid phase microextraction. Effect of aging on their levels in wine.<br><i>Journal of Agricultural and Food Chemistry (2002) 50 (23), 6653-6658.</i><br>Majcenovic, A. B.; Schneider, R.; Lepoutre, J. -P.; Lempereur, V.; Baumes, R. *                                                 |                                                              | GC-MS              |
| 1089 | Aroma compounds from tomatoes.<br>Differential effects of tomato ( <i>Lycopersicon esculentum</i> Mill) matrix on the volatility of important aroma compounds.<br><i>Journal of Agricultural and Food Chemistry (2003) 51 (3), 722-726.</i><br>Bezman, Y.; Mayer, F.; Takeoka, G. R.; Buttery, R. G.; Ben-Oliel, G.; Rabinowitch, H. D.; Naim, M.                                                                                    |                                                              |                    |
| 2246 | Flavour volatiles in milk<br><b>Stale flavour volatiles in Australian commercial UHT milk during storage</b><br><i>Australian J Dairy Technology 60, #3, 231-237 (2005)</i><br>Perkins, M.; Elliott, A.; D'Arcy, B.; Deeth, Hilton C.                                                                                                                                                                                                | headspace                                                    | GC-FiD             |
| 1090 | Volatile fraction of milk<br>Volatile fraction of milk: comparison between purge and trap and solid phase microextraction techniques.<br><i>Journal of Agricultural and Food Chemistry (2002) 50 (25), 7350-7355.</i><br>Contarini, G.; Povo, M.                                                                                                                                                                                     |                                                              |                    |
| 1091 | VOC's from eucalyptus.<br>SPME applied to the study of volatile organic compounds emitted by three species of Eucalyptus in situ.<br><i>Journal of Agricultural and Food Chemistry (2002) 50 (25), 7199-7205.</i><br>Zini, C. A.; Augusto, F.; Christensen, E.; Caramao, E. B.; Pawliszyn, J. *                                                                                                                                      | 65 µm PDMS/DVB                                               | GC-MS              |
| 1105 | Volatiles in mango<br>Headspace solid-phase microextraction and gas chromatography-mass spectrometry analysis of free volatile compounds in Mango.<br><i>Chromatographia (2002) 55(11-12), 737-741</i><br>Shang, C. Q.; Deng, C. H.; Zhang, X. Y.; Chen, Z. F.; Hu, Y. M.                                                                                                                                                            |                                                              | GC-MS              |
| 2524 | Methylmercury<br><b>Optimization of headspace SPME-GC-AED analysis of monomethylmercury</b><br><i>J Chromatogr A 1174, #1-2, 7-12 (2007 Dec 7)</i><br>Geerdink, Renoe Bernard; Breidenbach, Rembert; Epema, O.                                                                                                                                                                                                                       | 65 µm PDMS/DVB<br>100 µm PDMS<br>NaBPh4 derivative headspace | GC-AED             |
| 2612 | Methylmercury in mussel tissue<br><b>Certification of methylmercury content in two fresh-frozen reference materials: SRM 1947 Lake Michigan fish tissue and SRM 1974b organics in mussel tissue (<i>Mytilus edulis</i>).</b><br><i>Anal Bioanal Chem 387, #7, 2335-41 (2007 Apr)</i><br>Davis, W .; Christopher, S.; Pugh, R.; Donard, O.; Krupp, E.; Point,D.; Horvat, M.; Gibicar, D; Kljakovic-Gaspic, Z; Porter, B.; Schantz, M. | 100 µm PDMS<br>NaBPh4 derivative headspace                   | GC-MS<br>GC-ICP-MS |
|      | <b>Comparison of extraction procedures for methylmercury</b>                                                                                                                                                                                                                                                                                                                                                                         |                                                              |                    |

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|------|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-----------|
| 2676 | Methylmercury<br>in marine fish              | determination by a SPME-GC-AFS system<br><i>Microchemical Journal</i> 85, #1, 122-126 (JAN 2007)<br>Abranko, Laszlo; Kmellar, Bela; Fodor, Peter                                                                                                                                                                                                                    | immersion<br><br>NaBPh4<br>derivative | GC        |
| 2286 | Methylmercury<br>in marine fish              | SPME-GC-pyrolysis-AFS determination of methylmercury in<br>marine fish products by alkaline sample preparation and aqueous<br>phase phenylation derivatization<br><i>J Ag Food Chem</i> 53, #14, 5499-5505 (2005)<br>Jokai, Zsuzsa; Abranko, Laszlo; Fodor, Peter                                                                                                   | immersion<br><br>NaBPh4<br>derivative | GC        |
| 1106 | Methylmercury in fish.                       | Determination of methylmercury in fish tissues by isotope dilution SPME-GC-<br>ICP-MS<br><i>Journal of Analytical Atomic Spectrometry</i> (2003) 18 (5), 431-436.<br>Mester, Zoltan; Sturgeon, Ralph E.; Yang, Lu                                                                                                                                                   | PDMS                                  | GC-ICP-MS |
| 2444 | Acetates in wine                             | GC-MS determination of 3-mercaptopropan-1-ol and 3-mercaptopentyl<br>acetate in wine: A comparison of headspace SPME and<br>solid phase extraction methods<br><i>Anal. Chim. Acta</i> 596, #2, 291-297 (2007-07-23)<br>Fedrizzi, B.; Versini, G.; Lavagnini, I.; Nicolini, G.; Magno, F.                                                                            | headspace                             | GC/MS     |
| 1127 | Alcohols, acetates in<br>sweet wines.        | Determination of major compounds in sweet wines by headspace solid-phase<br>microextraction and gas chromatography.<br><i>Journal of Chromatography, A</i> (2003) 991 (1), 13-22.<br>Rodriguez-Bencomo, J. J.; Conde, J. E.; Garcia-Montelongo, F.; Perez-Trujillo,<br>J. P.*                                                                                       |                                       | GC        |
| 2226 | Off-flavors<br>in wine                       | Detection of 2-aminoacetophenone off-flavor in wine by SPME-<br>and SIM GC-MS<br><i>American Journal of Enology and Viticulture</i> 56 #3, 302A (2005)<br>Qian, Michael; Fan, Wenlai                                                                                                                                                                                | headspace                             | SIM GC-MS |
| 1128 | 2,4,6-trichloroanisole in<br>wine.           | Determination of 2,4,6-trichloroanisole in wines by headspace solid-phase<br>microextraction and gas chromatography-electron-capture detection.<br><i>Journal of Chromatography, A</i> (2002) 977 (1), 1-8.<br>Riu, M.; Mestres, M.; Busto, O. *; Guasch, J.                                                                                                        |                                       | GC-ECD    |
| 2312 | Volatiles from<br>wine                       | Contribution to the characterisation of wines from the grape<br>cultivars 'Rotgipfler' and 'Zierfandler' from the winegrowing<br>region Thermenregion in Austria.<br><i>Mitteilungen Klosterneuburg</i> 55 #5-6, 129-139 (2006) (German)<br>Flak, W.; Krizan, Rudolf; Sturm, Paul; Tscheik, Gabriele; Wallner, Erich                                                | headspace                             | GC/MS     |
| 2229 | Volatiles in<br>siriguella fruit             | Analysis of volatile composition of siriguella ( <i>Spondias purpurea</i> L.)<br>by SPME<br><i>Food Sci. Technol.</i> 39 #4, 436-442 (2006)<br>Antunes, O.; Bizzo, H.; Carvalho, C.; Ceva-Antunes, P.Silva, A.                                                                                                                                                      | DVB/CAR 50/30µm                       |           |
| 1129 | VOC's in fruit                               | Analysis of volatile compounds of tapereba ( <i>Spondias mombin</i> L.) and caja ( <i>Spondias mombin</i> L.) by simultaneous distillation and extraction (SDE) and<br>solid phase microextraction (SPME).<br><i>Journal of Agricultural and Food Chemistry</i> (2003) 51 (5), 1387-1392.<br>Ceva-Antunes, P. M. N.; Bizzo, H. R.; Alves, S. M.; Antunes, O. A. C.* | DVB/CAR/PDMS                          |           |
| 2353 | Volatile organics<br>in human milk           | Volatile organic compounds in human milk: methods and measurements<br><i>Envl Sci &amp; Tech</i> 41, # 5, 1662-1667 (2007)<br>Kim, S. R.; Halden, R. U.; Buckley, T. J.                                                                                                                                                                                             | headspace                             | GC/MS/SIM |
| 1130 | Volatile compounds in<br>goat's milk cheese. | Study of light-induced volatile compounds in goat apostrophe s milk cheese.<br><i>Journal of Agricultural and Food Chemistry</i> (2003) 51 (5), 1405-1409.<br>Kim, G. Y.; Lee, J. H.; Min, D. B.*                                                                                                                                                                   |                                       | GC-MS     |
| 1131 | Volatile compounds in<br>parmesan cheese.    | Optimization of solid phase microextraction analysis for the headspace volatile<br>compounds of Parmesan cheese.<br><i>Journal of Agricultural and Food Chemistry</i> (2003) 51 (5), 1136-1140.<br>Lee, J. H.; Diono, R.; Kim, G. Y.; Min, D. B.*                                                                                                                   |                                       |           |

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| 2877 | Aroma volatiles in olive oil    | Influence of bleaching by ultrasound on fatty acids and minor compounds of olive oil. Qualitative and quantitative analysis of volatile compounds (by SPME coupled to GC/MS) <i>Ultrason. Sonochem.</i> 15, #4, 590-597 (April 2008)<br>Adams, A.; De Kimpe, N.; Frikha, M.H.; Jahouach-Rabai, W.; Trabelsi, M.; Van Hoed, V.; Verhe, R.                                        | headspace     | GC/MS           |
| 2841 | Volatile from virgin olive oil. | Characterization of monovarietal virgin olive oils from six crossing varieties<br><i>Scientia Horticulturae (Amsterdam)</i> 115, #3, 252-260 (FEB 1 2008)<br>Manai, H.; Mahjoub-Haddada, F.; Oueslati, I.; Daoud, D.; Zarrouk, M.                                                                                                                                               | headspace     | GC/MS<br>GC/FID |
| 2736 | Volatile from virgin olive oil. | Application of SPME to the analysis of volatile compounds in virgin olive oils from five new cultivars.<br><i>Food Chemistry</i> 102, #3, 850-856 (2007)<br>Baccouri, B.; Temime, S.; Campeol, E.; Cioni, P.; Daoud, D.; Zarrouk, M.                                                                                                                                            | headspace     | GC/MS           |
| 2827 | Volatile from virgin olive oil. | Characterization of virgin olive oil from Southern Tunisia<br><i>European J. Lipid Science and Tech.</i> 110, #1, 81-88 (JAN 2008)<br>Zarrouk, W.; Haddada, F.; Baccouri, B.; Oueslati, I.; Taamalli, W.; Fernandez, X.; Lizzani-Cuvelier, L.; Daoud, D.; Zarrouk, M.                                                                                                           | headspace     | GC/MS           |
| 2475 | Volatile from virgin olive oil. | Profiles of volatile compounds from some monovarietal Tunisian virgin olive oils. Comparison with French PDO<br><i>Food Chemistry</i> 103, #2, 467-476 (2007)<br>Haddada, F.; Manai, H.; Daoud, D.; Fernandez, X.; Zarrouk, M. Lizzani-Cuvelier, L.;                                                                                                                            | headspace     | GC/MS<br>GC-FID |
| 1132 | Volatile from virgin olive oil. | Volatiles from leaves, fruits, and virgin oil from <i>Olea europaea</i> cv. Olivastra Seggianese from Italy.<br><i>Journal of Agricultural and Food Chemistry</i> (2003) 51 (5), 1382-1386.<br>Flamini, G.; Cioni, P. L.; Morelli, I.                                                                                                                                           |               |                 |
| 2325 | Hexanal in beef bouillons       | Accurate determination of hexanal in beef bouillons by headspace SPME-GC-MS<br><i>European J Lipid Sci Technology</i> 107 #11, 792-798 (2005)<br>Giuffrida, F.; Golay, P.; Destailats, F.; Hug, B.; Dionisi, F.                                                                                                                                                                 | headspace     | GC/MS           |
| 1140 | Hexanal from pork.              | Quantitation of hexanal by automated SPME for studying dietary influences on the oxidation of pork.<br><i>Journal of Food Composition and Analysis</i> (2003) 16 (2), 179-188.<br>Grun, Ingolf U.; Berg, Eric P.; Fernando, Lakdas N.                                                                                                                                           | Carboxen/PDMS | GC              |
| 1145 | Aroma compounds from pepper.    | Aroma compound analysis of <i>Piper nigrum</i> and <i>Piper guineense</i> essential oils from Cameroon using solid-phase microextraction-gas chromatography, solid-phase microextraction-gas chromatography-mass spectrometry and olfactometry.<br><i>Journal of Chromatography, A</i> (2002) 976 (1-2), 265-275.<br>Jirovetz, L.; Buchbauer, G.; Ngassoum, M. B.; Geissler, M. |               | GC-MS           |
| 1146 | Flavours from milk              | Experimental and modelling studies showing the effect of lipid type and level on flavour release from milk-based liquid emulsions.<br><i>Journal of Agricultural and Food Chemistry</i> (2003) 51 (1), 198-195.<br>Roberts, D. D.; Pollien, P.; Watzke, B.                                                                                                                      |               | GC-MS           |
| 1147 | Volatile flavor compounds       | Headspace solid-phase microextraction method for the study of the volatility of selected flavour compounds.<br><i>Journal of Agricultural and Food Chemistry</i> (2003) 51 (1), 200-205.<br>Jung, D. M.; Ebeler, S. E.*                                                                                                                                                         |               | GC-MS           |
| 2338 | Volatiles from roasted barley   | Comparison of comprehensive two-dimensional GC-TOF-MS and GC-MS for the qualitative characterisation of roasted barley by SPME<br><i>J. Sep. Sci.</i> 30 #4, 527-533 (2007-03 )<br>Bianchi, F.; Careri, M. ; Conti, C.; Musci, M.; Vreuls, R.                                                                                                                                   | headspace     | GC-TOF-MS       |
| 2302 | Volatiles from barley flour     | Analysis of volatile compounds from various types of barley cultivars<br><i>J Ag Food Chem</i> 53, #19, 7526-7531 (2005)<br>Cramer, A.; Mattinson, D.; Fellman, J. Baik, B.                                                                                                                                                                                                     | headspace     | GC/MS           |
|      |                                 | Optimisation of HS-SPME to study representativeness of partially                                                                                                                                                                                                                                                                                                                |               |                 |

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| 2584                                                                                                                                                         | Aroma volatiles from baked breads      | baked bread odorant extracts<br><i>Food Research Intl.</i> 40, #9, 1170-1184 (2007)<br>Poinot, P.; Grua-Priol, J.; Arvisenet, G.; Rannou, C.; Semenou, M.; Le Bail, A.; Prost, C.                                                                                                          | 75µm Carboxen<br>65µm PDMS/DVB<br>headspace<br>30 min @ 35°C | GC       |
| Evolution of aroma volatiles during storage of sourdough breads made                                                                                         |                                        |                                                                                                                                                                                                                                                                                            |                                                              |          |
| 2420                                                                                                                                                         | Aroma volatiles from sourdough breads  | by mixed cultures of <i>Kluyveromyces marxianus</i> and <i>Lactobacillus delbrueckii</i> ssp. <i>bulgaricus</i> or <i>Lactobacillus helveticus</i><br><i>FOOD CHEM.</i> 107, #2, 883-889 (15 MAR 2008)<br>Plessas, S.; Bekatorou, A.; Gallanagh, J.; Nigam, P.; Koutinas, A.; Psarianos, C | headspace                                                    | GC/MS    |
| 2760                                                                                                                                                         | Aroma volatiles in bread crumbs        | Effect of carrot ( <i>Daucus carota</i> ) antifreeze proteins on texture properties of frozen dough and volatile compounds of crumb<br><i>Food Sci. Technol.</i> 41, #6, 1029-1036 (July 2008)<br>Guo, Xiaona; Wang, Li; Zhang, Chao; Zhang, Hui                                           | headspace                                                    | GC/MS    |
| Solid-phase microextraction method for headspace analysis of volatile compounds in bread crumb.                                                              |                                        |                                                                                                                                                                                                                                                                                            |                                                              |          |
| 1160                                                                                                                                                         | Volatile compounds in bread crumb      | <i>Cereal Chemistry</i> (2003) 80 (3), 255-259.<br>Ruiz, J. A.; Guasch, J.; Mestres, M.; Quilez, J.                                                                                                                                                                                        | Carboxen/PDMS                                                |          |
| Accurate determination of 2,4,6-trichloroanisole in wines at low parts per trillion by solid-phase microextraction followed by GC-ECD.                       |                                        |                                                                                                                                                                                                                                                                                            |                                                              |          |
| 1161                                                                                                                                                         | 2,4,6-trichloroanisole in wine.        | <i>Journal of Agricultural and Food Chemistry</i> (2003) 51 (12), 3509-3514.<br>Alzaga, Roberto; Bayona, Josep Maria; Marco, M.-Pilar; Ortiz, Laura; Sanchez-Baeza, Francisco                                                                                                              | PDMS                                                         | GC-MS    |
| Coupling solid-phase microextraction and high-performance liquid chromatography for direct and sensitive determination of halogenated fungicides in wine.    |                                        |                                                                                                                                                                                                                                                                                            |                                                              |          |
| 1174                                                                                                                                                         | Halogenated fungicides in wine.        | <i>Journal of Chromatography A</i> (2003) 995 (1-2), 135-142.<br>Barrio, R. J.; Goicolea, M. A.; Millan, S.; Rodriguez, E.; Sampedro, M. C.; Unceta, N.                                                                                                                                    | PDMS/DVB                                                     | HPLC-DAD |
| Characterization of aroma compounds in apple cider using                                                                                                     |                                        |                                                                                                                                                                                                                                                                                            |                                                              |          |
| 2532                                                                                                                                                         | Aroma compounds in apple cider         | solvent-assisted flavor evaporation and headspace SPME<br><i>J Ag Food Chem</i> 55, #8, 3051-3057 (2007)<br>Yan Xu; Wenlai Fan; Qian, M. C                                                                                                                                                 | headspace                                                    | GC/MS    |
| Effects of processing treatment and sorbate addition on the flavor characteristics of apple cider.                                                           |                                        |                                                                                                                                                                                                                                                                                            |                                                              |          |
| 1178                                                                                                                                                         | Flavor characteristics in apple cider. | <i>Journal of Agricultural and Food Chemistry</i> (2003) 51 (7), 1924-1931.<br>Boylston, T. D.; Wang, H.; Reitmeier, C. A.; Glatz, B. A.                                                                                                                                                   |                                                              |          |
| Solid-phase microextraction long dash on-fibre derivatization with comprehensive two-dimensional gas chromatography analysis of trans - resveratrol in wine. |                                        |                                                                                                                                                                                                                                                                                            |                                                              |          |
| 1179                                                                                                                                                         | Trans-resveratrol in wine.             | <i>Chromatographia</i> (2003) 51 (Supp), S349-S353.<br>Shao, Y.; Marriott, P. *; Hugel, H.                                                                                                                                                                                                 |                                                              | GC       |
| Identification and quantification of the rice aroma compound, 2-acetyl-1-pyrroline, in bread flowers ( <i>Vallis glabra</i> Ktze).                           |                                        |                                                                                                                                                                                                                                                                                            |                                                              |          |
| 1180                                                                                                                                                         | 2-acetyl-1-pyrroline in bread flowers. | <i>Journal of Agricultural and Food Chemistry</i> (2003) 51 (2), 457-462.<br>Wongpornchai, S.; Sriseadka, T.; Choonvisase, S.                                                                                                                                                              |                                                              | GC-FID   |
| Factors affecting solid phase microextraction (SPME) to concentrate                                                                                          |                                        |                                                                                                                                                                                                                                                                                            |                                                              |          |
| 2681                                                                                                                                                         | Volatiles of Chinese noodles           | the odorants of Chinese white salted noodles for GC-MS analysis.<br><i>Flavour and Fragrance J.</i> 22, #4, 274-279 (2007)<br>Li-Yun Lin; Chiung-Huei Peng; Hui-Er Wang; Tsung-Han Wu; Cheng-Chang Chen; Tung-Hsi Yu; Cheung-May Wu; Peng, R. Y.                                           | 75µm Carboxen<br>65µm DVB/PDMS<br>16 min @ 30°C<br>headspace | GC-MS    |
| 2619                                                                                                                                                         | Volatiles of Italian pasta             | Electronic nose and GC-MS to investigate the volatile component of an Italian traditional pasta<br><i>Cereal Foods World</i> 52, #3, 138-143 (MAY-JUN 2007)<br>Baiano, A.; Siciliano, P.; Taurino, M.; Presicce, D.; Gambacorta, G.; Lamacchia, C.; Pati, S.; La Notte, E.                 | headspace                                                    | GC-MS    |

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| 2546 | Volatiles of brewed arabica coffee                | Analysis of the headspace volatiles of freshly brewed arabica coffee using solid-phase microextraction<br><i>J Food Science</i> 72, #7, C388-C396 (Sept. 2007)<br>Akiyama, M.; Murakami, K.; Ikeda, M.; Iwatsuki, K.; Wada, A.; Tokuno, K.; Onishi, M.; Iwabuchi, H.                                                       | DVB/car 50/30µm headspace                          | GC-MS        |
| 2861 | Volatiles in coffee                               | Headspace SPME-GC-TOF-MS methodology for geographical origin verification of coffee<br><i>Anal. Chim. Acta</i> 617, #1-2, 72-84 (Jun 9 2008)<br>Carasek, Eduardo; Pawliszyn, Janusz; Risticvic, Sanja                                                                                                                      | DVB/car 50/30µm headspace<br>12 min and 55 °C      | GC-TOF-MS    |
| 1185 | Volatile compounds in ground coffee.              | Analysis of volatile compounds released during the grinding of roasted coffee beans using solid-phase microextraction.<br><i>Journal of Agricultural and Food Chemistry</i> (2003) 51 (7), 1961-1969.<br>Akiyama, M.; Murakami, K.; Ohtani, N.; Iwatsuki, K.; Sotoyama, K.; Wada, A.; Tokuno, K.; Iwabuchi, H.; Tanaka, K. | PDMS/DVB                                           | GC-MS        |
| 1190 | 2-pentylfuran and 2-pentenylfuran in soybean oil. | Singlet oxygen oxidation for 2-pentylfuran and 2-pentenylfuran formation in soybean oil.<br><i>Journal of Food Science</i> (2003) 68 (4), 1175-1178.<br>Min, D. B.; Callison, A. L.; Lee, H. O.                                                                                                                            |                                                    | GC-MS        |
| 1191 | Organo-selenium in garlic                         | SPME for on-line volatile organo-selenium speciation.<br><i>Journal of Analytical Atomic Spectrometry</i> (2003), 18 (5), 467-473.<br>Dietz, C.; Camara, C.; Madrid-Albarran, Y.; Perez-Corona, T.                                                                                                                         | PDMS                                               | ICP-MS       |
| 1197 | Aroma compounds in wine.                          | Aroma compounds of an Italian wine ( Ruche ) by HS-SPME analysis coupled with GC-ion trap MS.<br><i>Food Chemistry</i> (2003) 80 (1), 125-133.<br>Bonino, M.; Schellino, R.; Rizzi, C.; Aigotti, R.; Delfini, C.; Baiocchi, C. *                                                                                           | Various                                            | GC-MS        |
| 1208 | Dairy products.                                   | The electronic nose applied to dairy products: A review<br><i>Sensors and Actuators, B: Chemical</i> (2003) 94 (1), 1-12.<br>Ampuero, Silvia; Bosset, J.O.                                                                                                                                                                 |                                                    |              |
| 2366 | Volatiles from white wine                         | Study of phenolic and volatile composition of white wine during fermentation and a short time of storage<br><i>Vitis</i> 46, # 2, 77-84 ( 2007)<br>Komes, D.; Ulrich, D.; Ganic, K. Kovacevic; Lovric, T.                                                                                                                  | headspace                                          | GC/FID GC/MS |
| 2321 | Volatiles from white wine                         | Isolation of white wine volatiles using different sample preparation methods<br><i>Vitas</i> 44 #4 187-193 (2005)<br>Komes, D.; Ulrich, D.; Lovric, T.; Schippel, K.                                                                                                                                                       |                                                    |              |
| 2417 | Volatiles from white wine                         | Differentiation of certified brands of origins of Spanish white wines by HS-SPME-GC and chemometrics Microfluidics in Cell Analysis<br><i>Anal. Bioanal. Chem.</i> 390, #3, 961-970 (February 2008)<br>Alcazar, A.; Ballesteros, O.; Jurado, J.M.; Martin, M.J.; Navalon, A.; Pablos, F.; Vilchez, J.L.                    | headspace                                          | GC-MS        |
| 1215 | Flavor analysis in wine.                          | Flavour analysis of Greek white wine by solid-phase microextraction-capillary gas chromatography-mass spectrometry.<br><i>Journal of Chromatography, A</i> (2003) 985 (1-2), 233-246.<br>Demyttenaere, J. C. R.; Dagher, C.; Sandra, P.; Kallithraka, S.; Verhe, R.; de Kimpe, N.                                          | Various                                            | GC-MS        |
| 2364 | Volatiles in whisky                               | Comparative study of the whisky aroma profile based on headspace . solid phase microextraction using different fibre coatings<br><i>J. Chromatogr., A</i> 1150, # 1-2, 198-207 (2007-05-25)<br>Camara, J.; Marques, J. C.; Perestrelo, R.; Rodrigues, F.; Oliveira, L.; Andrade, P.; Caldeira, M                           | 75µm Carboxen headspace<br>60 min @ 40°C sat. salt | GC- IT MS    |



|      |                                                                                                                                                                                                                                                                                                                       |                     |        |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|
|      | Analysis of volatiles of malt whisky by solid-phase microextraction and stir bar sorptive extraction.                                                                                                                                                                                                                 |                     |        |
| 1216 | Volatiles in malt whisky.<br><i>Journal of Chromatography, A (2003) 985 (1-2), 221-232.</i><br>Demyttenaere, J. C. R.; Sanchez Martinez, J. I.; Verhe, R.; Sandra, P.; de Kimpe, N.                                                                                                                                   | Various compared    |        |
| 1217 | Comparison of solid-phase microextraction and purge-and-trap methods for the analysis of the volatile fraction of butter.<br><i>Journal of Chromatography, A (2003) 985 (1-2), 117-125.</i><br>Povolo, M.; Contarini, G. *                                                                                            |                     |        |
| 1218 | Volatile components in virgin olive oil.<br><i>Journal of Chromatography, A (2003) 983 (1-2), 19-33.</i><br>Vichi, S.; Castellote, A. I.; Pizzale, L.; Conte, L. S.; Buxaderas, S.; Lopez-Tamames, E. *                                                                                                               | DVB/carboxen/PDMS   | GC-MS  |
| 1224 | Peppermint flavor in tablets.<br><i>Journal of Pharmaceutical and Biomedical Analysis 2003) 30 (5), 1469-1477.</i><br>Yeung, D. Y. H.; Lee, T.; Grant, G.; Ma, M. H.; Kwong, E. *                                                                                                                                     |                     | GC     |
| 1226 | Determination of the disproportionation products of limonene used for the catalytic hydrogenation of castor oil.<br><i>Journal of Chromatography, A (2003) 985 (1-2), 313-319.</i><br>Schneider, R. C. S.; Baldissarelli, V. Z.; Martinelli, M.; von Holleben, M. L. A.; Caramao, E. B.*                              |                     | GC-MS  |
| 1231 | Effect of <i>Penicillium chrysogenum</i> and <i>Debaryomyces hansenii</i> on the volatile compounds during controlled ripening of pork loins.<br><i>International Journal of Food Microbiology (2003) 84 (3), 327-338.</i><br>Cordoba, Juan J.; Aranda, Emilio; Asensio, Miguel A.; Benito, Maria J.; Martin, Alberto |                     | GC-MS  |
| 1232 | Release of limonene from polysaccharide matrices: Viscosity and synergy effect<br><i>Food Chemistry (2003) 82 (2), 227-234.</i><br>Grisel, Michel; Decroix, Bernard; Malhiac, Catherine; Secouard, Sebastien                                                                                                          |                     |        |
| 1236 | Oxidative stability of walnut oils extracted with supercritical carbon dioxide<br><i>Journal of the American Oil Chemists' Society (2003) 80 (6), 575-578.</i><br>Crowe, Tammy D.; White, Pamela J.                                                                                                                   |                     |        |
| 1237 | Evaluation of headspace solid-phase microextraction for the analysis of volatile carbonyl compounds in spirits and alcoholic beverages.<br><i>Journal of Chromatography, A (2003) 984 (1), 89-96.</i><br>Wardencki, W.; Sowinski, P.; Curylo, J.                                                                      |                     | GC-ECD |
| 1238 | Truffle aroma analysis by headspace solid phase microextraction.<br><i>Journal of Agricultural and Food Chemistry (2003) 50 (22), 6468-6472.</i><br>Diaz, P.; Senorans, F. J.; Reglero, G.; Ibanez, E. *                                                                                                              |                     | GC-MS  |
| 1246 | Headspace solid-phase micro-extraction gas chromatography method for the determination of methanol in aspartame sweeteners.<br><i>Food Additives and Contaminants 92003) 20 (6), 519-523.</i><br>de Lourdes Cardeal, Z.; Sales, J. A.                                                                                 | 85 um polyacrylate. | GC-FID |
| 2371 | Volatiles emission patterns of different plant organs and pollen of Citrus limon<br><i>Analytica Chimica Acta 589, #1, 120-124 (APR 18 2007)</i><br>Flamini, Guido; Tebano, Marianna; Cioni, Pier Luigi                                                                                                               | headspace           | GC/MS  |

|      |                                          |                                                                                                                                                                                                                                                                                                                              |                                       |       |
|------|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-------|
| 1248 | Limonene oxidation products              | Determination of limonene oxidation products using SPME and GC-MS.                                                                                                                                                                                                                                                           |                                       |       |
|      |                                          | <i>Journal of Chromatographic Science (2003) 41 (1), 31-35.</i><br>Marine, S. S.; Clemons, J.                                                                                                                                                                                                                                | 7 µm PDMS                             |       |
| 1249 | Geosmin in red beet.                     | Biosynthetic origin of geosmin in red beets (Beta vulgaris L.).<br><i>Journal of Agricultural and Food Chemistry (2003) 51 (4), 1026-1029.</i><br>Lu, G. P.; Edwards, C. G.; Fellman, J. K.; Mattinson, D. S.; Navazio, J.                                                                                                   |                                       | GC-MS |
| 1250 | Geosmin in red beet.                     | Quantitative determination of geosmin in red beets (Beta vulgaris L.) using headspace solid-phase microextraction.<br><i>Journal of Agricultural and Food Chemistry (2003) 51 (4), 1021-1025.</i><br>Lu, G. P.; Fellman, J. K.; Edwards, C. G.; Mattinson, D. S.; Navazio, J.                                                |                                       | GC    |
| 2447 | Tetracycline antibiotic in soil          | <b>On-line coupling of SPME to commercial CE-MS equipment</b><br><i>Electrophoresis 28, #9,1312-1318 (2007-05-09)</i><br><b>Santos, B.; Simonet, B. M.; Rios, A.; Valcarcel, M.</b><br><br>Off-line solid-phase microextraction and capillary electrophoresis mass spectrometry to determine acidic pesticides in fruits.    |                                       | CE-MS |
| 1251 | Acidic pesticides in fruit.              | <i>Analytical Chemistry (2003) 75 (3), 452-459.</i><br>Rodriguez, R.; Manes, J.; Pico, Y. *                                                                                                                                                                                                                                  |                                       | CE-MS |
| 1252 | Pyrethroid in vegetables.                | Application of solid-phase microextraction for the determination of pyrethroid residues in vegetable samples by GC-MS.<br><i>Analytical and Bioanalytical Chemistry (2003) 376 (4), 502-511.</i><br>Beltran, J.; Peruga, A.; Pitarch, E.; Lopez, F. J.; Hernandez, F.                                                        |                                       | GC-MS |
| 1253 | Daidzein and genistein in soybean foods. | Determination of daidzein and genistein in soybean foods by automated on-line in-tube solid-phase microextraction coupled to high-performance liquid chromatography.<br><i>Journal of Chromatography, A (2003) 986 (2), 169-177.</i><br>Mitani, K.; Narimatsu, S.; Kataoka, H. *                                             |                                       | HPLC  |
| 2862 | Volatiles from dried honey               | <b>Development of a rapid and sensitive method for the simultaneous determination of 1,2-dibromoethane,1,4-dichlorobenzene and naphthalene residues in honey using HS-SPME coupled with GC-MS</b><br><i>Anal. Chim. Acta 617, #1-2, 64-71 (Jun 9 2008)</i><br><b>Dimotikali, D.; Hiskia, A.; Triantis, T.M.; Tsimeli, K.</b> | 100µm PDMS<br>headspace               | GC-MS |
| 2510 | Volatiles from dried honey               | <b>Preparation of dry honey by microwave-vacuum drying</b><br><i>J. Food Eng. (UK) 84, #4, 582-90 (Feb. 2008)</i><br><b>Zheng-Wei Cui; Li-Juan Sun; Wei Chen; Da-Wen Sun</b>                                                                                                                                                 | headspace                             | GC-MS |
| 1266 | Volatiles from honey                     | Analysis of volatile composition of honey by solid phase microextraction and gas chromatography-mass spectrometry<br><i>Journal of Separation Science (2002) 26 (9-10), 793-801.</i><br>Martinez-Castro, Isabel; Sanz, Jesus; Soria, Ana Cristina                                                                            |                                       | GC-MS |
| 1271 | Aroma from truffles                      | Rebuttal on truffle aroma analysis by headspace solid phase microextraction (wrong information or wrong interpretation?).<br><i>Journal of Agricultural and Food Chemistry (2003) 51 (15), 4484.</i><br>Ibanez, Elena; Diaz, Paloma; Reglero, Guillermo; Senorans, F. Javier                                                 |                                       |       |
| 1272 | Hexanal from chicken                     | Solid phase microextraction-gas chromatography for quantifying headspace hexanal above freeze-dried chicken myofibrils.<br><i>Journal of Agricultural and Food Chemistry (2003) 51 (15), 4185-4190.</i><br>Goodridge, Carolyn F.; Beaudry, Randolph M.; Pestka, James J.; Smith, Denise M.                                   |                                       | GC-MS |
| 1275 | Phenolic compounds in smoked herring.    | Optimization of solid-phase microextraction coupled to gas chromatography for determination of phenolic compounds in smoked herring.<br><i>Food Chemistry (2003) 82 (4), 513-519.</i><br>Serot, T.; Lafficher, C.                                                                                                            | 85 µm polyacrylate, 50 C, 55 minutes. |       |

Changes in aromatic components of banana during ripening and air-drying.

|      |                                                  |                                                                                                                                                                                                                                                                                                  |                                                                     |                                        |
|------|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|----------------------------------------|
| 1282 | Aromatic components in bananas.                  | <i>Lebensmittel-Wissenschaft &amp; Technologie</i> (2003) 36 (6), 633-642.<br>Bonazzi, C.; Boudhrioua, N.; Giampaoli, P.                                                                                                                                                                         |                                                                     | GC-MS                                  |
| 1283 | Selenium in roasted coffee.                      | Studies of selenium-containing volatiles in roasted coffee.<br><i>Journal of Agricultural and Food Chemistry</i> (2003) 51 (17), 5116-5122.<br>Caruso, Joseph A.; Bryson, Joshua M.; Meija, Juris; Montes-Bayon, Maria; Vonderheide, Anne P.                                                     |                                                                     | GC/ICP-MS                              |
| 2909 | Aroma from Koreigusu hot sauce                   | <b>Pungent and aroma substances of Koreigusu sauce from Okinawa</b><br><i>Nippon Shokuhin Kagaku Kogaku Kaishi</i> 55, #4, 129-136 (2008)<br>Takahashi, Kyoko; Nishime, Anzu; Kakinuma, Mirei; Koitabashi, Y.; Sugaya, Asuka; Tanifuji, Fukuko; Miyamoto, Tomoko                                 | headspace                                                           | GC/MS                                  |
| 2442 | 1,3-dichloro-propan-2-ol in soy sauce            | <b>Determination of 1,3-dichloro-2-propanol and 3-chloro-1,2-propandiol in soy sauce by headspace derivatization SPME combined with GC-MS</b><br><i>Anal. Chim. Acta</i> 591, #2, 167-172 (2007-05-22)<br>Lee, M. R.; Chiu, T. C.; Dou, J. P.                                                    | 85µm polyacrylate<br>50°C, 15 minutes<br>headspace<br>0.36g/mL NaCl | GC/MS<br>trifluoroacetamide derivative |
| 2251 | 1,3-dichloro-propan-2-ol in soy sauce            | <b>Determination of 1,3-dichloropropanol in soy sauce and related products by headspace GC with MS detection: Interlaboratory study</b><br><i>Journal of AOAC International</i> 88, #5, 1404-1412 (2005)<br>Hasnip, S.; Crews, C.; Potter, N.; Brereton, P.; Diserens, H.; Oberson, J.           | headspace                                                           | GC/MS                                  |
| 2551 | Volatile sulfur compounds from tryptic soy agar  | <b>Identification of volatile sulfur compounds produced by Shigella sonnei using gas chromatography-olfactometry</b><br><i>Food Control (UK)</i> 18, #2, 179-82 (Feb. 2007)<br>Schneider, K. R.; Warren, B. R.; Rouseff, R. L.; Parish, M. E.                                                    | headspace                                                           | GC-MS                                  |
| 2186 | Volatiles from soybean                           | <b>Effect of soybean lipoxygenase on volatile generation and inhibition of aspergillus flavus mycelial growth</b><br><i>J Ag Food Chem</i> , 53, #12, 4778-4783 (2005)<br>A.Boue, S.; Shih, B.; Carter-Wientjes, C.H.; Cleveland, T..                                                            | headspace                                                           | GC-MS                                  |
| 2167 | Aroma compounds in soybeans                      | <b>Influence of irradiating bulk soybeans on their future functional and sensory properties in soyfood processing</b><br><i>AIChE Annu. Meet. Conf. Proc.</i> (2005) p 12298-12305<br>Boylston, T Chia, C; French, S; Perchonok, M; Wilson, Lester                                               | headspace                                                           | GC-MS                                  |
| 1284 | Volatile compounds in soybeans.                  | Identification of volatile compounds in soybean at various developmental stages using solid phase microextraction.<br><i>Journal of Agricultural and Food Chemistry</i> (2003) 51 (17), 4873-4876.<br>Boue, Stephen M.; Carter-Wientjes, Carol H.; Cleveland, Thomas E.; Shih, Betty Y.          |                                                                     | GC-MS                                  |
| 1285 | Chiral compounds in orange juice.                | Enantiomeric distribution of chiral compounds in orange juices according to their geographical origins.<br><i>Journal of Food Protection</i> (2003) 66 (8), 1448-1454.<br>Herraiz, M.; Blanch, G. P.; Caja, M. M.; Ruiz del Castillo, M. L.                                                      |                                                                     | GC-MS                                  |
| 1289 | Methylketone in cognac.                          | Analysis of microvolatiles in brandy: Relationship between methylketone concentration and Cognac age.<br><i>Journal of the Science of Food and Agriculture</i> (2003) 83 (11), 1143-1149.<br>Watts, Vivian A.; Butzke, Christian E.                                                              |                                                                     |                                        |
| 1290 | Volatile (flavour) compounds in Raclette cheese. | Distribution of the volatile (flavour) compounds in Raclette cheese produced with different staphylococci in the smear.<br><i>Mitteilungen aus Lebensmitteluntersuchung und Hygiene</i> (2003) 94 (3), 192-211.<br>Bosset, Jacques Olivier; Imhof, Miroslava; Place, Raymond B.; Teuber, Michael |                                                                     |                                        |

#### Isolation and identification of *Physalis philadelphica* Lam. volatiles

|      |                                                       |                                                                                                                                                                                                                                                                                                                                                                 |                                                 |           |
|------|-------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|-----------|
| 2473 | Volatiles from<br>husk tomato                         | <b>Agrociencia 41, #3, 337-346 (APR-MAY 2007)</b><br><b>Calyecac-Cortero, H.; Cibrian-Tovar, J.; Soto-Hernandez, M.;</b><br><b>Garcia-Velasco, R.</b>                                                                                                                                                                                                           |                                                 | GC-MS     |
|      |                                                       | Volatiles emitted from in vitro grown tomato shoots during abiotic and biotic stress.                                                                                                                                                                                                                                                                           | in Spanish                                      |           |
| 1291 | Volatiles from tomato<br>shoots.                      | <i>Plant Cell Tissue and Organ Culture (2003) 75 (1), 73-78.</i><br>Debergh, Pierre C.; Maes, Katrien                                                                                                                                                                                                                                                           |                                                 |           |
| 1292 | Ethylene in mango<br>fruit.                           | The role of ethylene in mango fruit aroma volatiles biosynthesis.<br><i>Journal of Horticultural Science &amp; Biotechnology (2003) 78 (4), 485-496.</i><br>Singh, Zora; Lalel, H. J. D.; Tan, S. C.                                                                                                                                                            |                                                 | GC-MS     |
| 1295 | Postharvest fungicides<br>in fruits.                  | Solid-phase microextraction liquid chromatography-tandem mass spectrometry to determine postharvest fungicides in fruits.<br><i>Analytical Chemistry (2003) 75 (14), 3606-3615.</i><br>Blasco, C.; Font, G.; Manes, J.; Pico, Y. *                                                                                                                              | 50 um carbowax/template LC-MS-MS                |           |
| 1296 | Volatile components in<br>cheese.                     | Volatile components of Grana Parmigiano-Reggiano type hard cheese.<br><i>Food Chemistry (2003) 83 (1), 55-61.</i><br>Bellesia, F.; Pinetti, A. *; Pagnoni, U. M.; Rinaldi, R.; Zucchi, C.; Caglioti, L.; Palyi, G.                                                                                                                                              |                                                 | GC-MS     |
| 2559 | PCBs in<br>human milk                                 | <b>Neuro-genetic multioptimization of the determination of PCBs<br/>cogeners in human milk by headspace SPME-GC-ECD</b><br><b><i>Anal. Chim. Acta 585, #1, 66-75 (2007-02-28)</i></b><br><b>Kowalski, C. H.; da Silva, G. A.; Poppi, R.; Godoy, H.; Augusto, F</b>                                                                                              | <b>headspace<br/>60 min @ 90C<br/>sat. NaCl</b> | GC-ECD    |
| 1306 | PCBs in milk.                                         | Application of Strategically Designed Sample Composition to the Rapid Analytical Screening of Milk Samples for Polychlorinated Biphenyls<br><i>Journal of AOAC International (2003) 86 (4), 846-855.</i><br>Carro, Antonia M.; Cela, Rafael; Llombart, Maria; Martinez, Elena; Pazos, Manuel                                                                    |                                                 |           |
| 1307 | Polyphenols in<br>grapes/wine.                        | Mass spectrometry in grape and wine chemistry. Part I: Polyphenols<br><i>Mass Spectrometry Reviews (2003) 22 (4), 218-250.</i><br>Flamini, Riccardo                                                                                                                                                                                                             |                                                 | LC-MS     |
| 1315 | Ochratoxin A,<br>cyclopiazonic acid in<br>cornflakes. | Simultaneous determination of ochratoxin A and cyclopiazonic, mycophenolic, and tenuazonic acids in cornflakes by solid-phase microextraction coupled to high-performance liquid chromatography.<br><i>Journal of Agricultural and Food Chemistry (2003) 51 (18), 5232-5237.</i><br>Palmisano, Francesco; Aresta, Antonella; Cioffi, Nicola; Zambonin, Carlo G. | PDMS/DVB                                        | LC-UV/DAD |
| 1319 | Iberian ham                                           | Challenges and prospects of Iberian pork products: Verification of the sensorial and nutritional quality of Iberian ham.<br><i>Alimentaria (2003) 40 (345), 45-58.</i><br>Ventanas, S.; Ventanas, J.; Petron, M. J.; Jurado, A.; Carrapiso, A.                                                                                                                  |                                                 |           |
| 1323 | Organochlorine<br>pesticides in Chinese<br>teas.      | Application of polyphenylmethylsiloxane coated fiber for solid-phase microextraction combined with microwave-assisted extraction for the determination of organochlorine pesticides in Chinese teas<br><i>Journal of Chromatography, A (2003) 1015 (1-2), 11-21.</i><br>Cai, Lingshuang; Dong, Li; Wu, Caiying; Xing, Jun                                       | polyphenylmethylsiloxane GC-ECD                 |           |
| 1325 | Pesticides in foods                                   | Analyses of pesticides and their metabolites in foods and drinks.<br><i>Trends in Analytical Chemistry (2002) 20(11), 649-661</i><br>Ahmed, Farid E.                                                                                                                                                                                                            |                                                 | LC-MS     |
| 1330 | Oil aroma compounds<br>in Ocimum species.             | Chemotaxonomical analysis of the essential oil aroma compounds of four different Ocimum species from southern India.<br><i>European Food Research and Technology (2003) 217 (2), 120-124.</i>                                                                                                                                                                   |                                                 | GC-MS     |

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|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------|
|      | Jirovetz, Leopold; Buchbauer, Gerhard; Kaniampady, Molikutty M.; Shafi, Mohamed                                                                                                    |                           |       |
|      | Solid-phase microextraction of volatile compounds in left dbl quote Terrincho right dbl quote ewe cheese: comparison of different fibres.                                          |                           |       |
| 1338 | Volatile compounds in ewe cheese. <i>Journal of Chromatography, A (2003) 1011 (1-2), 1-9.</i><br>Pinho, O.; Peres, C.; Ferreira, I. M. P. L. V. O.*                                | CAR-PDMS                  | GC-MS |
|      | Application of isotope dilution to the determination of methylmercury in fish tissue by solid-phase microextraction gas chromatography-mass spectrometry.                          |                           |       |
| 1339 | Methylmercury in fish. <i>Journal of Chromatography, A (2003) 1011 (1-2), 135-142.</i><br>Yang, L.; Colombini, V.; Maxwell, P.; Mester, Z.; Sturgeon, R. E.                        | PDMS                      | GC-MS |
|      | Comparison of two SPME fibres for differentiation of coffee by analysis of volatile compounds.                                                                                     |                           |       |
| 1347 | Volatile compounds in coffee <i>Chromatographia (2001) 54(9-10), 647-652.</i><br>Costa Freitas, A. M.; Parreira, C.; Vilas-Boas, L.                                                | Carbowax/DVB, PDMS        | GC-MS |
|      | Solid-phase microextraction-gas chromatographic-mass spectrometric method for the determination of the fungicides cyprodinil and fludioxonil in white wines.                       |                           |       |
| 1348 | Fungicides in wine <i>Journal of Chromatography A (2002) 942(1-2), 41-52</i><br>Simal Gandara, J.; Cancho Grande, B.; Rial Otero, R.; Yague Ruiz, C.                               | 50/30um DVB/Carboxen PDMS | GC-MS |
|      | Classification of Nebbiolo-based wines from Piedmont (Italy) by means of solid-phase microextraction-gas chromatography-mass spectrometry of volatile compounds.                   |                           |       |
| 1356 | Volatiles in wines <i>Journal of Chromatography A (2002) 943(1), 123-137</i><br>Aceto, Maurizio; Marengo, Emilio; Maurino, Valter                                                  |                           | GC-MS |
|      | Determination of cyclopiazonic acid in cheese samples using solid-phase microextraction with high performance liquid chromatography.                                               |                           |       |
| 1362 | Cyclopiazonic acid in cheese. <i>Food Chemistry (2001) 75(2), 249-254.</i><br>Zambonin, C. G.; Monaci, L.; Aresta, A. *                                                            | Carbowax/TPR              | HPLC  |
|      | 2-Methyl-3-furanthiol and methional are possible off-flavours in stored orange juice: aroma-similarity, NIF/SNIF GC-Olfactometry, and GC analyses.                                 |                           |       |
| 1367 | Off flavours in orange juice. <i>Journal of Agricultural and Food Chemistry (2001) 49(11), 5425-5432.</i><br>Bezman, Y.; Rouseff, R. L.; Naim, M. *                                |                           | GC-O  |
|      | Headspace solid phase microextraction ( SPME ) analysis of flavour compounds in wines. Effect of the matrix volatile composition in the relative response factors in a wine model. |                           |       |
| 1368 | Flavour compounds in wine. <i>Journal of Agricultural and Food Chemistry (2001) 49(11), 5142-5151.</i><br>Rocha, S.; Ramalheira, V.; Barros, A.; Delgadillo, I.; Coimbra, M. A.    |                           | GC    |
|      | New device for direct extraction of volatiles in solid samples using SPME                                                                                                          |                           |       |
| 1370 | Volatiles in solid foods. <i>Journal of Agricultural and Food Chemistry (2001) 49(11), 5115-5121.</i><br>Ruiz, J.; Ventanas, J.; Cava, R.                                          |                           | GC-MS |
|      | The use of an electronic aroma-sensing device to assess coffee differentiation. Comparison with SPME gas chromatography-mass spectrometry aroma patterns.                          |                           |       |
| 1372 | Coffee aroma <i>Journal of Food Composition and Analysis (2001) 14(5), 513-522.</i><br>Costa Freitas, A. M.; Parreira, C.; Vilas-Boas, L.                                          | 100 um PDMS               | GC-MS |
|      | Dynamics analysis for the distribution of PAH in rice.                                                                                                                             |                           |       |
| 1377 | PAH in rice. <i>Journal of Health Science (2001) 47(5), 446-451.</i><br>Liu, X. X.; Korenaga, T.                                                                                   |                           | GC-MS |
|      | Quantitative determination of short-chain free fatty acids in milk using solid-phase microextraction and gas chromatography.                                                       |                           |       |
| 1378 | Fatty acids in milk. <i>Journal of Agricultural and Food Chemistry (2001) 49(10), 4603-4608.</i>                                                                                   | Polyacrylate              | GC    |

|      |                                     |                                                                                                                                                                                                    |                         |        |
|------|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|--------|
| 1382 | Volatile flavour compounds.         | Comparison of simultaneous distillation extraction and solid-phase microextraction for the determination of volatile flavour components.                                                           |                         |        |
|      |                                     | Journal of Chromatography, A (2001) 930(1-2), 1-7.<br>Cai, J. B.; Liu, B. Z.; Su, Q. D.*                                                                                                           |                         | GC-MS  |
| 1387 | Cucumber flavour compounds          | Solid-phase microextraction ( SPME ) technique for measurement of generation of fresh cucumber flavour compounds.                                                                                  |                         |        |
|      |                                     | Journal of Agricultural and Food Chemistry (2001) 49(9), 4203-4207.<br>Palma-Harris, C.; McFeeters, R. F.*; Fleming, H. P.                                                                         | PDMS                    | GC     |
| 2330 | Volatile fraction of distilled gins | <b>Characterization of volatiles in different dry gins</b><br><i>J Ag Food Chem</i> 53, #26, 10154-10160 (2005)<br>Vichi, S.; Riu-Aumatell, M.; Mora-Pons, M.; Buxaderas, S.; Lopez-Tamames, Elvir | headspace               | GC/MS  |
| 1389 | Scotch whiskies                     | Headspace congeners of blended scotch whiskies of different product categories from SPME analysis.                                                                                                 |                         |        |
|      |                                     | Journal of the Institute of Brewing (2001) 107(5), 315-332.<br>Lee, K. -Y. M.; Paterson, A. *; Birkmyre, L.; Piggott, J. R                                                                         | PDMS, polyacrylate      | GC-FID |
| 1390 | Volatiles in potato tubers          | Volatile fingerprinting (SPME-GC-FID) to detect and discriminate diseases of potato tubers.                                                                                                        |                         |        |
|      |                                     | <i>Plant Disease</i> (2002) 86(2), 131-137<br>Kushalappa, A. C.; Chen, C. R.; Lee, B.; Lui, L. H.                                                                                                  |                         | GC-FID |
| 1399 | PCBs in food.                       | Fast extraction, clean-up and detection methods for the rapid analysis and screening of seven indicator PCBs in food matrices.                                                                     |                         |        |
|      |                                     | <i>Trends in Analytical Chemistry</i> (2002) 21(1), 39-52<br>Anklam, E.; von Holst, Christoph; Bjorklund, E.                                                                                       |                         |        |
| 1401 | Aroma from wine must.               | Optimization of solid phase microextraction analysis of aroma compounds in a Portuguese muscatel wine must.                                                                                        |                         |        |
|      |                                     | Journal of Microcolumn Separations (2001) 13(6), 236-242.<br>Relva, A. M.; Freire, Luis M. T. Vaz; Freitas, A. M. Costa                                                                            | 85 um polyacrylate      |        |
| 1402 | Lipid degeneration products in oils | Monitoring of lipid degradation products by solid-phase microextraction                                                                                                                            |                         |        |
|      |                                     | Journal of Microcolumn Separations (2001) 13(6), 215-220.<br>Doleschall, Fruzsina; Kemeny, Zsolt; Kovari, Katalin; Recseg, Katalin                                                                 | 100 um PDMS             | GC-FID |
| 1403 | Volatiles in bananas                | Optimization of solid-phase microextraction analysis for studying change of headspace flavor compounds of banana during ripening.                                                                  |                         |        |
|      |                                     | <i>Journal of Agricultural and Food Chemistry</i> (2002) 50(4), 653-657<br>Liu, Tai-Ti; Yang, Tsung-Shi                                                                                            |                         |        |
| 1414 | Volatiles from fruit.               | Solid phase microextraction and gas chromatography-olfactometry analysis of internal volatiles from intact citrus fruits and their aroma activity                                                  |                         |        |
|      |                                     | Abstracts of Papers American Chemical Society (2001) 222(1-2), AGFD142.<br>Rouseff, Russell L.; Lin, Jianming                                                                                      |                         | GC-O   |
| 1415 | Off-flavors from milk               | SPME GC-MS-based testing for monitoring off-flavor development in processed milk.                                                                                                                  |                         |        |
|      |                                     | Abstracts of Papers American Chemical Society (2001) 222(1-2), AGFD27.<br>Marsili, Ray T.                                                                                                          |                         |        |
| 1418 | Volatiles in soybean and corn oils  | Solid phase microextraction of volatile soybean oil and corn oil compounds.                                                                                                                        |                         |        |
|      |                                     | <i>Journal of Food Science</i> (2002) 67(1), 71-76<br>Min, D. B.; Lee, J. H.; Steenson, D. F.                                                                                                      | Various fibers compared | GC-MS  |
|      |                                     | Polydimethylsiloxane solid-phase microextraction-gas chromatography method for the analysis of volatile compounds in wines. Its application to the characterization of varietal wines.             |                         |        |

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|------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|---------------|
| 1420 | Volatile compounds in wine.      | Journal of Chromatography A (2001) 922(1-2), 267-275.<br>Polo, M. C.; Martin-Alvarez, P. J.; Pozo-Bayon, M. A.; Pueyo, E.                                                                                                                         | PDMS                                           | GC            |
|      |                                  | Determination of organochlorine pesticides and chlorobenzenes in strawberries by using accelerated solvent extraction combined with sorptive enrichment and gas chromatography/mass spectrometry.                                                 |                                                |               |
| 1421 | Pesticides in strawberries.      | Journal of AOAC International (2001) 84(4), 1194-1201.<br>Wennrich, Luise; Breuste, Juergen; Koeller, Gabor; Popp, Peter                                                                                                                          |                                                |               |
|      |                                  | Analysis of volatile compounds released from embryogenic cultures and somatic embryos of sweet oranges by head space SPME                                                                                                                         |                                                |               |
| 1422 | Volatile compounds from oranges. | Plant Cell Tissue and Organ Culture (2001) 66(1), 31-34.<br>Del Bosco, S. Fatta; Alonzo, G.; Saiano, F.; Tusa, N.                                                                                                                                 |                                                | GC-MS         |
|      |                                  | The effects of temperature and pressure on the performance of Carboxen/PDMS fibres during solid phase microextraction ( SPME ) of headspace volatiles from cooked and raw turkey breast.                                                          |                                                |               |
| 1423 | Volatiles from turkey breast.    | Flavour and Fragrance Journal (2001) 16(4), 294-302.<br>Cronin, D. A.; Brunton, N. P.; Monahan, F. J.                                                                                                                                             | Carboxen/PDMS                                  |               |
|      |                                  | Headspace-SPME analysis of volatiles of the ridge gourd ( <i>Luffa acutangula</i> ) and bitter melon ( <i>Momordica charantia</i> ) flowers.                                                                                                      |                                                |               |
| 1424 | Volatiles of gourd flowers.      | Flavour and Fragrance Journal (2001) 16(4), 289-293.<br>Grun, I. U.; Fernando, L. N.                                                                                                                                                              |                                                | GC-MS         |
|      |                                  | Changes in the aroma of a strawberry drink during storage.                                                                                                                                                                                        |                                                |               |
| 1426 | Aroma of strawberry drink.       | Journal of Agricultural and Food Chemistry (2001) 49(7), 3244-3252.<br>Siegmond, Barbara; Derler, Karin; Pfannhauser, Werner                                                                                                                      |                                                |               |
|      |                                  | Truffle aroma characterization by headspace solid-phase microextraction                                                                                                                                                                           |                                                |               |
| 1440 | Truffle aroma                    | <i>Journal of Chromatography A</i> (2003) 1017(1-2), 207-214<br><br>Diaz, P.; Ibanez, E.; Reglero, G.; Senorans, F.J                                                                                                                              | 50/30um DVB/Carboxen PDMS headspace 13.6 mins. | GC-MS         |
|      |                                  | Analysis of total propionic acid in feed using headspace solid-phase microextraction and gas chromatography                                                                                                                                       |                                                |               |
| 1441 | Propionic acid in feed           | <i>Journal of Chromatography A</i> (2003) 1017(1-2), 161-166<br><br>Ibanez, Carlos                                                                                                                                                                | 85um Polyacrylate headspace                    | GC-FID, GC-MS |
|      |                                  | Quantitative analysis of 2-furfural and 5-methylfurfural in different Italian vinegars by headspace solid-phase microextraction coupled to gas chromatography-mass spectrometry using isotope dilution                                            |                                                |               |
| 1442 | Volatiles in Italian Vinegars    | <i>Journal of Chromatography A</i> (2003) 1017(1-2), 141-149<br><br>Calabrese, Roberto; Davoli, Enrico; Giordano, Lucia; Rotilio, Domenic                                                                                                         | 50/30um DVB/Carboxen PDMS headspace            | GC-MS         |
|      |                                  | Comparative study of extraction techniques for determination of garlic flavour components by gas chromatography-mass spectrometry.                                                                                                                |                                                |               |
| 1448 | Garlic flavor components         | <i>Analytical and Bioanalytical Chemistry</i> (2003) 377(4), 749-756<br><br>Lee, S. N.; Kim, N. S.; Lee, D. S.                                                                                                                                    | 50/30um DVB/Carboxen PDMS, headspace           | GC-MS         |
| 2731 | Volatiles in Olive Oil           | <b>Comparative study of different extraction techniques for the analysis of virgin olive oil aroma</b><br><b><i>Food Chemistry</i> 105, #3, 1171-1178 (2007)</b><br><b>Vichi, S.; Guadayol, J.; Caixach, J.; Lopez-Tamames, E.; Buxaderas, S.</b> | headspace                                      | GC-MS         |
|      |                                  | Solid-phase microextraction in the analysis of virgin olive oil volatile fraction: Characterization of virgin olive oils from two distinct geographical areas of northern Italy.                                                                  |                                                |               |
| 1451 | Volatiles in Olive Oil           | <i>Journal of Agricultural and Food Chemistry</i> (2003) 51(22), 6572-6577<br><br>Lopez-Tamames, Elvira; Buxaderas, Susana; Conte, Lanfranco S.; Pizzale, Lorena; Vichi, Stefania                                                                 |                                                | GC-FID, GC-MS |

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|------|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|---------------|
|      |                                              | Solid-phase microextraction in the analysis of virgin olive oil volatile fraction: Modifications induced by oxidation and suitable markers of oxidative status.                                                                                                                                                     |                                                           |               |
| 1452 | Volatiles in Olive Oil                       | <i>Journal of Agricultural and Food Chemistry</i> (2003) 51(22), 6564-6571<br>Lopez-Tamames, Elvira; Buxaderas, Susana; Conte, Lanfranco S.; Pizzale, Lorena; Vichi, Stefania                                                                                                                                       |                                                           | GC-FID, GC-MS |
|      |                                              | Quantification of short-chain free fatty acids in "Terrincho" ewe cheese: Intravarietal comparison.                                                                                                                                                                                                                 |                                                           |               |
| 1453 | Free fatty acids in ewe cheese               | <i>Journal of Dairy Science</i> (2003) 86(10), 3102-3109<br><br>Ferreira, I. M. P. L. V. O.; Ferreira, M. A.; Pinho, O.                                                                                                                                                                                             | 85um Polyacrylate 65 degrees C, 45 mins. Headspace        | GC-FID        |
|      |                                              | Evaluation of two commercial solid-phase microextraction fibres for the analysis of target aroma compounds in cooked beef meat                                                                                                                                                                                      |                                                           |               |
| 1454 | Aroma volatiles in beef                      | <i>Talanta</i> (2003) 61(4), 529-537<br><br>Istasse, Louis; Machiels, David                                                                                                                                                                                                                                         | 50/30um DVB/Carboxen PDMS, Carboxen PDMS, GC-MS headspace |               |
| 2346 | Volatiles in sparkling wine                  | <b>Volatile profiles of sparkling wines obtained by three extraction methods and gas chromatography-mass spectrometry</b><br><i>Food Chemistry</i> 105, #1, 428-435 (2007 )<br><b>Bosch-Fuste, J.; Riu-Aumatell, M.; Guadayol, J. M.; Caixach, J.; Lopez-Tamames, E.; Buxaderas, S.</b>                             | <b>50/30µm DVB/Car headspace<br/>30 min @ 35 C</b>        | GC-MS         |
| 1457 | Volatiles in sparkling wine                  | Volatile compounds by SPME-GC as age markers of sparkling wines.<br><i>American Journal of Enology and Viticulture</i> (2003) 54(3), 158-162<br>Buxaderas, Susana; Francioli, Sonia; Lopez-Tamames, Elvira; Riu-Aumatell, Montserrat; Torrens, Jordi                                                                |                                                           | GC-MS         |
| 1463 | Long chain alcohols from food-borne bacteria | Comparison of long-chain alcohols and other volatile compounds emitted from food-borne and related Gram positive and Gram negative bacteria.<br><i>Journal of Basic Microbiology</i> (2002) 42(6), 373-380<br><br>Hamilton-Kemp, T. R.; Archbold, D. D.; Collins, R. W.; Elgaali, Hesham; Newman, M. C.; Yu, Keshun |                                                           | GC-MS         |
| 1465 | Thymol in honey                              | Application of solid phase microextraction to evaluate traces of thymol in honey.<br><i>Apidologie</i> (2002) 33(6), 545-552<br><br>Conte, Lanfranco S.; Bogdanov, Stefan; Gracco, Luisa; Piasenzotto, Lara                                                                                                         |                                                           |               |
| 1471 | VOCs in Riesling wine                        | Analysis of Riesling wine volatiles by a novel headspace solid-phase microextraction gas chromatography method.<br><i>American Journal of Enology and Viticulture</i> (2002) 53(3), 251A                                                                                                                            |                                                           |               |
| 1472 | Volatiles in dry-cured ham                   | Optimisation of solid phase microextraction ( SPME ) for the analysis of volatile compounds in dry-cured ham.<br><i>Journal of the Science of Food and Agriculture</i> (2002) 82(14), 1703-1709<br><br>Flores, Monica; Gianelli, Maria Pia; Toldra, Fidel                                                           | 50/30um DVB/Carboxen PDMS                                 |               |
| 1473 | Carvone in dill seeds                        | Estimation of the main dill seeds odorant carvone by solid-phase microextraction and gas chromatography.<br><i>Nahrung</i> (2002) 46(5), 357-359<br><br>Zawirska-Wojtasiak, Renata; Wasowicz, Erwin                                                                                                                 | 85um Polyacrylate, 100um PDMS                             | GC-FID        |
| 1474 | Volatiles from soybean leaves                | Clean recovery and HRGC-MS/HRGC-FTIR identification of volatiles from soybean (Glycine max).<br><i>Italian Journal of Food Science</i> (2002) 12(2), 175-182<br><br>Damiani, P.; Bin, F.; Castellini, M.; Cossignani, L.                                                                                            |                                                           | GC-MS         |
|      |                                              | Binding properties of 2-pentyl pyridine to soy protein as measured by solid phase microextraction                                                                                                                                                                                                                   |                                                           |               |



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|------|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|----------|
| 1481 | 2-pentyl pyridine binding to soy proteins | <i>Journal of Food Science</i> (2002) 67(1), 142-145<br><br>Boatright, W. L.; Johnson, L. A.; Reuber, M.; Zhou, A.<br><br>Headspace solid-phase microextraction analysis of aroma compounds in vinegar. Validation study.                                                                                                                                                                                                                                                          |                                         |          |
| 1482 | Aroma compounds in Vinegar                | <i>Journal of Chromatography A</i> (2002) 967(2), 261-267<br><br>Castro Mejias, Remedios; Garcia Barroso, Carmelo; Garcia Moreno, Ma. de Valme; Garcia Rowe, Fernando; Natera Marin, Ramon                                                                                                                                                                                                                                                                                         | 75um Carboxen/PDMS                      |          |
| 1496 | Mycophenolic acid in cheese               | <i>Food Chemistry</i> (2002) 78(2), 249-254<br><br>Zambonin, C. G.; Aresta, A.; Monaci, L.<br><br>Characterization of flavor compounds during grinding of roasted coffee beans.                                                                                                                                                                                                                                                                                                    | 50um Carbowax TPR                       | HPLC-PAD |
| 1499 | Characterization of flavors in coffee     | <i>Abstracts of Papers American Chemical Society</i> (2002) 224(1-2), AGFD 68<br><br>Sotoyama, Kazuyoshi; Ohtani, Noboru; Murakami, Kazuya; Iwatsuki, Keiji; Akiyama, Masayuki; Iwabuchi, Hisakatsu; Tanaka, Kiyofumi; Tokuno, Katsuya; Wada, Akira                                                                                                                                                                                                                                |                                         |          |
| 1500 | Volatiles in orange juice                 | Variables affecting SPME headspace analysis of orange juice volatiles<br><i>Abstracts of Papers American Chemical Society</i> (2002) 224(1-2), AGFD 49<br><br>Goodrich, Renee M.; Bryan, Charles R.; Braddock, Robert J.<br><br>Volatile compounds in hydrolyzed pineapple (Ananas comosus L. Merrill) perola variety and clarified pasteurized juices obtained by solid-phase microextraction                                                                                     |                                         |          |
| 1516 | Volatiles in pineapple                    | <i>Alimentaria</i> (2002) 39(333), 129-132<br><br>de Carvalho, Lucia Maria Jaeger; da Silva, Carlos Alberto Bento; de Oliveira Godoy, Ronel Luiz; Abadio, Fernanda Dias Bartolomeu; Figueira, Jose Americo A.                                                                                                                                                                                                                                                                      | 65um PDMS DVB                           | GC-MS    |
| 1517 | Aroma compounds in wine                   | Headspace solid-phase microextraction gas chromatography/mass spectrometry in the analysis of the aroma constituents of 'Cannonau de Jerzu' wine.<br><i>Rapid Communications in Mass Spectrometry</i> (2002) 16(11), 1086-1091<br><br>Podda, Gianni; Begala, Michela; Corda, Luciana; Fedrigo, Maria Anna; Traldi, Pietro                                                                                                                                                          |                                         | GC-MS    |
| 2405 | Volatile flavors of sardine               | <b>Analysis of volatile flavor compounds of sardine (<i>Sardinops melanosticta</i>) by solid phase microextraction.</b><br><i>J Food Sci</i> 73, #1, S83-88 (2008 Jan)<br>Ganeko, N; Shoda, M; Hirohara, I; Bhadra, A; Ishida, T; Matsuda, H; Takamura, H; Matoba, T                                                                                                                                                                                                               | headspace                               | GC-MS    |
| 2548 | MIB and geosmin in fish                   | Natural origins of off-flavours in fish related to feeding habits<br><i>Water Science and Technology</i> 55, #5, 301-309 (2007)<br>Papp, Zs. Gy.; Kerepeczki, E.; Pekar, F.; Gal, D.                                                                                                                                                                                                                                                                                               | headspace                               | GC-MS    |
| 2173 | Volatiles from fish powder                | Patterns in volatile components over heated fish powders<br><i>Food Research International</i> 39, #2, 190-202 (2006)<br>Mjos, Svein A.; Solvang, Marianne                                                                                                                                                                                                                                                                                                                         | headspace<br>0.5-4 h at 40°<br>to 140°C | GC-MS    |
| 2299 | Volatiles from smoked fish                | Headspace volatile components of smoked swordfish ( <i>Xiphias gladius</i> ) and cod ( <i>Gadus morhua</i> ) detected by means of spme-gc-ms<br><i>Food Chemistry</i> 94 #1, 151-156 (2006)<br>Guillen, M. D.; Errecalde, W. C.; Salmeron, J.; Casas, C.<br><br>Volatile components of raw and smoked black bream ( <i>Brama raii</i> ) and rainbow trout ( <i>Oncorhynchus mykiss</i> ) studied by means of solid phase microextraction and gas chromatography/mass spectrometry. | headspace                               | GC/MS    |
| 1520 | Volatiles in smoked fish                  | <i>Journal of the Science of Food and Agriculture</i> (2002) 82(9), 945-952<br><br>Guillen, Maria D.; Errecalde, Maria C.                                                                                                                                                                                                                                                                                                                                                          |                                         |          |
| 2567 | Aroma volatiles in watermelon             | <b>Characterization and semiquantitative analysis of volatiles in seedless . watermelon varieties using solid-phase microextraction</b><br><i>J. Agric. Food Chem.</i> 54, #20, 7789-7793 (2006-10-04)                                                                                                                                                                                                                                                                             | 50/30µm DVB/Car headspace               | GC/MS    |

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| 2311 | Volatile Esters in melons & apples            | Effect of cutting and storage on acetate and nonacetate esters in convenient, ready-to-eat fresh-cut melons and apples<br><i>HortScience</i> 41 #1, 65-73 (2006)<br>Beaulieu, John C.                                                                                                                                                                              | headspace                              | GC/MS           |
| 1521 | Aroma volatiles in cantaloupe                 | Effect of storage on some volatile aroma compounds in fresh-cut cantaloupe melon.<br><i>Journal of Agricultural and Food Chemistry</i> (2002) 50(14), 4043-4047<br>Lamikanra, Olusola; Richard, Olga A.                                                                                                                                                            | headspace                              | GC-MS           |
| 1525 | Fatty acid ethyl ethers in rum                | Headspace solid-phase microextraction of higher fatty acid ethyl esters in white rum aroma.<br><i>Journal of Chromatography A</i> (2002) 954(1-2), 51-57<br>Guasch, J.; Busto, O.; Marti, M. P.; Mestres, M.; Perez, J.; Pino, J.                                                                                                                                  |                                        |                 |
| 2466 | Volatiles from white grapes                   | Screening of variety- and pre-fermentation-related volatile compounds during ripening of white grapes to define their evolution profile<br><i>ANAL. CHIM. ACTA</i> 597, #2, 257-264 (10 AUG 2007)<br>Coelho, E.; Rocha, S. M.; Barros, A. S.; Delgadillo, I.; Coimbra, M. A.                                                                                       | headspace                              | GC-MS           |
| 2803 | Volatiles from grapes                         | Applications of GCxGC-TOF-MS to targeted analyses of volatiles in grapes during berry development<br><i>American J Enology and Viticulture</i> 59, #1, 115A (2008)<br>Sacks, Gavin L.; Pan, Bruce S.; Ryona, Imelda                                                                                                                                                | headspace                              | GCxGC-TOF-MS    |
| 2810 | Volatiles from grapes                         | Effect of vertical shoot-positioned, smart-dyson, and Geneva double-curtain training systems on Viognier grape and wine composition<br><i>American J Enology and Viticulture</i> 59, #1, 11-21 (2008)<br>Zoecklein, B.; Wolf, T.; Pelanne, Lisa.; Miller, M. ; Birkenmaier, S.                                                                                     | headspace                              | GC-MS           |
| 1526 | Volatiles in alcoholic fermentation of grapes | Investigation of volatiles evolution during the alcoholic fermentation of grape must using free and immobilized cells with the help of solid phase microextraction ( SPME ) headspace sampling.<br><i>Journal of Agricultural and Food Chemistry</i> (2002) 50(13), 3840-3848<br>Komaitis, Michael; Kanellaki, Maria; Koutinas, Athanasios; Mallouchos, Athanasios |                                        |                 |
| 1527 | Odors in cheese                               | Optimization of headspace solid-phase microextraction ( SPME ) for the odor analysis of surface-ripened cheese.<br><i>Journal of Agricultural and Food Chemistry</i> (2002) 50(13), 3810-3817<br>Ducruet, Violette; Feigenbaum, Alexandre; Gratadoux, Jean Jacques; Jouquand, Celine; Lecanu, Laurent                                                              | headspace                              | GC-OLFACTOMETRY |
| 1534 | Butyltin in wines                             | Headspace solid-phase micro-extraction gas chromatography-mass detection method for the determination of butyltin compounds in wines.<br><i>Analytica Chimica Acta</i> (2002) 458(1), 231-239<br>Azenha, Manuel; Vasconcelos, Maria Teresa                                                                                                                         | headspace                              | GC-MS           |
| 1535 | Ethylphenol in wine                           | Determination of ethylphenol compounds in wine by headspace solid-phase microextraction in conjunction with gas chromatography and flame ionization detection.<br><i>Analytica Chimica Acta</i> (2002) 458(1), 111-117<br>Nepveu, Francoise; Gastine, Valerie; Monje, Marie-Carmen; Privat, Christelle                                                             | 85um Polyacrylate, NaCl added, 40mins. | GC-FID          |
| 2347 | Aroma compounds in peach                      | Changes in quality parameters and volatile aroma compounds in fairtime-peach during fruit development and ripening<br><i>Italian Journal of Food Science</i> 19, #1, 3-13 (2007)<br>Agozzino, P.; Avellone, G.; Filizzola, F.; Farina, V.; Lo Bianco, R.                                                                                                           | headspace                              | GC/MS           |
| 2317 | Ethyl carbamate in fruit spirits              | Automated determination of ethyl carbamate in stone-fruit spirits using headspace SPME-GC-MS<br><i>J. Chromatogr. A</i> 1108 #1, 116-120 (2006)<br>Kuballa, Thomas; Lachenmeier, Dirk W.; Nerlich, Uta                                                                                                                                                             | 65µm CW/DVB headspace<br>30 min at 70  | GC/MS           |

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| 1537 | Ethyl carbamate in wine                         | Determination of ethyl carbamate in wine by solid-phase microextraction and gas chromatography/mass spectrometry.<br><i>American Journal of Enology and Viticulture</i> (2002) 53(1), 60-63<br>Zoecklein, B. W.; Whiton, R. S.                                                                                           | 65µm Carbowax DVB, 30mins, headspace                 | GC-MS  |
| 2907 | 3-alkyl-2-methoxy pyrazines in wine and juice   | <b>Quantitative analysis of 3-alkyl-2-methoxypyrazines in juice and wine using stable isotope labelled internal standard assay</b><br><i>J. Chromatogr., A</i> 1190, #1-2, 294-301 (May 9 2008)<br>Blake, A.J.; Brindle, I.D.; Chen, X.; Inglis, D.; Kotseridis, Y.S.; Pickering, G.J.; Sears, M.; Soleas, G.; Spink, M. | 50/30µm DVB/CAR Headspace pH 6                       | GC-MS  |
| 2901 | 3-alkyl-2-methoxypyrazines in wine              | <b>Implementation of headspace SPME-GC-MS/MS methodology for determination of 3-alkyl-2-methoxypyrazines in wine</b><br><i>Eur. Food Res. Technol</i> 227, #2, 449-461 (June 2008)<br>Godelmann, Rolf; Kuballa, Thomas; Limmert, Susanne                                                                                 | 75µm Carboxen 30-80 min 30-80 °C                     | GC-MS  |
| 2806 | 3-alkyl-2-methoxypyrazine in wine               | <b>Determination of 3-alkyl-2-methoxypyrazines in lady beetle-infested wine by SPMEheadspace sampling</b><br><i>J of Agri and Food Chemistry</i> 56(3), 1065-1071 (FEB 13 2008)<br>Galvan, Tederson Lutz; Kells, Stephen; Hutchison, William Dale                                                                        | headspace                                            | GC     |
| 1539 | 3-alkyl-2-methoxypyrazines in wine              | Headspace solid-phase microextraction analysis of 3-alkyl-2-methoxypyrazines in wines.<br><i>Journal of Chromatography A</i> (2002) 953(1-2), 1-6<br>Guasch, J.; Busto, O.; Marti, M. P.; Mestres, M.; Sala, C.                                                                                                          |                                                      |        |
| 1541 | Butyltin in Portuguese wines                    | Butyltin compounds in Portuguese wines.<br><i>Journal of Agricultural and Food Chemistry</i> (2002) 50(9), 2713-2716<br>Azenha, Manuel; Vasconcelos, Maria Teresa                                                                                                                                                        |                                                      | GC-MS  |
| 1542 | Volatiles in Spanish honey                      | Analysis of volatiles from Spanish honeys by solid-phase microextraction and gas chromatography-mass spectrometry.<br><i>Journal of Agricultural and Food Chemistry</i> (2002) 50(9), 2633-2637<br>Tadeo, Jose L.; Calvo, Rosa M.; Perez, Rosa A.; Sanchez-Brunete, Consuelo                                             | 75µm Carboxen PDMS, 70 degrees C, 30mins.            | GC-MS  |
| 1546 | Short-chain fatty acids in cane and beet sugars | Semiquantitative determination of short-chain fatty acids in cane and beet sugars.<br><i>Journal of Chromatographic Science</i> (2002) 40(3), 127-132<br>Grimm, Casey C.; Batista, Rebecca B.; Godshall, Mary An                                                                                                         |                                                      |        |
| 2415 | Sulfur compounds in wines                       | <b>Quantitative determination of wine highly volatile sulfur compounds by using automated headspace SPME-GC-pulsed FPD:</b><br><b>Critical study and optimization of a new procedure</b><br><i>J. Chromatogr., A</i> 1143, #1-2, 8-15 (-2007-03-02)<br>Lopez, R.; Lapena, A. C.; Cacho, J.; Ferreira, V.                 | 75µm Carboxen 20 MIN @ 35°C headspace saturated NaCl | GC-FPD |
| 2225 | Sulfur compounds in wines                       | <b>Volatile sulfur compounds in oregon wines determined by SPME-pulsed flame photometric detection</b><br><i>American Journal of Enology and Viticulture</i> 56 #3, 309A (2005)<br>Fang, Yu; Qian, Michael                                                                                                               | headspace                                            | GC-FPD |
| 1555 | Sulfur compounds in wines                       | Application of headspace solid-phase microextraction to the determination of sulphur compounds with low volatility in wines.<br><i>Journal of Chromatography A</i> (2002) 945(1-2), 211-219<br>Mestres, M.; Busto, O.; Guasch, J.                                                                                        | 50/30µm DVB/Carboxen PDMS                            | GC-MS  |
| 1196 |                                                 | Analysis of chemical constituents of capsicol by GC-MS.<br><i>Fenxi Ceshi Xuebao</i> (2003) 22 (1), 67-70.<br>Zhu, X. L.; Liu, B. Z.; Zong, R. W.; Yun, G. O.                                                                                                                                                            |                                                      | GC-MS  |

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| 1211 |                                          | Identification of 2-bromo-3,4,5,6-tetrachloroaniline and its quantification in the color additives D&C Red Nos. 27 and 28 (phloxine B) using solid-phase microextraction and gas chromatography-mass spectrometry<br><i>Journal of Chromatography A</i> (2003) 1005 (1-2), 143-153.<br>Andrzejewski, Denis; Weisz, Adrian |                             | GC-MS            |
| 1243 | Nicotine in cigarettes                   | Determination of nicotine and other minor alkaloids in international cigarettes by solid-phase microextraction and gas chromatography/mass spectrometry.<br><i>Analytical Chemistry</i> (2003) 74 (19), 4878-4884.<br>Wu, W. J.; Ashley, D. L.; Watson, C. H.*                                                            |                             | GC-MS            |
| 1274 |                                          | Determination of the volatile constituents of Chinese <i>Coriandrum sativum</i> L. by gas chromatography-mass spectrometry with solid-phase microextraction.<br><i>Chromatographia</i> (2003) 57 (5-6), 357-361.<br>Deng, C. H.; Song, G. X.; Hu, Y. M.*; Zhang, X. M.                                                    | 100 µm PDMS, 250 C, 3 µm    | GC-MS            |
| 1314 |                                          | Aroma dilution method using GC injector split ratio for volatile compounds extracted by headspace solid phase microextraction.<br><i>Food Chemistry</i> (2003) 83 (1), 151-158.<br>Lee, Hyong Joo; Kim, Kyoung Heon; Kim, Tae Hwan; Kim, Young-Suk; Lee, Sang Mi; Oh, Sangsuk                                             |                             | GC-O             |
| 1409 | Disulfide flavors from proteins          | Flavor-protein binding: Disulfide interchange reactions between ovalbumin and volatile disulfides.<br><i>Journal of Agricultural and Food Chemistry</i> (2001), 49(9), 4333-4336.<br>Mottram, Donald S.; Adams, Rachel L.; Brown, Helen M.; Parker, Jane K.                                                               |                             |                  |
| 1559 | Esters in wine                           | Analysis of esters in wines<br><i>J.Chromatogr. A</i> (2002) 963(1-2), 213-223<br>Rodríguez-Bencomo, J.; Conde, J.; Rodríguez-Delgado, M.A.; García-Montelongo, F.; Perez-Trujillo, J.P.<br>Contribution of dimethyl sulfide to the aroma of Syrah and                                                                    | Various                     | GC               |
| 1560 | Dimethyl sulfide in wine                 | Grenache Noir wines and estimation of its potential in grapes of these varieties<br><i>J Agr Food Chem</i> , 52, #23, 7084-7093<br>Segurel, M.; Razungles, A.; Riou, C.; Salles, M; Baumes, R                                                                                                                             | headspace                   | GC-MS            |
| 1561 | Volatiles in apple leaves                | Hydrolysis of glycosidically bound volatiles from apple leaves (cv. Anna) by <i>Aspergillus niger</i> beta-glucosidase affects the behavior of codling moth ( <i>Cydia pomonella</i> L.)<br><i>J Agril and Food Chem</i> , 52, #26, 6212-6216<br>Wei, Shu; Reuveny, Haim; Bravdo, Ben-Ami; Shoseyov, Oded                 | headspace                   | GC-MS            |
| 2547 | Volatiles in apples                      | <b>Genetic diversity of volatile components in Xinjiang Wild Apple (<i>Malus sieversii</i>)</b><br><b><i>Journal of Genetics and Genomics</i> 34, #2, 171-179( FEB 2007)</b><br><b>Chen, X.; Feng, T.; Zhang, Y.; He, T.; Feng, Jianrong; Zhang, Chunyu</b>                                                               | Headspace                   | GC-MS            |
| 1562 | Volatiles in apples                      | Monitoring seasonal variation in apple fruit volatile emissions in situ using SPME<br><i>Phytochemical Analysis</i> , 14, No 4, 232-240<br>Hern, Alan; Dorn, Silvia                                                                                                                                                       | in situ                     | GC               |
| 1563 | Esters in apples                         | Ester variability in apple varieties as determined by SPME-GC-MS<br><i>J Agril and Food Chem</i> , 52, #26, 8086-8093<br>Young, J. C.; Chu, C. L. G.; Lu, X. W.; Zhu, H. H.                                                                                                                                               | PDMS fiber<br>Headspace     | GC-MS            |
| 1564 | Volatiles in stawberry vs a puree        | Potential of SPME-GC and chemometrics to detect adulteration of soft fruit purees.<br><i>J Agr Food Chem</i> , 52, #3, 421-427<br>Reid, L.; Oapostrophe Donnell, C.; Downey, G.                                                                                                                                           | Headspace                   | GC-FID<br>GC-MS  |
| 1565 | Solvents in edible oils, pharmaceuticals | Development of headspace SPME-GC method for the determination of solvent residues in edible oils and pharmaceuticals<br><i>J. Chromatogr. A</i> , 1071, #1-2, 119-124<br>Michulec, M.; Wardencki, W.                                                                                                                      | various fibers<br>headspace | GC-FID<br>GC-ECD |
| 2701 | Volatiles in safflower oil               | <b>Rapid determination of volatile constituents in safflower by microwave distillation and simultaneous SPME-GC-MS</b><br><b><i>Annali di Chimica</i> 97, #10, 1075-1084 (OCT 2007)</b><br><b>Yu, Yingjia; Yang, Bei; Zhou, T.; Zhang, H.; Shao, Luping; Duan, G.</b>                                                     | 65µm PDMS/DVB<br>headspace  | GC/MS            |

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| 1566 | Volatiles in safflower oil        | Identification of volatile compounds in structured lipid of safflower oil using electronic nose and SPME-GC-MS<br><i>Agr Chem&amp;Biotechnogy</i> , 46, #4, 152-155<br>Shin, Jung-Ah; Lee, Jong-Ho; Lee, Ki-Teak                                                                        | headspace                                                | GC-MS     |
| 2708 | Terpenes in olive oil             | <b>Monoterpene and sesquiterpene hydrocarbons of virgin olive oil by . headspace SPME coupled to gas chromatography/mass spectrometry</b><br><i>J. Chromatogr., A 1125, #1, 117-123 (2006-08-25)</i><br>Vichi, S.; Guadayol, J.; Caixach, J.; Lopez-Tamames, E.; Buxaderas, S.          | headspace                                                | GC/MS     |
| 2248 | Halogenated solvents in olive oil | Determination of halogenated solvents content in olive oil by two completely automated headspace techniques coupled to GC-MS<br><i>Analytica Chimica Acta (2005) 552 #1-2, 60-66</i><br>Arrebola, F. ; Gonzalez-Rodriguez, M.; Garrido Frenich, A.; Marin-Juan, A.; Martinez Vidal, J.; | headspace                                                | GC/MS     |
| 2515 | Volatiles from Virgin olive oil   | Characterization of olive paste volatiles to predict the sensory quality of virgin olive oil<br><i>European J Lipid Sci Tech 109, #7, 663-672 (JUL 2007)</i><br>Garcia-Gonzalez, Diego L.; Tena, Noelia; Aparicio, Ramon                                                                | headspace                                                | GC/MS     |
| 2300 | Volatiles from Virgin olive oil   | Effect of the matrix volatile composition in the headspace SPME analysis of extra virgin olive oil<br><i>Food Chemistry 94 #1, 143-150 (2006)</i><br>Contini, Marina; Esti, Marco                                                                                                       | 65µm PDMS/DVB headspace                                  | GC/MS     |
| 1567 | Volatiles in olive oils           | Comparative study on volatile analysis of extra virgin olive oil by dynamic headspace and SPME<br><i>Food Chemistry</i> , 90, #1-2, 69-79<br>Kanavouras, A.; Kiritsakis, A.; Hernandez, R. J.                                                                                           | 100µm PDMS<br>65µm PDMS-DVB headspace                    | GC-MS-TOF |
| 2738 | Volatiles in olive oils           | <b>Application of SPME to virgin olive oil quality control</b><br><i>J Chromatogr A, 1121, #1, 140-144 (2006-07-14)</i><br>Jimenez, A.; Aguilera, M. P.; Beltran, G.; Uceda, M.                                                                                                         | 65µm PDMS/DVB headspace<br>30 min @ 40°C                 | GC/MS     |
| 1568 | Volatiles in olive oils           | Application of SPME in the analysis of volatile oils compounds in virgin olive oils.<br><i>J Chromatogr A, 1028, #2, 321-324</i><br>Jimenez, A.; Beltran, G.; Aguilera, M. P.                                                                                                           | 100µm PDMS<br>15 min @ 45°C headspace                    | GC        |
| 1569 | Volatiles in olive oils           | Analysis of virgin olive oil volatiles by a novel electronic nose based on a miniaturized SAW sensor array coupled with SPME enhanced headspace enrichment<br><i>J AgriFood Chem</i> , 52, #25, 7475-7479<br>Garcia-Gonzalez, D.; Barie, N; Rapp, M; Aparicio, R                        | headspace                                                | SAW<br>GC |
| 1570 | Terpenes in olibanum              | A chemical investigation by headspace SPME and GC-MS of volatile and semi-volatile terpenes in various olibanum samples<br><i>Phytochemistry (Amsterdam)</i> , 66, #12,1499-1514<br>Hamm, S; Bleton, J; Connan, J; Tchaplal, A                                                          | headspace                                                | GC-MS     |
| 2450 | Terpenes from live branches       | <b>Quantifying sesquiterpene and oxygenated terpene emissions from live vegetation using solid-phase microextraction fibers.</b><br><i>J. Chromatogr., A 1161, #1-2, 113-120 (2007-08-17)</i><br>Bouvier-Brown, N. C.; Holzinger, R.; Palitzsch, K.; Goldstein, A. H.                   | 65µm PDMS-DVB headspace<br>10-45 min                     | GC-MS     |
| 2522 | Volatiles from Rock-rose          | <b>Simultaneous distillation-extraction of high-value volatile compounds from Cistus ladanifer L</b><br><i>Anal. Chim. Acta 584, #2, 439-446 (Feb 19 2007)</i><br>Alves, Arminda; Mendes, Adelio; Santos, Lucia; Teixeira, Salome                                                       | 85µm Polyacrylate<br>60 min @ 40°C headspace<br>20% NaCl | GC-FID    |
| 2479 | Phytohormones from plants         | <b>Simultaneous determination of phytohormones in plant extracts using SPME and HPLC</b><br><i>Chromatographia 66, #7/8, 515-520 (2007)</i><br>Liu HongTao; Li YanFen; Luan TianGang; Lan ChongYu; Shu WenSheng                                                                         | 50µm CW                                                  | GC, HPLC  |
| 2288 | Volatiles from plants             | Volatile profiling of Arabidopsis thaliana - Putative olfactory compounds in plant communication<br><i>Phytochemistry (Amsterdam)</i> 66 #16, 1941-1955 (2005)<br>Rohloff, Jens; Bones, Atle M.                                                                                         | headspace                                                | GC/IMS    |
| 2202 | Volatiles from plants             | Evaluation of extracts and oils of mosquito (Diptera : Culicidae) repellent plants from Sweden and Guinea-Bissau<br><i>J Medical Entomology 43, #1, 113-119 (2006)</i><br>Jaenson, Thomas G. T.; Palsson, Katinka; Borg-Karlson, Anna-Karin                                             | headspace                                                | GC-MS     |

Characterization of three Agave species by GC

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| 1571 | Terpenes & fatty acids in plants           | and SPME-GC-MS<br><i>J Chromatogr A</i> , 1027, #1-2, 131-136<br>Pena-Alvarez, A.; Diaz, L.; Medina, A.; Labastida, C.; Capella, S.; Vera, L..                                                                                                                                                                     | headspace<br>steam distillation                   | GC, GC-MS |
| 2628 | Volatiles in camu-camu fruit               | <b>Analysis of volatile compounds of camu-camu (<i>Myrciaria dubia</i> (HBK) Mcvaugh) fruit isolated by different methods</b><br><i>J. Essent. Oil Res.</i> 19, #6, 527-533 (Nov/Dec 2007)<br><b>Pino, Jorge A.; Quijano, Clara E.</b>                                                                             | headspace                                         | GC-MS     |
| 1572 | Volatiles in fruit                         | Analysis of volatile secondary metabolites from Colombian <i>Xylopia rorata</i> (Lamarck) by different extraction and headspace methods and GC<br><i>J Chromatogr A</i> , 1025, #1, 105-113<br>Stashenko, E.; Jaramillo, B.; Martinez, J                                                                           | headspace                                         | GC-MS     |
| 1573 | Volatiles in corn oil                      | Comparison of volatile compounds of corn oil and modified corn oil by electronic nose and SPME-GC-MS<br><i>Agri Chem and Biotechnology</i> , 47, #3, 153-156<br>Vu, Phuong-Lan; Shin, Jung-Ah; Lee, Ki-Teak                                                                                                        | headspace                                         | GC-MS     |
| 1574 | Review                                     | Application of the SPME and in food analysis<br><i>Polish J Food and Nutrition Sci</i> , 13, #4, 355-361<br>Ligor, Magdalena; Wojcik, Jan; Buszewski, Boguslaw                                                                                                                                                     | 100µm PDMS<br>85µm polyacrylate<br>headspace      | GC-MS     |
| 2812 | Volatiles from essential oils              | <b>Essential oil in fruits of <i>Peucedanum alsaticum</i> L. and <i>Peucedanum cervaria</i> (L.) Lap. Composition and antibacterial activity</b><br><i>Planta Medica</i> 73, #9, 883-884 (AUG 2007)<br><b>Skalicka-Wozniak, K.; Los, R.; Glowinski, K.; Malm, A.</b>                                               |                                                   |           |
| 2318 | Volatiles from essential oils              | <b>Use of SPME in diffusive sampling of the atmosphere generated by different essential oils</b><br><i>Anal. Chim. Acta</i> 559 #2, 97-104 (2006)<br><b>Battle, R.; Huerga, M.A.; Lopez, P.; Nerin, C.</b>                                                                                                         | headspace<br>30 min @ 20°C                        | GC/MS     |
| 2222 | Volatiles in essential oils                | <b>High-throughput analysis of bergamot essential oil by fast SPME capillary GC-FID</b><br><i>J. Chromatogr. A</i> , 1103, #1, 162-165 (2006)<br><b>Costa, R.; Dugo, G.; Dugo, P.; Mondello, L.; Presti, M.; Tranchida, P.</b>                                                                                     | 30 and 7µm PDMS<br>headspace                      | GC-FID    |
| 1575 | Volatiles from essential oils              | Steam distillation-SPME for the detection of <i>Ephedra sinica</i> in herbal preparations<br><i>J Chromatogr A</i> , 1025, #1, 51-56<br>Tellez, M.; Khan, I.; Schaneberg, B.; Crockett, S.; Rimando, A.; Kobaisy, M                                                                                                | headspace                                         | GC-MS     |
| 1576 | Volatiles from essential oils              | Testing of microencapsulated flavours by electronic nose and SPME-GC<br><i>Food Chem</i> , 92, #1, 45-54<br>Baranauskienė, R.; Venskutonis, P.; Galdikas, A.; Senulienė, Daiva; Setkus, Arunas                                                                                                                     | headspace                                         | GC-MS     |
| 1577 | Organo-phosphorus pesticides in wine/juice | SPME-GC-MS a fast and simple screening method for the assessment of organophosphorus pesticides residues in wine and fruit juices.<br><i>Food Chemistry</i> , 86, #2, 269-274<br>Zamabonin, C.; Quinto, M.; de Vietro, N.; Palmisano, F                                                                            | headspace                                         | GC-MS     |
| 1578 | Volatiles from wheat                       | Metabolites of lesser grain borer in grains.<br><i>J Agri Food Chem</i> , 52, #4, 898-908<br>Seitz, L. M.; Ram, M. S.                                                                                                                                                                                              | headspace<br>0-240min @ 20°-40°C                  | GC-MS     |
| 1579 | Volatiles of essential oils                | Headspace SPME-GC-Mass spectrometric analysis of the essential oils of two traditional Chinese medicines, <i>Angelica pubescens</i> and <i>Angelica sinensis</i> .<br><i>Chromatographia</i> , 59, #5-6, 343-349<br>Song, G. X.; Deng, C. H.; Wu, D.; Hu, Y. M.*                                                   | headspace                                         | GC-MS     |
| 2853 | Volatiles from chinese grandiflora         | <b>Comparative study on volatile components of <i>Nardostachys</i> Rhizome</b><br><i>Journal of Natural Medicines</i> 62, #1, 112-116 (JAN 2008)<br><b>Tanaka, Ken; Komatsu, Katsuko</b>                                                                                                                           | headspace                                         | GC-MS     |
| 2704 | Active ingredients from chinese medicine   | <b>Fast determination of curcuminol, curdione and germacrone in three species of <i>Curcuma</i> rhizomes by microwave-assisted extraction followed by headspace SPME-GC-MS</b><br><i>J. Chromatogr., A</i> 1117, #2, 115-120 (2006-06-09)<br><b>Deng, C. H.; Ji, J.; Li, N.; Yu, Y. J.; Duan, G. L.; Zhang, X.</b> | 100 µm PDMS<br>20min @ 80°. headspace<br>30% NaCl | GC-MS     |

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| 2589 | Volatiles from<br>chinese medicines      | Analysis of the volatile compounds in <i>Ligusticum chuanxiong</i> Hort.<br>using HS-SPME-GC-MS<br><i>J. PHARM. BIOMED. ANAL.</i> 44, #2, 464-470 (28 JUN 2007)<br>Zhang, C.; Qi, M.; Shao, Q.; Zhou, S.; Fu, R.                                                                                                  | 65µm PDMS-DVB<br>headspace                                              | GC-MS                   |
| 2570 | Essential oils<br>in Chinese<br>medicine | GC-MS following microwave distillation and headspace SPME for fast<br>analysis of essential oil in dry traditional Chinese medicine<br><i>J. Chromatogr., A</i> 1133, #1-2, 29-34 (2006-11-10)<br>Li, N.; Deng, C. H.; Li, Y.; Ye, H.; Zhang, X. M.                                                               | headspace                                                               | GC-MS                   |
| 2166 | Essential oils<br>in Chinese<br>medicine | Rapid determination of essential oil compounds in <i>Artemisia<br/>Selengensis</i> Turcz by GC-MS with microwave distillation and<br>simultaneous SPME<br><i>Anal. Chim. Acta</i> , 556, #2, 289-294 (2006)<br>Deng, Chunhui; Xu, Xiuqin; Yao, Ning; Li, Ning; Zhang, Xiangmin                                    | headspace                                                               | GC-MS                   |
| 2553 | Volatiles from<br>chinese medicines      | Headspace SPME-GC-MS for analysis of volatile components<br>from <i>Atractylodes macrocephala</i> Koidz<br><i>Sepu</i> 25, #1, 43-47 (2007-01)<br>Guo, F. Q.; Huang, L. F.; Zhou, S. Y.                                                                                                                           | 65µm PDMS-DVB<br>30 min @ 70°C<br>headspace                             | GC-MS                   |
| 2500 | Review article                           | Recent developments in sample preparation techniques for<br>chromatography analysis of traditional Chinese medicines.<br><i>J Chromatogr A</i> 1153, #1-2, 90-96 (2007 Jun 15)<br>Deng, Chunhui; Liu, Ning; Gao, Mingxia; Zhang, Xiangmin                                                                         |                                                                         |                         |
| 1580 | Organo-<br>selenium in<br>yeast          | SPME-multicapillary GC coupled to different<br>detection systems and applied to volatile<br>organo-selenium speciation in yeast.<br><i>J Analytical Atomic Spectrometry</i> , 19, #2, 260-266<br>Dietz, C.; Sanz Landaluze, J.; Ximenez-Embun, P.; Madrid-Albarran, Y.;<br>Camara, C.                             | headspace                                                               | ICP-MS, MIP-AES,<br>AFS |
| 1581 | Organo-<br>selenium in<br>yeast          | Volatile organoselenium monitoring in production and gastric<br>digestion processes of selenized yeast by SPME-multicapillary<br>GC coupled microwave-induced plasma atomic<br>emission spectrometry<br><i>Appl. Organomet. Chem.</i> , 18, #12, 606-613<br>Camara, C.; Dietz, C.; Madrid, Y.; Sanz Landaluze, J. | headspace                                                               | MIP-AES                 |
| 1582 | Sulfur compd<br>in yeast                 | Production of volatile organic sulfur compounds (VOSCs)<br>by basidiomycetous yeasts<br><i>FEMS Yeast Research</i> , 5, #4-5, 379-385<br>Buzzini, Pietro; Romano, Sergio; Turchetti, Benedetta;<br>Vaughan, Ann; Pagnoni, Ugo Maria; Davoli, Paolo                                                                | headspace                                                               | GC-MS                   |
| 1583 | Methyl<br>mercury in<br>seafood          | Direct coupling of SPME and quartz tube-atomic<br>absorption spectrometry for selective and sensitive<br>determination of methylmercury in seafood: An<br>assessment of chloride & hydride generation<br><i>J Analytical Atomic Spectrometry</i> , 19, #2, 220-254<br>Fragueiro, S; Lavilla, I; Bendicho, C.      | 65µm PDMS-DVB<br>bare silica fiber<br>headspace<br>chloride derivative. | GC-MS, AA               |
| 2258 | Flavor volatiles<br>in cantaloupe        | Volatile changes in cantaloupe during growth, maturation, and in<br>stored fresh-cuts prepared from fruit harvested at various maturities<br><i>J Am Society for Horticultural Sci.</i> 131, #1, 127-139 (2006)<br>Beaulieu, John                                                                                 | headspace                                                               | GC-MS                   |
| 1584 | Flavor volatiles<br>in cantaloupe        | Volatile profile, sensory attributes, and quality of<br>freshcut cantaloupe is maturity-at-cutting dependent<br><i>Hortscience</i> , 38, #5, 833<br>Beaulieu, John C.; Bett, Karen L.                                                                                                                             | headspace                                                               | GC-MS                   |
| 1585 | Fatty acids<br>in tomatos                | Fatty acid composition of tomato affects fruit and<br>leaf biosynthesis of C6 aldehydes and alcohols<br><i>Hortscience</i> , 38, #5, 833<br>Canoles, M; Li, C; Howe, Gg; Beaudry, R                                                                                                                               |                                                                         | GC-MS                   |
| 1586 | C6 aldehydes<br>in tomatos               | Rapid determination of C6-aldehydes in tomato plant emission<br>by GC-MS and SPME with on-fiber derivatization<br><i>J Sep Science</i> , 28, #2, 172-176<br>Deng, Chunhui; Li, Ning; Zhu, Weimin; Qian, Ji;<br>Yang, Xiaofeng; Zhang, Xiangmin                                                                    | 65µm PDMS-DVB<br>5 min @ 25°C<br>PFBHA derivatives<br>headspace         | GC-MS                   |
| 1587 | Sulfur aroma<br>from Beer                | The measurement of sulfur-containing aroma compounds in<br>samples from production-scale brewery operations<br><i>JAm Society of Brewing Chemists</i> , 63, #3, 129-134<br>Miracle, R. E.; Ebeler, S. E.; Bamforth, C. W.                                                                                         | headspace                                                               | GC-FPD                  |

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| 1588 | Aldehydes in beer                           | Determination of C3-C10 aliphatic aldehydes using PFBHA derivatization and SPME. Application to the analysis of beer<br><i>Chemia Analityczna</i> , 49, #6, 869-880<br>Jelen, H.; Dabrowska, A.; Klensporf, D.; Nawrocki, J.; Wasowicz, E.                          | PFBHA derivatives<br>20min @ 20°C headspace | GC              |
| 1589 | Volatiles from wheat grain                  | Volatile compounds of <i>Aspergillus</i> strains with different abilities to produce ochratoxin A<br><i>J Agri Food Chem</i> , 53, #5, 1678-1683<br>Jelen, Henryk H.; Grabarkiewicz-Szczesna, Jadwiga                                                               | headspace @ 20° to 27°C                     | GC              |
| 2697 | Volatiles from strawberries                 | <b>Quantification of selected aroma-active compounds in strawberries by headspace SPME-GC and correlation with sensory descriptive analysis</b><br><i>J Food Science</i> 72, #7, S487-S496 (2007)<br>Jetti, R. R.; Yang, E.; Kurnianta, A.; Finn, C.; Qian, M. C.   | headspace                                   | GC-MS           |
| 1590 | Volatiles from strawberries                 | Comparison of methodologies for the identification of aroma compounds in strawberry<br><i>Turk. J. Agric. For.</i> , 29, #5, 383-390<br>Bar, E.; Kafkas, E.; Kafkas, S.; Koch-Dean, M. Larkov, O.; Lavid, N. Lewinsohn, Efraim; Ravid, Uzi; Schwab, Wilfried        | headspace                                   | GC-MS           |
| 1591 | Volatiles from strawberries                 | Analysis of strawberry volatiles using comprehensive two dimensional gas chromatography with headspace SPME<br><i>J Chromatogr. B</i> :817, # 1, 97-107<br>Williams, A.; Ryan, D.; Guasca, A.; Marriott, P.; Pang, E.                                               | headspace                                   | GC-GC           |
| 1592 | Off-odour in strawberries                   | Main compounds responsible for off-odour of strawberries infected by <i>Phytophthora cactorum</i><br><i>Letters in Applied Microbiology</i> , 40, #4, 255-259<br>Jelen, H. ; Krawczyk, J.; Larsen, T. ; Jarosz, A.; Golebniak, B.                                   | headspace                                   | GC-olfactometry |
| 1593 | Volatiles from strawberries                 | Volatile compounds as markers for coliforms inoculated on strawberry fruit.<br><i>Hortscience</i> , 38, #5, 831<br>Yu, K; Elgaali, H; Hamilton-Kemp, T; Newman, M; Collins, R; Archbold, D.                                                                         | 15 min headspace                            | GC              |
| 1594 | Sulfur volatiles from garlic                | SPME-GC-MS analysis of garlic oil obtained by hydrodistillation<br><i>J. Chromatogr. A</i> , 1036, #1, 91-93<br>Calvo-Gomez, O.; Lopez, M.; Morales-Lopez, J.                                                                                                       | various fibers headspace                    | GC-MS           |
| 1595 | Garlic flavor components                    | Comparative study of extraction techniques for determination of garlic flavor components by GC-MS<br><i>Anal. Bioanal. Chem.</i> , 377, #4, 749-756<br>Kim, Nam-Sun; Lee, Dong-Sun; Lee, Sun-Neo                                                                    | 50/30µm DVB/CAR headspace                   | GC-MS           |
| 1596 | Volatiles from avocado                      | SPME and GC-MS of volatile compounds from avocado puree after microwave processing<br><i>J. Chromatogr. A</i> , 1036, #1, 87-90<br>Dorantes, A.; Guzman, G; Lopez, M.                                                                                               | headspace<br>30sec microwave<br>pH 5.5      | GC-MS           |
| 2462 | Oxidative byproducts in sunflower oil       | <b>Sensory evaluation of the odour of a sunflower oil emulsion throughout oxidation</b><br><i>European J. Lipid Sci. Tech.</i> 109, #1, 38-48 (JAN 2007)<br>Villiere, A.; Rousseau, Florence; Brossard, Chantal; Genot, C.                                          | headspace<br>50°C in dark                   | GC-MS           |
| 1597 | Oxidative byproducts in sunflower oil       | Synergistic Effect of BSA on Antioxidant Activities in Model Food Emulsions<br><i>J Am Oil Chem Soc</i> , 81, #3, 275-280<br>Almajano, M. Pilar; Gordon, Michael H.                                                                                                 |                                             | GC+G742         |
| 2912 | Oxidative byproducts in sunflower oil       | <b>Evidence of the formation of light PAHs during the oxidation of edible oil in closed containers at room temperature</b><br><i>J Agr &amp; Food Chemistry</i> , 56, #6, 2028-2033 (MAR 26 2008)<br>Guillen, M.; Goicoechea, E.; Palencia, Gemma; Cosmes, Nerea    | headspace                                   | GC-MS           |
| 1598 | Oxidative byproducts in sunflower oil       | Study of both sunflower oil and its headspace throughout the oxidation process. Occurrence in the headspace of toxic oxygenated aldehydes<br><i>J Agr &amp; Food Chemistry</i> , 53, #4, 1093-1101<br>Guillen, Maria D.; Cabo, Nerea; Ibargoitia, Maria L.; Ruiz, A | headspace @ 70°C                            | GC-MS           |
| 2847 | Permethrin and cyfluthrin in surface waters | <b>Bioavailability of permethrin and cyfluthrin in surface waters with low levels of dissolved organic matter</b><br><i>J Environmental Quality</i> 36, #6, 1678-1685 (NOV-DEC 2007)<br>Yang, W. C.; Hunter, W.; Spurlock, F.; Gan, J.                              |                                             | GC              |
|      |                                             | SPME of permethrin residues from cucumber using                                                                                                                                                                                                                     |                                             |                 |



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| 1599 | Permethrin<br>on cucumbers           | a silica-bonded phase-coated stainless steel fibre<br><i>Food Additives &amp; Contaminants</i> , 21, #3. 222-231<br>Noroozian, E.; Kazemipour, M.; Tehrani, M.; Mahmoudian, M.                                                                                                          | 75µm Carboxen/PDMS<br>100µm PDMS<br>headspace   | GC                |
| 1600 | Volatiles in<br>herbal mixture       | Application of headspace SPME and comprehensive<br>two-dimensional gas chromatography (GC x GC) for the<br>chemical profiling of volatile oils in complex herbal mixtures:<br><i>J. Sep. Sci.</i> , 27, #5-6, 451-458<br>Di, Xin; Huie, C.; Marriott, P.; Shellie, R.                   | headspace                                       | GC-GC             |
| 1601 | Solvents in<br>plant oil             | Determination of residual solvents content<br>(hexane residue) in plant oil by headspace SPME<br><i>Fenxi Shiyanshi</i> , 23, #4, 70-72<br>Lan, F.; Xie, L. Q.; Yang, Z.; Pan, K. Y.; Wu, C.                                                                                            | headspace                                       | GC-FID            |
| 2795 | Volatiles from<br>Fungus             | <b>Volatile organic compounds released by the entomopathogenic fungus<br/>Beauveria bassiana</b><br><i>Microbiological Research</i> 163, #2, 148-151 (2008)<br>Crespo, R.; Pedrini, N.; Juarez, M. P.; Dal Bello, G. M.                                                                 | headspace                                       | GC/MS             |
| 2874 | Rancidity in<br>bakery<br>products   | <b>HS-SPME-GC applied to rancidity assessment in bakery foods</b><br><i>European Food Res Tech</i> 227, #1, 1-6 (May 2008)<br>Purcaro, G.; Moret, S.; Conte, L. S.                                                                                                                      | headspace                                       | GC/MS             |
| 1602 | Fungus<br>bakery<br>products         | Early detection of fungal growth in bakery products by use<br>of an electronic nose based on mass spectrometry<br><i>J Agr Food Chem</i> , 52, #20, 6068-6074<br>Vinaixa, M.; Marin, S.; Brezmes, J.; Llobet, E.;<br>Vilanova, X.; Correig, X.; Ramos, A.; Sanchis, V.                  | headspace                                       | GC/MS             |
| 2192 | Aroma<br>compounds<br>from food      | <b>Mechanisms of extraction of aroma compounds from foods, using<br/>adsorbents. Effect of various parameters</b><br><i>Food Reviews International</i> 22, #1, 51-94 (2006)<br>Nongonierma, A.; Cayot, P.; Le Quere, J.; Springett, M.; Voilley, A.                                     | headspace                                       | GC-MS             |
| 2737 | Odors from<br>wood packaging         | <b>Potential of SPME-GC for quarantine-required detection of wood<br/>packaging in shipping containers.</b><br><i>J. Sep. Sci.</i> 30, #7, 1044-1051 (2007-05)<br>More, N. A.; Braggins, T. J.; Goldson, S. L.                                                                          | headspace                                       | GC-FID            |
| 1603 | Odors from<br>packaging              | Investigation of the interaction of active packaging<br>material with food aroma compounds<br><i>Sens Actuators, B Chem</i> , 106, #1, 83-87<br>Pastorelli, S.; Simoneau, C.; Strathmann, S.                                                                                            | headspace                                       | GC-MS             |
| 2566 | N-nitrosamines<br>from water         | <b>Solid-phase microextraction of N -nitrosamines.</b><br><i>J. Chromatogr., A</i> 1117, #1, 11-18 (2006-06-02)<br>Gebel, J. E.; Young, C. C.; Suffet, I. H.                                                                                                                            |                                                 | CI-MS, NCD<br>NPD |
| 2565 | N-nitrosamines<br>in gelatine system | <b>On-site analysis of volatile nitrosamines in food model systems by<br/>solid-phase microextraction coupled to a direct extraction device</b><br><i>Talanta</i> 70, #5, 1017-1023 (2006-12-15)<br>Ventanas, S.; Ruiz, J.                                                              | DVB/CAR 50/30µm<br>75µm Carboxen<br>25°C        |                   |
| 1604 | N-nitrosamines<br>in sausage         | A method for the determination of volatile N -nitrosamines<br>in food by HS-SPME-GC-TEA.<br><i>Food Chemistry</i> , 91, #1, 173-179<br>Andrade, R.; Reyes, F. G. R.; Rath, S.                                                                                                           | 65µm PDMS-DVB<br>85µm polyacrylate<br>headspace | GC-TEA            |
| 2474 | Flavor<br>Volatiles<br>from honey    | <b>SPME-comprehensive two-dimensional gas chromatography-TOF-MS<br/>for the analysis of honey volatiles</b><br><i>J. Sep. Sci.</i> 30, #4, 534-546 (2007-03)<br>Cajka, T.; Hajslova, J. ; Cochran, J.; Holadova, K.; Klimankova, E.                                                     | DVB/CAR 50/30µm<br>headspace                    | GC-MS             |
| 2359 | Flavor<br>Volatiles<br>from honey    | <b>SPME/GC/MS and sensory flavour profile analysis for estimation of<br/>authenticity of thyme honey</b><br><i>Intl J of Food Sci &amp; Tech</i> 42, #2, 133-138 (FEB 2007)<br>Mannas, Demet; Altug, Tomris                                                                             | headspace                                       | GC-MS             |
| 1605 | Flavor<br>Volatiles<br>from honey    | SPME-GC-MS analysis of volatile organic compounds in<br>honey from Basilicata. Evidence for the presence of<br>pollutants from anthropogenic activities<br><i>Intl J Food Sci &amp; Tech</i> ; 39, #10, 1079-1086<br>Bentivenga, G; D'Auria, M; Fedeli, P; Mauriello, G;<br>Racioppi, R |                                                 | GC-MS             |
| 1606 | Monoterpenes                         | SPME-GC-MS determination of monoterpenes in honey<br><i>J. Sep. Sci.</i> , 27, #17-18, 1540-1544                                                                                                                                                                                        | 100µm PDMS                                      | GC-MS             |

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|      | in honey                                  | Pena, Rosa M.; Barciela, Julia; Herrero, C; Garcia-Martin, S                                                                                                                                                                                                                                 | 15min @ 20°C<br>agitated, 25% salt            |       |
| 1607 | Aroma<br>Volatiles<br>from honey          | Evaluation of four isolation techniques for honey<br>aroma compounds.<br><i>J Sci of Food and Agriculture</i> , 85, #1,91-97<br>Alissandrakis, E.; Tarantilis, P. A.; Harizanis, P.; Polissiou, M.                                                                                           | headspace                                     | GC    |
| 1608 | Aroma<br>Volatiles<br>from honey          | Characterization of Spanish unifloral honeys by SPME-GC-MS<br><i>J. Sep. Sci.</i> , 28, #9-10, 1093-1100<br>de la Fuente, Esther; Martinez-Castro, Isabel; Sanz, Jesus                                                                                                                       | headspace                                     | GC-MS |
| 1609 | Aroma<br>Volatiles<br>from honey          | Estimation of the honeydew ratio in honey samples from<br>their physicochemical data and from their volatile composition<br>obtained by SPME and GC-M<br><i>J Sci of Food and Agriculture</i> , 85, #817-824<br>Soria,A; Gonzalez, M; deLorenzo, C; MartinezCastro,I; Sanz, J                | headspace                                     | GC-MS |
| 2848 | Flavors in<br>vinegars                    | <b>Stir bar sorptive extraction of volatile compounds in vinegar:<br/>validation study and comparison with SPME</b><br><i>J Chromatogra, A</i> , 1167, #1, 18-26 (OCT 5 2007)<br><b>Duran Guerrero, E.; Natera Marin, R.; Castro Mejias, R.; Garcia Barroso,C.</b>                           | headspace                                     | GC    |
| 2431 | Flavors in<br>vinegars                    | <b>Three-way principal component analysis of the volatile fraction by<br/>HS-SPME/GC of aceto balsamico tradizionale of modena</b><br><i>Talanta</i> 74, #4, 547-554 (Jan 15 2008)<br>Cocchi, M.; Durante, C.; Grandi, M.; Manzini, D.; Marchetti, A.                                        | headspace                                     | GC    |
| 2360 | Flavors in<br>vinegars                    | <b>Vinegar classification based on feature extraction and selection from<br/>headspace SPME/GC volatile analyses: a feasibility study.</b><br><i>Anal Chim Acta</i> 608, # 1, 38-47 (2008 Feb 4)<br>Pizarro, C; Esteban-Doez, I; Soaenz-Gonzalez, C; Gonzoalez-Soaiz, J                      | headspace                                     | GC-MS |
| 1610 | Flavors in<br>potato crisps               | Profiling flavor compounds of potato crisps during storage<br>using SPME<br><i>J Chromatogra, A</i> , 1064, #2, 239-245<br>Sanches-Silva, A; Lopez-Hernandez, J; Paseiro-Losada, P                                                                                                           | 65µm PDMS-DVB<br>20min @ 70°C<br>headspace    | GC-MS |
| 1611 | Rancidity in<br>potato crisps             | Fast detection of rancidity in potato crisps using e-noses<br>based on mass spectrometry or gas sensors<br><i>Sens Actuators, B Chem</i> , 106, #1, 67-75<br>Badia, C.; Brezmes, J.; Correig, X.; Duran, C.; Llobet, E.;<br>Vergara, A.; Vilanova, X.; Vinaixa, M.                           | headspace                                     | GC-MS |
| 1612 | Rancidity in<br>potato crisps             | A fuzzy ARTMAP- and PLS-based MS e-nose for the<br>qualitative and quantitative assessment of rancidity of crisps<br><i>Sens Actuators, B Chem</i> , 106, #2, 677-686<br>Brezmes, J.; Correig, X.; Llobet, E.; Vilanova, X.; Vinaixa, M.                                                     | headspace                                     | GC-MS |
| 2416 | Fatty acids<br>from cheese                | <b>Flavouring of imitation cheese with enzyme-modified cheeses (EMCs):<br/>Sensory impact and measurement of aroma active short chain fatty<br/>acids (SCFAs)</b><br><i>FOOD CHEM.</i> 106, #3, 905-913 (01 FEB 2008)<br><b>Noronha, N.; Cronin, D. A.; O'Riordan, E. D.; O'Sullivan, M.</b> | headspace                                     | GC    |
| 1613 | PAHs in<br>smoked<br>cheese               | Headspace SPME as a tool to estimate the contamination<br>of smoked cheeses by polycyclic aromatic hydrocarbons<br><i>J of Dairy Science</i> , 88, #1, 13-20<br>Guillen, M. D.; Sopelana, P.                                                                                                 | 85µm polacrylate<br>60min @ 70°C<br>headspace | GC-MS |
| 1614 | Terpenes<br>from cheese                   | Application of artificial neural network on mono-and<br>sequiterpenes compounds determined by headspace<br>SPME-GC-MS for the Piedmont ricotta cheese traceability<br><i>J Chromatogra, A</i> , 1071, #1-2, 247-253<br>Giuseppe, Z; Manuela, G; Marta, Bo; Vincenzo, G                       | headspace                                     | GC-MS |
| 1615 | Review of<br>technique                    | Calibration of gas chromatography inlet splitting for GC<br>olfactometry dilution analysis<br><i>Flavour Fragrance J.</i> , 19, #6, 518-521<br>Acree, T.; Deibler, K.; Lavin, E.; Llesca, F.                                                                                                 |                                               | GC    |
| 1616 | Volatile free<br>fatty acids in<br>cheese | Volatile free fatty acids as ripening indicators for Serra<br>da Estrela cheese<br><i>J Dairy Sci</i> , 87, #12, 4064-4072<br>Tavaria, F. K.; Ferreira, A. C. Silva; Malcata, F.                                                                                                             | headspace                                     | GC    |
| 1617 | Aroma of<br>cheese                        | Composition and aroma compounds of Ragusano<br>cheese: Native pasture and total mixed rations.<br><i>J Dairy Sci</i> , 87, #4, 816-830                                                                                                                                                       | headspace                                     | GC    |

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|      |                                 | Carpino, S.; Mallia, S.; LaTerra, S.; Melilli, C.; Licitra, G.; Acree, T.; Barbano, D.; VanSoest, P.                                                                                                                                                                                                              |                                                        |                          |
| 1618 | Aroma of cheese                 | Comparison of purge and trap and SPME techniques for studying the volatile aroma compounds of three European PDO hard cheeses<br><i>International Dairy Journal</i> , 15, #6-9, 741-758<br>Mallia, S.; Fernandez-Garcia, E.; Bosset, J. Olivier                                                                   | headspace                                              | GC                       |
| 1619 | Aroma of cheese                 | Characterization of "Provola dei Nebrodi", a typical Sicilian cheese, by volatiles analysis using SPME-GC/MS<br><i>International Dairy Journal</i> , 15, #6-9, 585-593<br>Ziino, M.; Condurso, C.; Romeo, V.; Giuffrida, D.; Verzera, A.                                                                          | headspace                                              | GC-MS                    |
| 2878 | Aroma of cheese                 | <b>Optimization of headspace SPME for the analysis of specific flavors in enzyme modified and natural Cheddar cheese using factorial design and response surface methodology</b><br><i>J Chromatogr A</i> , 1195, #1-2, 16-24 (Jun 27 2008)<br>Azarnia, Sorayya; Januszkiewicz, Julien; Lee, Byong; Sabik, Hassan | 75µm Carboxen headspace<br>50 min at 55 °C<br>3 M NaCl | GC-MS                    |
| 1620 | Aroma of cheese                 | SPME and GC-MS for rapid characterisation of semi-hard cheeses<br><i>Anal. Bioanal. Chem.</i> , 380, #7-8, 930-936<br>Condurso, C.; Romeo, V.; Verzera, A.; Zappala, M.; Ziino, M.                                                                                                                                | headspace                                              | GC-MS                    |
| 1621 | Sulfur compd in cheese          | Volatile sulfur compounds in Cheddar cheese determined by headspace SPME and GC-pulsed FPD<br><i>J Chromatogr A</i> , 1066, #1-2, 149-157<br>Burbank, Helen M.; Qian, Michael C.                                                                                                                                  | 75µm Carboxen headspace                                | GC-PFPD                  |
| 1622 | Aroma of chilli                 | Analysis of volatile aroma compounds of fresh chilli ( <i>Capsicum annuum</i> ) during stages of maturity using SPME<br><i>J Food Composition &amp; Analysis</i> , 18, #5, 427-437<br>Mazida, M. M.; Salleh, M. M.; Osman, H.                                                                                     | headspace<br>30min @ 60°C                              | GC-MS                    |
| 1623 | Volatiles from cheese           | SPME Combined with GC and olfactometry-MS for characterization of cheese aroma compounds.<br><i>Lebensmittel-Wissenschaft &amp; Technologie</i> , 37, #2, 139-154<br>Frank, D.; Owen, C.; Patterson, J.                                                                                                           | 75µm Carboxen headspace<br>9-16hr extract              | GC-MS<br>GC-olfactometry |
| 2879 | Volatiles from Siciliano cheese | <b>Effect of wild strains used as starter cultures and adjunct cultures on the volatile compounds of the Pecorino Siciliano cheese</b><br><i>Intl J of Food Microbiology</i> 122, #3, 269-278 (MAR 20 2008)<br>Randazzo, C. L.; Pitino, I.; De Luca, S.; Scifo, G. O.; Caggia, C.                                 | headspace                                              | GC/MS                    |
| 2898 | Flavors from Kuflu cheese       | <b>Characterization of the chemistry, biochemistry and volatile profile of Kuflu cheese, a mould-ripened variety</b><br><i>Food Sci. Technol.</i> 41, #7, 1323-1334 (September 2008)<br>Brechany, E.Y.; Deegan, K.C.; Hayaloglu, A.A.; McSweeney, P                                                               | headspace                                              | GC/MS                    |
| 1624 | Flavors from butter             | Improved determination of flavour compounds in butter by SPME & comprehensive two-dimensional GC<br><i>J. Chromatogr. A</i> 1086, #1-2, 99-106<br>Adahchour, M.; Brinkman, U.; Verdel, R.; Vreuls, R.; Wiewel, J.                                                                                                 | headspace                                              | GC-GC-TOFMS<br>GC-FID    |
| 1625 | Aroma compounds in yoghurt      | Effect of thickeners and sweeteners on the release of blended aroma compounds in fat-free stirred yoghurt during shear conditions<br><i>Intl Dairy Journal</i> , 14, #9, 783-789<br>Decourcelle, N.; Lubbers, S.; Vallet, N.; Rondeau, P.; Guichard, E.                                                           | headspace                                              | GC                       |
| 1626 | Volatiles from milk             | Optimization of SPME for the analysis of volatile compounds in milk.<br><i>Journal of Dairy Science</i> , 86, Supplement 1, 294<br>Clarkson, H.; Duncan, S.; O'Keefe, S.                                                                                                                                          | headspace                                              | GC                       |
| 1627 | Volatiles from milk             | Volatile compounds and chemical changes in ultrapasteurized milk packaged in polyethylene terephthalate containers<br><i>J of Food Science</i> , 70, #6, C407-C412<br>Solano-Lopez, C.; Ji, T.; Alvarez, V.                                                                                                       | headspace @ 5°C                                        | GC-MS                    |
| 2808 | Volatiles from raw cow milk     | <b>Quality control of raw cows' milk by headspace analysis</b><br><i>Int. Dairy J.</i> 18, #5, 506-513 (May 2008)<br>van Hooijdonk, A.C.M.; van Valenberg, H.J.F.; Hettinga, K.A.                                                                                                                                 | headspace                                              | GC                       |

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| 1628 | Phthalate esters in cow milk       | Development of a headspace SPME method combined w/ GC-MS for the determination of phthalate esters in cow milk<br><i>Analytica Chimica Acta</i> , 538, #1-2, 41-48<br>Feng, Yong-Lai; Zhu, Jiping; Sensenstein, R.                                                                   | 60min @ 90°C.<br>headspace<br>NaCl added    | GC-MS                    |
| 2814 | Aromatic amines in food            | <b>Analytical methods applied to the determination of heterocyclic aromatic amines in foods</b><br><i>J Chromatogr B</i> , 862, #1-2, 15-42 (FEB 1 2008)<br>Sanz Alaejos, M.; Ayala, J. H.; Gonzalez, V.; Afonso, A. M.                                                              | Review article                              |                          |
| 1629 | Aromatic amines in food            | SPME coupled with HPLC for the analysis of heterocyclic aromatic amines.<br><i>J Chromatogr A</i> , 1030, #1-2, 87-93<br>Cardenes, L.; Ayala, J.; Afonso, A.; Gonzalez, V.                                                                                                           | 50µm CW-TPR<br>methanolic NaOH              | LC-diode array           |
| 1630 | Isothiocyanates in horseradish     | SPME-GC-MS analysis of horseradish ( <i>Armoracia rusticana</i> )<br><i>Italian J Food Sci</i> , 16, #4, 487-490<br>D'Auria, M.; Mauriello, G.; Racioppi, R.                                                                                                                         |                                             | GC-MS                    |
| 2451 | Volatiles from basil cultivars     | <b>Aroma profiles of five basil (<i>Ocimum basilicum</i> L.) cultivars grown under conventional and organic conditions</b><br><i>FOOD CHEM.</i> 107, #1, 464-472 (01 MAR 2008)<br>Klimankova, E.; Holadova, K.; Hajslova, J.; Cajka, T.; Poustka, J.; Koudela, M.                    | headspace                                   | GC-ITMS<br>GC-TOFMS      |
| 1631 | Volatiles from cultivars           | Volatile compounds in different cultivars of <i>Apium graveolens</i> L.<br><i>Italian J Food Sci</i> , 16, #4, 477-482<br>Tirillini, B.; Pellegrino, R.; Pagiotti, R.; Pocceschi, N.; Menghini, L.                                                                                   | headspace                                   | GC-MS                    |
| 1632 | Volatiles in tequila               | Tequila volatile characterization and ethyl ester determination by SPME-GC-MS analysis<br><i>J Agri and Food Chem</i> , 52, #18, 5567-5571<br>Vallejo-Cordoba, B.; Gonzalez-Cordova, A.; .<br>del Carmen Estrada-Montoya, M.                                                         | 100µm PDMS<br>60min @ 40°C<br>immersed      | GC-MS                    |
| 1633 | Volatile aroma compounds in grapes | Rapid determination of volatile compounds in grapes by HS-SPME coupled with GC-MS<br><i>Talanta</i> , 66, #5, 1152-1157<br>Sanchez-Palomo, E.; Diaz-Maroto, A. ; Perez-Coello, A.                                                                                                    | 65µm DVB-PDMS<br>20 min @ 70°C<br>headspace | GC                       |
| 1634 | Fermentation products of wines     | Stable isotope dilution analysis of wine fermentation products by HS-SPME-GC<br><i>Anal. Bioanal. Chem.</i> , 381, #4, 937-947<br>Capone, D.; Herderich, M.; Neuwohner, C.; Pardon, K.; Pollnitz, A.; Sefton, M.; Skouroumounis, G.; Smyth, H.; Siebert, T.                          | headspace<br>salt addition                  | GC-MS                    |
| 1635 | Monoterpenoids in wine             | Comparison of ultrasound-assisted extraction and direct immersion SPME method for the analysis of monoterpenoids in wine<br><i>Talanta</i> , 67, #1, 129-135<br>Barciela, J.; Garcia-Martin, S.; Herrero, C.; Pena, R.                                                               | immersion                                   | GC-MS                    |
| 2873 | Volatiles from white wine          | <b>Impact odorants of Chardonnay dry white wine from Changli County</b><br><i>European Food Res and Tech</i> 227, #1, 287-292 (May 2008)<br>Li, Hua; Tao, Yong-Sheng; Wang, Hua; Zhang, Li                                                                                           | headspace                                   | GC/MS                    |
| 2282 | Ester compd in Chardonnay juice.   | <b>Dynamic changes in ester formation during chardonnay juice fermentations with different yeast inoculation and initial brix conditions</b><br><i>American J Enology and Viticulture</i> 55 #3, 346-354 (2004)<br>Lee, Seung-Joo; Rathbone, Da.; Asimont, S.; Adden, R.; Ebeler, S. | headspace                                   | GC-MS                    |
| 1636 | Volatiles in white wine            | Analytical method for determination of some aroma compounds on white wines by SPME-GC<br><i>J of Food Sci</i> , 68, #9, 2817-2820<br>Ferreira, A.; Guedes de Pinho, P.                                                                                                               | 50/30µm DVB/CAR<br>Headspace                | GC                       |
| 1637 | Methoxy-pyrazine in wine           | Analysis of methoxypyrazines in wine using headspace SPME with isotope dilution and comprehensive two dimensional GC<br><i>J. Sep. Sci.</i> , 28, #9-10, 1075-1082<br>Allen, M.; Marriott, P.; Ryan, D.; Smith, J.; Watkins, P.                                                      | Headspace                                   | GC-GC-NPD<br>GC-GC-TOFMS |

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| 1638 | Volatiles in cheese                | GC profile of volatiles in cheese induced by different fat globule surface coatings.<br><i>J of Dairy Science</i> , 86, Supplement 1, 43<br>Everett, D. ; Crownshaw, J.; Ginestet, A.; Leus, M.; Dufour, J..                                                                                         | headspace               | GC           |
| 1639 | Flavors in milk products           | Flavor stability of skim and whole milk powder<br><i>J of Dairy Science</i> , 86, Supplement 1, 40<br>Whetstone, M.; Drake, M.; Karagul-Yuceer, Y.; Avsar, Y.                                                                                                                                        |                         | GC           |
| 1640 | Methyl salicylate in tomato leaves | GC-MS with SPME method for determination of methyl salicylate and other volatile compounds in leaves of <i>Lycopersicon esculentum</i> .<br><i>Anal. Bioanal. Chem.</i> , 378, #2, 518-522<br>Deng, C; Zhang, X; Zhu, W; Qian, J                                                                     | 100µm PDMS Headspace    | GC-MS        |
| 1641 | Flavors in Harari Khat stimulant   | SPME for flavor analysis in Harari Khat ( <i>Catha edulis</i> ) stimulant.<br><i>J. Zhejiang Univ: Sci</i> , 5, #4, 428-431<br>Abdulsalam, Al-Flahi; Yin, Xue-Feng; Zou, Jian-Kai                                                                                                                    | 100µm PDMS 30min @ 20°C | GC-MS        |
| 1642 | Nonvolatiles from brewed coffee    | Interactions between volatile and nonvolatile coffee components. Screening of nonvolatile components<br><i>J Agr Food Chem.</i> , 53, #11, 4417-4425<br>Charles-Bernard, M.; Kraehenbuehl, K.; Rytz, A.; Roberts, D.                                                                                 | headspace               | GC           |
| 2649 | Volatiles in coffee beans          | <b>Impact of "ecological" post-harvest processing on the volatile fraction of coffee beans: I. Green coffee</b><br><i>J. Food Compos. Anal. (UK)</i> 20, #3-4, 289-96 (May 2007)<br>Schorr-Galindo, S.; Gonzalez-Rios, O.; Suarez-Quiroz, M. L.; Boulanger, R.; Barel, M.; Guyot, B.; Guiraud, J.-P. | headspace               | GC-MS        |
| 2517 | Volatiles in coffee beans          | <b>Quality determination and group discrimination of shade grown coffee using solid phase microextraction</b><br><b>21st International Conference on Coffee Science, Montpellier, France, 11-15 September, 2006 PP 306-309</b><br>Jackson, M.; Steiman, S.; Gautz, L.; Bittenbender, H.; Idol, T.    | headspace               | GC-FID       |
| 1643 | Volatiles in coffee beans          | Comprehensive multidimensional GC for the characterization of roasted coffee beans:<br><i>J. Sep. Sci.</i> , 27, #5-6, 442-450<br>Casilli, A.; Costa, R.; Dugo, G.; Dugo, P.; Festa, S.; Mondello, L.; Tranchida, P.                                                                                 | headspace               | GC-GC        |
| 1644 | Volatiles in coffee beans          | Analysis of roasted coffee bean volatiles by using comprehensive two-dimensional GC-TOF-MS<br><i>J. Chromatogr. A</i> , 1054, #1-2, 57-65<br>Casilli, A.; Marriott, P.; Mondello, L.; Ryan, D.; Shellie, R.; Tranchida, P.                                                                           | headspace               | GC-GC-TOF-MS |
| 1645 | Volatiles in coffee beans          | Reliable characterization of coffee bean aroma profiles by automated headspace SPME-GC-MS with the support of a dual-filter mass a dual-filter spectra library<br><i>J. Sep. Sci.</i> , 28, #9-10, 1101-1109<br>Casilli, A; Costa, R; Dugo, G; Dugo, P; Festa, S; Mondello, L; Tranchida, P.         | headspace               | GC-MS        |
| 2401 | Furan in food                      | <b>Analysis of furan in foods by headspace SPME-GC-IT-MS</b><br><i>J. Chromatogr.</i> , A 1146, #1,103-109 (2007-03-30)<br>Altaki, M. S.; Santos, F. J.; Galceran, M. T.                                                                                                                             | 75µm Carboxen headspace | GC-IT-MS     |
| 2160 | Furan in baby-food                 | <b>Development and validation of a SPME-GC-MS method for the determination of furan in baby-food</b><br><i>J. Chromatogr. A</i> , (2006) 1102, #1-2, 268-272<br>Bianchi, Federica; Careri, Maria; Mangia, Alessandro; Musci, Marilena                                                                |                         | GC-MS        |
| 2276 | Furan in fruit juice               | <b>Impact of ionizing radiation and thermal treatments on furan levels in fruit juice</b><br><i>J Food Science (2005)</i> 70 #7, E409-E414<br>Fan, Xuotong                                                                                                                                           | headspace               | GC-MS        |
| 1646 | Furan in coffee                    | Determination of furan levels in coffee using automated SPME-GC-MS<br><i>JAOAC Intl</i> , 88, #2,574-576<br>Ho, I-Pin; Yoo, Seong-Jae; Tefera, Sebhai                                                                                                                                                | headspace               | GC-MS        |
| 1647 | Volatiles in                       | SPME-GC-MS and multivariate analysis for the characterization of roasted coffee:                                                                                                                                                                                                                     | headspace               | GC-MS        |

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|      | roasted coffee                             | <i>Talanta</i> , 66, #1, 261-265<br>Zambonin, C.; Balest, L.; De Benedetto, G.; Palmisano, F.                                                                                                                                                                                      |                                                                   |                  |
| 2212 | Volatiles from broom snakeweed             | <b>Volatile composition of <i>Gutierrezia sarothrae</i> (broom snakeweed) as determined by steam distillation and SPME</b><br><i>J. Essent. Oil Res.</i> 18 #2, 121-125 (2006)<br>Estell, R.; Fredrickson, E.; Lucero, M.; Morrison, A.; Richman, D.                               |                                                                   | GC-MS<br>GC-FID  |
| 1648 | Essential oils from leaves                 | A direct liquid, non-equilibrium SPME application for analysing chemical variation of single peltate trichomes on leaves of <i>Salvia officinalis</i><br><i>Phytochemical Analysis</i> , 15, #3, 198-203<br>Grassi, P.; Novak, J.; Steinlesberger, H.; Franz, C.                   | 100µm PDMS fiber immersed                                         | GC-MS            |
| 1649 | Aroma from Tarhana                         | GC-olfactometric characterization of aroma active compounds in sun-dried and vacuum-dried tarhana<br><i>European Food Res &amp; Tech</i> , 218, #6, 573-578<br>Goemen, D.; Gurbuz, O.; Rouseff, R.; Smoot, J.; Dagdelen, A.                                                        | Headspace                                                         | GC-FID           |
| 1650 | Aroma from fermentation process            | Lactic acid fermentation of <i>Brassica rapa</i> : chemical and microbial evaluation of a typical Italian product (brovada)<br><i>European Food Res &amp; Tech</i> , 218, #5, 469-473<br>Maifreni, Michela; Marino, Marilena; Conte, L.                                            | headspace                                                         | GC-FID           |
| 2687 | Acetaldehyde in red wine                   | <b>Monitoring acetaldehyde concentrations during micro-oxygenation of red wine by headspace SPME with on-fiber derivatization</b><br><i>J Agr Food Chem</i> 55, #14, 5620-5625 (2007)<br>Carlton, W. K.; Gump, B.; Fugelsang, K.; Hasson, A. S.                                    | headspace<br>PFBH derivative                                      | GC-FID           |
| 2728 | Haloanisoles from packaging                | <b>Determination of haloanisoles in paper samples for food packaging by solid-phase microextraction and gas chromatography</b><br><i>Microchim. Acta</i> 159, #3-4, 229-234 (2007)<br>Martendal, E.; Budziak, D.; Debastiani, R.; Carasek, E.                                      | DVB/CAR 50/30µm headspace<br>30min @ 70°C                         | GC-MS            |
| 2792 | Haloanisoles and halophenols in water      | <b>Comparison of stir bar sorptive extraction and SPME to determine halophenols and haloanisoles by GC-iontrap MS</b><br><i>Talanta</i> 75, #3, 753-759 (May 15 2008)<br>Alonso, G.; Maggi, L.; Mazzoleni, V.; Salinas, M.; Zalacain, A.                                           | headspace                                                         | GC-iontrap MS    |
| 2686 | Haloanisoles and halophenols in wine       | <b>Multiple headspace solid-phase microextraction for eliminating matrix effect in the simultaneous determination of haloanisoles and volatile phenols in wines</b><br><i>J. Chromatogr., A</i> 1166, #1-2, 1-8 (2007)<br>Pizarro, C.; Perez-del-Notario, N.; Gonzalez-Saiz, J. M. | DVB/CAR 50/30µm headspace                                         | GC-MS/MS         |
| 2407 | Haloanisoles and halophenols in wine       | <b>Optimisation of a headspace SPME with on-fiber derivatisation method for the direct determination of haloanisoles and halophenols in wine.</b><br><i>J. Chromatogr., A</i> 1143, #1-2, 26-35 (2007-03-02)<br>Pizarro, C.; Perez-del-Notario, N.; Gonzalez-Saiz, J. M.           | 85µm polacrylate<br>60min @ 70°C<br>headspace<br>MSTFA derivative | GC-ECD           |
| 2289 | Trichloroanisole from wine & cork stoppers | <b>Study of chloroanisoles assay and TCA assay validation in wine and cork stoppers soaked in dilute alcohol solution using SIDA-HSSPME-GC-MS/EI-SIM</b><br><i>J Intl des Scie de la Vigne et du Vin</i> 39 #3, 137-147 (2005)<br>Chatonnet, P.; Labadie, Dominique; Boutou, S.    | headspace                                                         | GC-MS/<br>EI-SIM |
| 2542 | 2,4,6-trichloro anisole in cork            | <b>Matrix effect during the application of a rapid method using HS-SPME followed by GC-ECD for the analysis of 2,4,6-TCA in wine and cork soaks</b><br><i>Food Chemistry</i> 105, #2, 681-690 (2007)<br>Vlachos, P.; Kapioti, A.; Kornaros, M.; Lyberatos, G.                      | Headspace                                                         | GC-ECD           |
| 1651 | 2,4,6-trichloro anisole in wine/cork       | Relationship between sensory and instrumental analysis of 2,4,6-trichloroanisole in wine and cork stoppers<br><i>Anal. Chim. Acta</i> , 513, #1, 291-297<br>Antico, E.; Garcia Regueiro, J.A.; Guerrero, L.; Insa, S.; Juanola, R.; Salvado, V.; Subira, D.                        | Headspace                                                         | GC-ECD           |
| 2452 | Fluoride in toothpaste                     | <b>Determination of fluoride in toothpaste using headspace SPME-GC-FID</b><br><i>J. Chromatogr., A</i> 1150, #1-2, 173-177 (2007-05-25)<br>Wejnerowska, G.; Karczmarek, A.; Gaca, J.                                                                                               | 75µm Carboxen<br>Headspace<br>TMCS derivative                     | GC/FID           |
| 1652 | Chlorhexidine in saliva                    | Assay of stability, free and total concentration of chlorhexidine in saliva by solid phase microextraction<br><i>J Pharma and Biomed Analysis</i> , 37, #5, 1015-1024<br>Musteata, Florin Marcel; Pawliszyn, Janusz                                                                | headspace                                                         | GC               |

Improving headspace-SPME of 3-isobutyl-2-

|      |                                 |                                                                                                                                                                                                                                                                                    |                                                                |        |
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| 1653 | Pyrazines in wine               | methoxypyrazine by experimental design with regard to stable isotope dilution GC-MS analysis of wine<br><i>Anal. Chim. Acta</i> , 513, #1, 223-227<br>Lucchese, Y.; Nepveu, F.; Prouteau, C.; Renard, R.; Schneider, R.; Vaca-Garcia, C.                                           | headspace saturated salt                                       | GC-MS  |
| 2575 | Terpenes in tequila             | <b>Determination of terpenes in tequila by SPME-GC-MS</b><br><i>J. Chromatogr., A</i> 1134, #1-2, 291-297 (2006-11-17)<br>Pena-Alvarez, A.; Capella, S.; Juarez, R.; Labastida, C.                                                                                                 | 100µm PDMS<br>30min @ 25°C<br>headspace, sat salt              | GC-MS  |
| 1654 | Terpenes in wine                | Optimization of SPME methods for GC-MS determination of terpenes in wine<br><i>J Sci of Food and Agr</i> , 85, #7, 1227-1234<br>Pena, R.; B, Julia; Herrero, C; Garcia-Martin, S.                                                                                                  | 100µm PDMS<br>15min @ 20°C<br>immersed<br>25% NaCl             | GC-MS  |
| 2677 | Volatiles in Spanish wine       | <b>Comparative study of sampling systems combined with gas sensors for wine discrimination</b><br><i>Sens. Actuators B, Chem. (Switzerland)</i> 126, #2, 616-23 (1 Oct. 2007)<br>Lozano, J.; Santos, J.P.; Gutierrez, J.; Horrillo, M.C.                                           | headspace                                                      | GC     |
| 2692 | Volatiles in Greek wine         | <b>Sensory profiling of aroma in Greek dry red wines using rank-rating and monadic scoring related to headspace composition</b><br><i>European Food Res. and Technology</i> 225, #5-6, 749-756 (SEP 2007)<br>Koussissi, Elisabeth; Paterson, Alistair; Piggott, John R.            | headspace                                                      | GC     |
| 2845 | Volatiles in wine yeast         | <b>A survey of Saccharomyces populations associated with wine fermentations from the Apulia region (South Italy)</b><br><i>Annals of Microbiology</i> 57, #4, 545-552 (2007)<br>Tofalo, R.; Torriani, S.; Chaves-Lopez, C.; Martuscelli, M.; Paparella, Antonello; Suzzi, Giovanna | headspace                                                      | GC     |
| 2614 | Aromatic volatiles in red wines | <b>Comparative study of aromatic compounds in young red wines from cabernet sauvignon, cabernet franc, and cabernet gernischt varieties in China.</b><br><i>J Food Sci</i> 72, #5, C248-52 (2007 Jun)<br>Zhang, M; Xu, Q; Duan, C; Qu, W; Wu, Y                                    | headspace                                                      | GC     |
| 2419 | Volatiles in red wine           | <b>Factors influencing sensory quality in red wines of the variety Aghiorghitiko (Vitis vinifera L.) from Nemea</b><br><i>Eur. Food Res. Technol.</i> 226, #4, 745-753 (February 2008)<br>Koussissi, Elisabeth; Paraskevopoulos, Yiannis; Paterson, Alistair                       | headspace                                                      | GC-MS  |
| 1655 | Volatiles in red wine           | Characterization of the aroma profile of Madeira wine by sorptive extraction techniques<br><i>Anal. Chim. Acta</i> , 546, #1, 11-21<br>Alves, R.F.; Nascimento, A.M.D.; Nogueira, J.M.F.                                                                                           | headspace                                                      | GC-MS  |
| 2193 | Terpenoids in Madeira wines     | <b>Development of headspace SPME-GC-MS methodology for analysis of terpenoids in Madeira wines</b><br><i>Anal. Chim. Acta</i> 555, #2, 191-200 (2006)<br>Camara, J. S.; Alves, M. Arminda; Marques, J. C.                                                                          | 85µm polyacrylate<br>headspace<br>60-120min @<br>40°C w/salt   | GC-MS  |
| 2180 | Flavors from Madeira wine       | <b>Multivariate analysis for the classification and differentiation of Madeira wines according to main grape varieties</b><br><i>Talanta</i> 68, #5, 1512-1521 (2006)<br>Alves, M. Arminda; Camara, Jose S.; Marques, Jose C. Vasconcelos, T.                                      | headspace                                                      | GC-MS  |
| 1656 | Flavors from Madeira wine       | Varietal flavour compounds of four grape varieties producing Madeira wines<br><i>Analytica Chimica Acta</i> , 513, #1, 203-207<br>Camara, J.; Herbert, P.; Marques, J.; Alves, M.                                                                                                  | dynamic headspace                                              | GC-MS  |
| 1657 | Volatiles in red wine           | Elimination of matrix effects for headspace SPME of important volatile compounds in red wine using a novel coating<br><i>Anal. Chim. Acta</i> , 540, #2, 341-353<br>Liu, Mingming; Tian, Yun; Zeng, Zhaorui                                                                        | 65µm PDMS-DVB,<br>85µm polyacrylate<br>100µm PDMS<br>headspace | GC     |
| 1658 | Sulfur compounds in wine        | Sensitive quantification of sulfur compounds in wine by headspace solid-phase microextraction technique<br><i>J. Chromatogr. A</i> , 1080, #2, 177-185<br>Fang, Yu; Qian, Michael C.                                                                                               | headspace                                                      | GC-FPD |
| 1659 | Fungicides on grapes            | Screening of grapes and wine for azoxystrobin, kresoxim-methyl and trifloxystrobin fungicides by HPLC with diode array detection<br><i>Food Additives and Contaminants</i> , 22, #6, 549-566<br>Abreu, S.; Correia, M.; Herbert, P.;                                               | headspace                                                      | GC-MS  |

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| 1660 | Tribromo-aniline in color additives | Determination of 2,4,6-tribromoaniline in the color additives D&C Red Nos. 21 and 22 (Eosin Y) using SPME-GC-MS<br><i>J. Chromatogr. A</i> , 1057, #1--2, 185-191<br>Andrzejewski, Denis; Rasooly, Irit R.; Weisz, Adrian                                            | headspace                                                          | GC-MS            |
| 1661 | Ochratoxin A in foods               | Determination of Ochratoxin A in foods: State-of-the-art and analytical challenges<br><i>Anal. Bioanal. Chem.</i> , 378, #1, 96-103<br>Monaci, Linda; Palmisano, Francesco                                                                                           |                                                                    | LC-FLD           |
| 1662 | Volatiles in sherry wine            | Comparative analysis of volatile compounds of "fino" sherry wine by rotatory and continuous liquid-liquid extraction and SPME in conjunction w/GC-MS<br><i>Anal. Chim. Acta</i> , 513, #1, 141-150<br>Barroso, C.G.; Benitez, P.; Castro, R.; Natera, R.             | headspace                                                          | GC-MS            |
| 1663 | Volatiles in vinegars               | Application of a wavelet-based algorithm on headspace SPME-GC signals for the classification of balsamic vinegars.<br><i>Chemometrics and Intelligent Lab Systems</i> , 71, #2, 129-140<br>Cocchi, M.; Durante, C.; Foca, G.; Manzini, D.; Marchetti, A.; Ulrici, A. | headspace                                                          | GC-MS            |
| 1664 | Flavors from yogurt                 | Flavour release and rheology behaviour of strawberry fat-free stirred yogurt during storage.<br><i>J Agri and Food Chemistry</i> , 52, #10, 3077-3082<br>Lubbers, S.; Decourcelle, N.; Vallet, N.; Guichard, E.                                                      | headspace @ 10°C stirred                                           | GC               |
| 1665 | Aroma of coffee beans               | Solid-phase aroma concentrate extraction (SPACE): a new headspace technique for more sensitive analysis of volatiles<br><i>Flavour &amp; Fragrance Journal</i> , 19, #3, 183-187<br>Ishikawa, M.; Ito, O.; Ishizaki, S.; Kurobayashi, Y.; Fujita, A.                 | headspace                                                          | GC-MS            |
| 1666 | Volatiles from cod liver oil        | Comparison of volatile compounds formed by autoxidation and photosensitized oxidation of cod liver oil in emulsion systems<br><i>Fisheries Science (Tokyo)</i> , 71, #3, 639-647<br>Pan, Xiang-Qing; Ushio, Hideki; Ohshima, Toshiak                                 | 40°C headspace<br>ferrous chloride added<br>foil lined sample vial | GC-MS<br>GC-FID  |
| 1667 | 2,4,6-trichloroanisole in raisins   | Detection of 2,4,6-trichloroanisole in microorganism-free irradiated raisins by SPME-GC-MS<br><i>J Stored Products Res</i> , 40, #4, 451-459<br>Aung, L. H.; Jenner, J. F.                                                                                           | 50/30µm DVB/CAR headspace                                          | GC-MS            |
| 2283 | Haloanisoles in wine                | <b>Use of multiple headspace SPME and pervaporation for the determination of off-flavours in wine</b><br><i>J. Chromatogr. A</i> , 1112, #1-2,133-140 (2006)<br>Beltran, R.; Garcia-Barrera, T.; Gomez-Ariza, J.L.; Lorenzo, F.                                      | headspace                                                          | GC-MS            |
| 1668 | Anisoles in wines                   | Simultaneous separation, clean-up and analysis of musty odorous compounds in wines by on-line coupling of a pervaporation unit to GC- tandem MS<br><i>Anal. Chim. Acta</i> , 516, #1-2, 165-170<br>Garcia-Barrera, T.; Gomez-Ariza, J.L.; Lorenzo, F.                | headspace                                                          | GC-MS-MS         |
| 1669 | Anisoles in wines                   | Optimisation of a two-dimensional on-line coupling for the determination of anisoles in wine using ECD and ICP-MS after SPME-GC separation<br><i>Jof AnalyAtomic Spectrometry</i> , 20, #9, 883-888<br>Gomez-Ariza, J. L.; Garcia-Barrera, T.; Lorenzo, F.           | headspace                                                          | GC-ECD-ICP-MS    |
| 1670 | Aroma volatile from stawberry juice | Aroma profile of strawberry juice cocktail produced in industrial conditions<br><i>Kem Ind</i> , 54, #3, 135-141<br>Cosic, B.; Ganic, K. Kovacevic; Komes, D.; Lovric, T.                                                                                            | 100µm PDMS headspace                                               | GC-FID and GC-MS |
| 1671 | Aroma volatiles from stawberry      | Assessment of strawberry aroma through SPME-GC and artificial neuron network methods. Variety Classification versus growing years.<br><i>J Agri Food Chemistry</i> , 52, #9, 2472-2478<br>deBoishebert, V.; Urruty, L.; Giraudel, J.; Montury, M.                    | headspace                                                          | GC-MS            |
| 1672 | Triazine herbicides in              | Hollow fiber membrane-protected SPME of triazine herbicides in bovine milk and sewage sludge samples<br><i>J. Chromatogr. A</i> , 1047, #2, 189-194                                                                                                                  | 65µm PDMS-DVB                                                      | GC-MS            |



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| 2455 | Acrylamide<br>in water solutions            | <p>Basheer, Chanbasha; Lee, Hian Kee</p> <p><b>Determination of acrylamide in food by SPMEGC positive chemical ionization tandem mass spectrometry.</b><br/> <i>Anal. Chim. Acta</i> <b>582</b>, #1, 19-23 (2007-01-16)<br/> Lee, M. R.; Chang, L. Y.; Dou, J. P.</p>                                                                  | 50µm CW/DVB<br>immersion<br>20 min @ pH 7    | GC-PCI-MS-MS |
| 1673 | Acrylamide<br>in cereals                    | <p>Silylation of acrylamide for analysis by SPME-GC ion-trap mass spectrometry<br/> <i>J Agri and Food Chem</i>, <b>52</b>, #12, 3744-3748<br/> Lagalante, Anthony F.; Felter, Matthew A.</p>                                                                                                                                          | 100µm PDMS<br>BSTFA derivative<br>headspace  | GC-MS        |
| 1674 | Quinoxifen<br>pesticide in<br>grape musts   | <p>Influence of quinoxifen residues on <i>Saccharomyces cerevisiae</i> fermentation of grape musts<br/> <i>Food Tech and Biotechnology</i>, <b>42</b>, #2, 89-97<br/> Lopez, C; Boselli, E; Piva, A; Ndaghijimana, M;<br/> Paparella, A; Antonello, S; Mastrocola, D</p>                                                               |                                              | GC           |
| 1675 | Pyrazine in<br>musts/wines                  | <p>Influence of vine training and sunlight exposure on the 3-alkyl-2-methoxypyrazines content in musts and wines from <i>Vitis vinifera</i> variety cabernet sauvignon<br/> <i>J Agri and Food Chemistry</i>, <b>52</b>, #11, 3492-3497<br/> Sala, C; Busto, O; Guasch, J; Zamora, Fernando</p>                                        | headspace                                    | GC           |
| 1676 | Volatiles from<br>oak in wine               | <p>The effects of sample preparation and GC injection techniques on the accuracy of measuring quaiacol, 4-methylguaiacol and other volatile oak compounds in oak extracts by stable isotope dilution analyses<br/> <i>J Agri and Food Chemistry</i>, <b>52</b>, #11, 3244-3252<br/> Pollnitz, A.; Pardon, K.; Sykes, M; Sefton, M.</p> | headspace                                    | GC-MS        |
| 1677 | Volatiles<br>from Oak                       | <p>Analysis of oak volatiles by GC-MS after ozone sanitization<br/> <i>American J Enology &amp; Viticulture</i>, <b>56</b>, #1, 46-51<br/> Marko, S.; Dormedy, E.; Fugelsang, K.; Dormedy, D.;<br/> Gump, B.; Wample, Robert</p>                                                                                                       | headspace<br>5, 10, 15min sampling<br>82°C   | GC-MS        |
| 1678 | Volatiles<br>from Oak<br>wood               | <p>Fast screening method for volatile compounds of oak wood used for aging wines by headspace SPME-GC-MS (SIM)<br/> <i>J Agri and Food Chemistry</i>, <b>52</b>, #23, 6857-6861<br/> Diaz-Maroto, M.; Sanchez-Palomo, Eva; Perez-Coello, M.</p>                                                                                        | 50/30µm DVB/CAR<br>40min @ 70°C<br>Headspace | GC-MS (SIM)  |
| 1679 | Volatiles in<br>apple wine                  | <p>Rapid analysis of flavor volatiles in apple wine using headspace SPME<br/> <i>J Institute of Brewing</i>, <b>110</b>, #1, 57-65<br/> Wang, L.; Xu, Y.; Zhao, G.; Li, J.</p>                                                                                                                                                         | 75µm Carboxen<br>Headspace                   | GC-MS        |
| 1680 | Volatiles from<br>irradiated food           | <p>Markers for irradiated food<br/> <i>Chem. World</i>, <b>2</b>, #2, 20<br/> Down, Steve</p>                                                                                                                                                                                                                                          | headspace                                    | GC           |
| 2833 | Flavor compounds<br>from red-cooked<br>beef | <p><b>Effects of cooking conditions on sensory characteristics of red-cooked beef flavor and identification of the flavor compounds</b><br/> <i>J Food Process Eng</i> <b>31</b>, #1, 51-65 (Feb 2008)<br/> Cui, Chun; Wang, Jinshui; Wu, Jinwei; Wu, Xiao; Yang, Bao; Zhao, M.</p>                                                    | headspace                                    | GC/MS        |
| 2257 | Odor-active<br>components<br>of beef flavor | <p><b>Analysis of odor-active components of simulated beef flavor by SPME-GC-olfactometry</b><br/> <i>Abstracts of Papers Am Chem Society</i> (2004) <b>228</b>, #1, U68<br/> Moon, Soo Yeun; Cliff, Margaret A.; Li-Chan, Eunice C. Y.</p>                                                                                            |                                              | GC/MS        |
| 1681 | Volatiles from<br>Beef<br>extract           | <p>Development of SPME methodology for analysis of headspace volatile compounds in simulated beef flavour.<br/> <i>Food Chemistry</i>, <b>88</b>, #1, 141-149<br/> Moon, S. Y.; Li-Chan, E. C. Y.*</p>                                                                                                                                 | 50/30µm DVB/CAR<br>60min @ 60°C<br>headspace | GC           |
| 1682 | Volatiles from<br>Beef<br>extract           | <p>Identification of radiolytic marker compounds in the irradiated beef extract powder by volatile analysis<br/> <i>Microchemical Journal</i>, <b>80</b>, #2, 127-137<br/> Kim, Hun; Cho, Woo-; Ahn, Jun-; Cho, Doee; Cha, Yong-</p>                                                                                                   | headspace @ 30°C                             | GC           |
| 1683 | Volatiles from<br>fruit juices              | <p>Characterization of volatile compounds of fruit juices and nectars by headspace SPMEand GC-MS.<br/> <i>Food Chemistry</i>, <b>87</b>, #4, 627-637<br/> Riu-Aumatell, M.; Castellari, M.; Lopez-Tamames, E.;<br/> Galassi, S.; Buxaderas, S. *</p>                                                                                   | headspace                                    | GC/MS        |

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| 1684 | Volatiles from food emulsions     | on flavor release from complex food emulsions<br><i>J Agr and Food Chem</i> , 52, #20, 6257-6263<br>Relkin, Perla; Fabre, Marjorie; Guichard, Elisabeth                                                                                                                                  | headspace                                                   | GC-MS             |
| 1685 | Volatiles from olive oil          | Characterization of volatile compounds of French and Spanish virgin olive oils by HS-SPME: I. identification of quality-freshness markers<br><i>Food Chemistry</i> , 88, #1, 151-157<br>Cavalli, J; Fernandez, X.; Lizzani-Cuvelier, L; Loiseau, A                                       | headspace                                                   | GC-RI and GC-MS,  |
| 1686 | Oxidative byproducts from lipids  | Oxidation of lipids in food<br><i>Polish JFood and Nutrition Sci</i> , 13, #1, 87-100<br>Wasowicz, E; Gramza, A; Hes, M; Jelen, H;Korczak,J; Malecka, M; Mildner-Szkudlarz, S; Rudzinska, M; Samotyja, U; Zawirska-Wojtasiak, R                                                          | headspace                                                   | GC                |
| 1687 | Volatiles from sea weed           | Photo-oxidation of lipids impregnated on the surface of dried seaweed (porphyra yezoensis ueda). Characterization of volatiles<br><i>JAOCs</i> , 81, #8, 773-781<br>Ohshima, Toshiaki; Pan, Xiangqing; Ushio, Hideki                                                                     | headspace @ 45°C                                            | GC-FID and GC-MS, |
| 1688 | Oxidation byproducts from chicken | Lipid oxidation in high-pressure processed chicken breast during chill storage and subsequent heat treatment: effect of working pressure, packaging atmosphere and storage time<br><i>European Food Res and Tech</i> , 219, #2, 167-170<br>Wiggers, S.; Kroeger-Ohlson, M.; Skibsted, L. | 10min @ 80°C headspace                                      | GC-MS             |
| 1689 | Volatiles in Citric acid          | Determination of organic volatile impurities in citric acid by SPME-GC<br><i>Fenxi Shiyanshi</i> , 24, #1, 43-45<br>Li, L. H.; Zheng, L.; Guo, W.                                                                                                                                        |                                                             | GC-MS             |
| 1690 | Hexanal in potato crisps          | Determination of hexanal as indicator of the lipidic oxidation state in potato crisps using GC and HPLC<br><i>J. Chromatogr. A</i> , 1046, #1-2, 75-81<br>Lopez-Hernandez, J.; Paseiro-Losada, P.; Rodriguez-Bernaldo De Quiros, A.; Sanches-Silva, A.                                   | headspace<br>2,4-dinitrophenyl-hydrazone derivative.        | GC-MS<br>HPLC     |
| 1691 | Volatile thiol from wine          | Variation in 4-mercapto-4-methyl-pentan-2-one release by <i>Saccharomyces cerevisiae</i> commercial wine strains<br><i>FEMS Microbiology Letters</i> , 240, #2, 125-129<br>Howell, K.; Swiegers, J.; Elsey, G.; Siebert, T.; Bartowsky, E.; Fleet, G.; Pretorius, I.; Lopes, M.          | headspace                                                   | GC-AED            |
| 1692 | Volatiles in wine                 | Determination of volatile compounds in wine by automated SPME-GC<br><i>Chromatographia</i> , 59, #11-12, 733-738<br>Cabredo-Pinillos, S.; Cedron-Fernandez, T.; Parra-Manzanares, A.; Saenz-Barrio, C.                                                                                   | headspace                                                   | GC-FID            |
| 1693 | Off taste of soft drink           | Evaluation of the antimicrobial activity of citrus essences on <i>Saccharomyces cerevisiae</i><br><i>J Agrl and Food Chemis</i> , 52, #23, 6932-6938<br>Belletti, Nicoletta; Ndagijimana, Maurice; Sisto, C Guerzoni, Maria E.; Lanciotti, Rosalba; Gardini, F.                          | headspace                                                   | GC-MS             |
| 1694 | Methyloxime in grapefruit leaves  | Phenylacetaldehyde O-methyloxime: A volatile compound produced by grapefruit leaves infected with the citrus canker pathogen, <i>Xanthomonas axonopodis</i> pv. citri<br><i>J Agrl and Food Chemis</i> , 53, #13, 5134-5137<br>Zhang, Aijun; Hartung, John S.                            | oxime methyl ether derivatives<br>headspace                 | GC-MS             |
| 1695 | Aroma of leaves                   | Analysis and characterization of aroma-active compounds of <i>Schizandra chinensis</i> (omija) leaves.<br><i>J Sci of Food and Agriculture</i> , 85, #1, 161-166<br>Zheng, C. H.; Kim, K. H.; Kim, T. H.; Lee, H. J.*                                                                    | headspace                                                   | GC-MS             |
| 1696 | Essential oils from yacon leaves  | Comparison of three different SPME fibres for analysis of essential oils in yacon ( <i>Smallanthus sonchifolius</i> ) leaves<br><i>J. Chromatogr. A</i> , 1084, #1-2, 2-6<br>Adam, M.; Bajzer, T.; Eisner, A.; Juklova, M.; Ventura, K.                                                  | 100µm PDMS<br>65µm PDMS-DVB<br>50/30µm DVB/CAR<br>headspace | GC-FID            |
| 2856 | Volatiles from argyi flowers      | <b>Separation and identification of volatile constituents in <i>Artemisia argyi</i> flowers by GC-MS with SPME and steam distillation</b><br><i>J. Chrom. Sci</i> 46, #5, 401-405 (MAY-JUN 2008)<br>Li, Ning; Mao, Yu; Deng, Chunhui; Zhang, Xiangmin                                    | headspace                                                   | GC-MS             |

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| 1697 | Essential oils from argyi leaves      | Comparison of essential oil composition of <i>Artemisia argyi</i> leaves at different collection times by headspace SPME-GC-MS<br><i>Chromatographia</i> , 59, #11-12, 729-732<br>Zheng, X. H.; Deng, C. H.; Song, G. X.; Hu, Y. M.*                                                     | headspace                                                                                   | GC-MS     |
| 1698 | Essential oils from Eucalyptus leaves | A SPME method to fingerprint dissolved organic carbon released from <i>Eucalyptus camaldulensis</i> Dehnh (River Red Gum) leaves<br><i>Analytica Chimica Acta</i> , 530, #2, 325-333<br>Zander, Alek; Bishop, Andrea G.; Prenzler, Paul D.                                               | 100µm PDMS<br>15min @ 40°C, pH 2<br>saturated salt<br>rapid stirring                        | GC        |
| 1699 | Off flavors in catfish                | Instrumental versus sensory detection of off-flavors in farm-raised channel catfish<br><i>Aquaculture</i> , 236, #1-4, 309-319<br>Grimm, Casey; Lloyd, Steven; Zimba, Paul                                                                                                               | headspace                                                                                   | GC-MS     |
| 1700 | Volatiles from essential oils         | Composition of the essential oils and in vivo emission of volatiles of four <i>Lamium</i> species from Italy: <i>L. purpureum</i> , <i>L. hybridum</i> , <i>L. bifidum</i> & <i>L. amplexicaule</i> .<br><i>Food Chemistry</i> , 91, #1, 63-68<br>Flamini, G.; Cioni, P. L.; Morelli, I. | headspace                                                                                   | GC-MS     |
| 1701 | Volatiles from essential oils         | The use of a non-equilibrated SPME method to quantitatively determine the off-notes in mint and other essential oil<br><i>J Sci Food &amp; Agri</i> , 84, #10, 1223-1228<br>Coleman, W. M., III.; Lawrence, B. M.; Craven, S. H.                                                         | headspace                                                                                   | GC/SIM-MS |
| 2277 | Volatiles in red pepper               | <b>Effect of gamma-irradiated red pepper powder on the chemical and volatile characteristics of kakdugi, a Korean traditional fermented radish kimchi</b><br><i>J Food Science</i> 70 #7, C441-C447 (2005)<br>Lee, Jeung Hee; Lee, Ki-Teak; Kim, Mee Ree                                 | headspace                                                                                   |           |
| 1702 | Volatiles in red pepper               | Effect of gamma-irradiation on color, pungency, and volatiles of Korean red pepper powder<br><i>Journal of Food Science</i> , 69, #8, C585-C592<br>Lee, J. H.; Sung, T. H.; Lee, K. T.; Kim, M. R.                                                                                       | headspace                                                                                   | GC-MS     |
| 1703 | Isothiocyanate in cabbage leaves      | Analysis of the isothiocyanates present in cabbage leaves extract and their potential application to control <i>Alternaria</i> rot in bell peppers<br><i>Food Res Intl.</i> , 38, #6, 701-708<br>Troncoso, R.; Espinoza, C.; Sanchez-Estrada, A.; S. Tiznado, M. E.; Garcia, Hugo S.     | headspace                                                                                   | GC-MS     |
| 1704 | Organo-phosphate in cabbage           | New approach for the detection of organophosphorus pesticide in cabbage using SPME/SnO <sub>2</sub> gas sensor: Principle and preliminary experiment<br><i>Sens Actuators, B Chem</i> , 102, #2, 235-240<br>Huang, Xingjiu; Liu, Jinhui; Meng, Fanli; Sun, Yufeng                        | headspace                                                                                   | GC        |
| 1705 | Off flavor in apple juice             | Determination of off-flavour compounds in apple juice caused by microorganisms using headspace SPME-GC-MS<br><i>Anal. Chim. Acta</i> , 520, #1-2, 3-11<br>Pfannhauser, W.; Siegmund, B.; Zierler, B.                                                                                     | headspace                                                                                   | GC-MS     |
| 1706 | Volatiles from cured ham              | Study of the effect of different fiber coatings and extraction condition on dry cured ham volatile compounds extracted by SPME<br><i>Talanta</i> , 64, #2, 458-466<br>Ansorena, D.; Astiasaran, I.; Garcia-Esteban, M.; Ruiz, J.                                                         | 75µm Carboxen<br>50/30µm DVB/CAR<br>15, 30, 60min extraction<br>headspace<br>saturated NaCl | GC        |
| 1707 | Volatiles in cured ham                | Comparison of simultaneous distillation extraction and SPME for the analysis of volatile compounds in dry-cured ham.<br><i>J Sci Food and Agri</i> , 84, #11, 1364-1370<br>Garcia-Esteban, M.; Ansorena, D.; Astiasaran, I.; Martin, D.; Ruiz, J. *                                      | 75µm Carboxen<br>headspace                                                                  | GC-MS     |
| 1708 | Volatiles from hams                   | Characterization of French and Spanish dry-cured hams: influence of the volatiles from the muscles and the subcutaneous fat quantified by SPME-GC<br><i>Meat Science</i> , 69, #4, 635-645<br>Sanchez-Pena, C.; Luna, G; Garcia-Gonzalez, D.; Aparicio, R                                | headspace                                                                                   | GC        |
| 1709 | Chloroanisoles                        | Optimisation of a headspace SPME method for the direct determination of chloroanisoles related to cork taint in red wine                                                                                                                                                                 | headspace                                                                                   | GC-ECD    |

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| in wine                                         | <i>J. Chromatogr. A</i> , 1056, #1-2, 49-56<br>Gonzalez-Saiz, J.; Martinez-Urunuela, A.; Pizarro, C.                                                                                                                                                          |                                                 |                     |
| 2485 Pentachlorophenol in food                  | <b>A sensitive SPME-GC-based procedure for determining . pentachlorophenol in food</b><br><i>Food Addit Contam 24</i> , #7, 777-83 (2007 Jul)<br>Campillo, Natalia; Peonalver, Rosa; Hernoandez-Coordoba, Manuel                                              | headspace as derivative                         | MIP-AED             |
| 1710 Chlorophenols in wine                      | Multiple SPME in a non-equilibrium situation: Application in quantitative analysis of chlorophenols and chloroanisoles related to cork taint in wine<br><i>J. Chromatogr. A</i> , 1089, #1-2, 31-38<br>Gonzalez-Saiz, J.; Martinez-Urunuela, A.; Pizarro, C.  | headspace                                       | GC-MS               |
| 2206 Chlorophenols in cork                      | <b>Ethanol/water extraction combined with SPE and SPME concentration for determination of chlorophenols in cork stoppers</b><br><i>J Ag Food Chem</i> , 54, #3, 627-632 (2006)<br>Insa, S.; Besalu, E.; Iglesias, C.; Salvado, V.; Antico, E.                 |                                                 |                     |
| 1711 Chlorophenols in cork/wine                 | Development of solid-phase extraction and SPME methods for the determination of chlorophenols in cork macerate and wine samples<br><i>J. Chromatogr. A</i> , 1047, #1, 15-20<br>Antico, E.; Insa, S.; Salvado, V.                                             | 100µm PDMS Acetylation derivative headspace     | GC-ECD              |
| 1712 2,4,6-Trichloro-anisole in wine            | Migration of 2,4,6-trichloroanisole from cork stoppers to wine<br><i>European Food Research and Tech</i> , 220, #3-4, 347-352<br>Juanola, R.; Subira, D.; Salvado, V.; Regueiro, J.; Antico, E.                                                               | headspace                                       | GC-ECD              |
| 2668 Monoterpenoids in wine                     | <b>Classification of Boal, Malvazia, Sercial and Verdelho wines based on terpenoid patterns</b><br><i>FOOD CHEM. 101</i> , #2, 475-484, (2007)<br>Camara, J. S.; Alves, M. A.; Marques, J. C.                                                                 | headspace                                       | GC-MS               |
| 1713 Volatile esters in wine                    | Inhibition of the decline of volatile esters and terpenols during oxidative storage of Muscat-white and Xinomavro-red wine by caffeic acid and N-acetyl-cysteine<br><i>Food Chemistry</i> , 93, #3, 485-492<br>Roussis, I.; Lambropoulos, I.; Papadopoulou, D | headspace<br>20°C heated sample                 | GC-MS               |
| 1714 Volatiles in wine                          | Volatile compounds of red and white wines by headspace SPME using different fibres.<br><i>J of Chromatographic Sci</i> , 42, #6, 310-316<br>Torrens, J.; Riu-Aumatell, M.; Lopez-Tamames, E.; Buxaderas, S. *                                                 | 50/30µm DVB/CAR<br>40min @ 35°C<br>headspace    | GC                  |
| 1715 Haloanisoles in wine                       | Optimisation of a two-dimensional on-line coupling for the determination of anisoles in wine using ECD and ICP-MS after SPME-GC separation<br><i>J Anal At Spectrom</i> , 20, #9, .883-888<br>Garcia-Barrera, T.; Gomez-Ariza, J.L.; Lorenzo, F.              | headspace                                       | GC-ICP-MS<br>GC-ECD |
| 1716 Impurities constituents additives flavours | A review of theoretical and practical aspects of SPME in food analysis<br><i>IntL J Food Sci &amp; Technology</i> , 39, #7, 703-717<br>Wardencki, Waldemar; Michulec, Magdalena; Curylo, J.                                                                   | headspace                                       | GC                  |
| 2432 Flavour from cocoa                         | <b>Evaluation of SPME-GC-MS for the headspace analysis of volatile compounds in cocoa products</b><br><i>Talanta 74</i> , #5, 1166-1174 (Feb 15 2008)<br>Ducki, S.; Miralles-Garcia, J.; Storey, D.; Tornero, A.; Zumbé, A.                                   | 50/30µm DVB/CAR<br>60°C for 15 min<br>headspace | GC-MS               |
|                                                 |                                                                                                                                                                                                                                                               | 25% NaCl                                        |                     |
| 2849 Pyrazine in chinese liquors                | <b>Characterization of pyrazines in some Chinese liquors and their approximate concentrations</b><br><i>J Agri Food Chemistry</i> , 55, #24, 9956-9962 (NOV 28 2007)<br>Fan, Wenlai; Xu, Yan; Zhang, Yanhong                                                  | headspace<br>50°C for 30 min<br>Satr.NaCl       | GC-FTD              |
| 1717 Flavour from cocoa liquors                 | Relationship between procyanidin and flavour contents of cocoa liquors from different origins.<br><i>J Agri Food Chemistry</i> , 52, #20, 6243-6249<br>Counet, C.; Ouwerx, C.; Rosoux, D.; Collin, S.                                                         | headspace                                       | HPLC-UV             |
| 1718 Methylpyrazine in cocoa                    | Cocoa quality and processing: A study by SPME and GC analysis of methylpyrazines<br><i>Food Bioprod. Process.</i> , 82, #4C, 291-297                                                                                                                          | headspace                                       | GC-MS               |

Ambient temperature, unless otherwise indicated.

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| 1719 | Chlorophenol<br>in red wine               | Optimisation of the derivatisation reaction and subsequent headspace SPME method for the direct determination of chlorophenols in red wine<br><i>J. Chromatogr. A</i> , 1048, #2, 141-151<br>Gonzalez-Saiz, J; Martinez-Urunuela, A; Pizarro, C.                                                                                    | headspace<br>acetylated derivatives               | GC                  |
| 1720 | Volatiles<br>from dried<br>fruit          | Headspace SPME-GC-MS analysis of the volatile compounds of Evodia species fruits<br><i>J. Chromatogr. A</i> , 1087, #1-2, 265-273<br>Benvenuti, S; Bertelli, D; Pellati, F; Rossi, M; Yoshizaki, F.                                                                                                                                 | 50/30µm DVB/CAR<br>18min @ 80°C<br>headspace      | GC-MS               |
| 1721 | Volatiles<br>from dried<br>ripe fruit     | Comparison of SPME, SFE, steam distillation, and solvent extraction techniques for analysis of volatile constituents in Fructus amomi<br><i>J AOAC Intl</i> , 88, #2, 418-423<br>Shen, S; Sha, Y; Deng, C; Fu, D; Chen, ; Zhang, Xian                                                                                               | headspace                                         | GC-MS               |
| 1722 | Volatiles<br>from dried<br>ripe fruit     | Rapid analysis of essential oil from Fructus Amomi by pressurized hot water extraction followed by SPME-GC-MS<br><i>J Pharma&amp; Biomedical Analysis</i> , 38, #2, 326-331<br>Deng, C; Wang, A; Shen, S; Fu, D; Chen, J; Zhang, X                                                                                                  | headspace<br>15min @ 80°C                         | GC-MS               |
| 1723 | Volatiles<br>from sweet<br>marjoram       | Sensory and instrumental evaluation of sweet marjoram (Origanum majorana L.) aroma<br><i>Flavour Fragrance J.</i> , 20, #5, 492-500<br>Baranauskienė, R.; Demyttenaere, J.C.R.; Venskutonis, P.                                                                                                                                     | headspace                                         | GC                  |
| 2688 | Arom<br>compounds<br>apricots             | Characterization of aroma potential of apricot varieties using different extraction techniques<br><i>Food Chem</i> 105, #2, 829-837 (2007)<br>Solis-Solis, H. M.; Calderon-Santoyo, M.; Schorr-Galindo, S.; Luna-Solano, G.; Ragazzo-Sanchez, J. A.                                                                                 | headspace                                         | GC-MS               |
| 2629 | Arom<br>compounds<br>apricots             | Discrimination of eight varieties of apricot (Prunus armeniaca) by electronic nose, LLE and SPME using GC-MS and multivariate analysis<br><i>Sens. Actuators B, Chem. (Switzerland)</i> 125, #2, 415-21 (8 Aug. 2007)<br>Solis-Solis, H.M.; Calderon-Santoyo, M.; Gutierrez-Martinez, P.; Schorr-Galindo, S.; Ragazzo-Sanchez, J.A. | headspace                                         | GC-MS               |
| 1724 | Arom<br>compounds<br>apricot puree        | Trehalose improves flavour retention in dehydrated apricot puree<br><i>Intl J Food Science &amp; Tech</i> , 40, #4, 425-435<br>Komes, D; Lovric, T; Kovacevic G, Karin;<br>Gajdos Kljusuric, Jasenka; Banovic, Mara                                                                                                                 | headspace                                         | GC-FID<br>GC-MS     |
| 2651 | Aroma Volatiles<br>from white<br>truffle  | Rapid white truffle headspace analysis by proton transfer reaction mass spectrometry and comparison with SPME-GC-MS<br><i>Rapid Comm Mass Spectrometry</i> 21, #6, 2564-2572 (2007)<br>Aprea, E.; Biasioli, F.; Carlin, S.; Versini, G.; Maerk, T.; Gasperi, F.                                                                     | headspace                                         | GC-MS               |
| 2203 | Aroma Volatiles<br>from white<br>truffle  | Aroma characterisation of white truffle by GC-MS and GC-O<br><i>Italian J Food Sci.</i> , 17 #4, 463-468 (2005)<br>Piloni, M.; Tat, L.; Tonizzo, A.; Battistutta, F.                                                                                                                                                                | headspace                                         | GC-MS               |
| 1725 | Volatiles from<br>truffles                | Volatile components of truffle species collected in Basilicata<br><i>Micologia Italiana</i> , 30, #3, 11-29<br>Mauriello, G.; Marino, R.; D'Auria, M.; Cerone, G.; Rana, G. L.                                                                                                                                                      | headspace                                         | GC-MS               |
| 1726 | Volatiles from<br>mould                   | Sensitive detection of volatile organic compounds (MVOC) produced by mould by means of SPME-GC-MS<br><i>Naunyn-Schmiedeberg's Archives of Pharmacology</i> 369, Suppl 1, R145<br>Schuetz, E.                                                                                                                                        | headspace                                         | GC-MS               |
| 1727 | Phenylurea<br>herbicides on<br>vegetables | Application of SPME for determining phenylurea herbicides and their homologous anilines from vegetables.<br><i>J Chromatogr. A</i> , 1042, #1-2, 9-14<br>Berrada, H.; Font, G.; Molto, J. C.*                                                                                                                                       | 85µm polyacrylate<br>headspace<br>14% salt, pH 11 | GC-NPD<br>GC-MS-SIM |
| 2512 | Volatiles from<br>French beans            | Chemical analysis of French beans (Phaseolus vulgaris L.) by headspace SPME and simultaneous distillation/extraction<br><i>Food Chem.</i> 101, #3, 1279-1284 (2007)<br>Barra, A.; Baldovini, N. ; Loiseau, A.; Albino, L.; Lesecq, C.; Cuvelier, L.                                                                                 | 65µm DVB/PDMS<br>headspace                        | GC-MS               |
| 2354 | Volatiles in                              | Development of GC-MS with microwave distillation and simultaneous SPME for rapid determination of volatile constituents in ginger                                                                                                                                                                                                   | 65µm DVB/PDMS                                     | GC-MS               |

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|      | ginger                            | <i>J. Pharm. Biomed. Anal.</i> <b>43</b> , #1, 24-31 (2007-01-04)<br>Yu, Y. J.; Huang, T. M.; Yang, B.; Liu, X.; Duan, G. L.                                                                                                                                                                                                                                | microwave digested                                         |               |
| 1728 | Volatiles in ginger               | GC-mass Spectrometry coupled with SPME for determination of volatile constituents of chinese ginger<br><i>Fudan Xuebao Ziranhexueban</i> , <b>42</b> , #6, 939-949<br>Song Guo-xin; Deng Chun-hui; Wu Dan; Hu Yao-ming                                                                                                                                      | 100µm PDMS headspace                                       | GC-MS         |
| 1729 | MIBP in red wine                  | Yield effects on 2-methoxy-3-isobutylpyrazine concentration in Cabernet Sauvignon using a SPME-GC-MS<br><i>J of Agri Food Chemistry</i> , <b>52</b> , #17, 5431-5435<br>Chapman, D. M.; Thorngate, J. H.; Matthews, M. A.; Guinard, J. -X.; Ebeler, S. E.*                                                                                                  | 50/30µm DVB/CAR 30min @ 40°C<br>30% NaCl immersed sampling | GC-MS         |
| 2280 | MIBP in red wine                  | Pruning effects on 2-methoxy-3-isobutylpyrazine concentration in cabernet sauvignon using a new SPME GC-MS quantification method<br><i>American J Enology and Viticulture</i> <b>55</b> #3, 296A (2004)<br>Chapman, D.; Matthews, M.; Guinard, J.; Ebeler, S.                                                                                               |                                                            |               |
| 2281 | MIBP in wine                      | Simplified method for detection and quantification of 2-methoxy-3-isobutylpyrazine in wine<br><i>American J Enology and Viticulture</i> <b>55</b> #3, 276-278 (2004)<br>Wampfler, Daniel J.; Howell, G. S.                                                                                                                                                  | headspace                                                  | GC-MS         |
| 2463 | Review article                    | Techniques of preparing plant material for chromatographic separation and analysis<br><i>J of Biochem Biophysical Methods</i> <b>70</b> , #2, 253-261 (MAR 10 2007)<br>Romanik, G.; Gilgenast, E.; Przyjazny, A.; Kaminski, M.                                                                                                                              |                                                            |               |
| 2198 | Volatiles from plants             | Practical approaches to plant volatile analysis<br><i>Plant J.</i> <b>45</b> , #4, 540-560 (2006)<br>Boland, W.; Hansel, A.; Loreto, F.; Rose, U.; Schnitzler, J.; Tholl, D.                                                                                                                                                                                | headspace                                                  | GC-MS         |
| 1730 | Essential oils from plants        | Volatile constituents of micropropagated plants of <i>Bupleurum fruticosum</i> L<br><i>Plant Science (Oxford)</i> , <b>167</b> , #4, 807-810<br>Bertoli, Alessandra; Pistelli, Luisa; Morelli, Ivano; Fraternali, Daniele; Giamperi, Laura; Ricci, Donat                                                                                                    | headspace                                                  | GC and GC-MS  |
| 2580 | Volatiles in frankfurters         | Oxidation of lipids and proteins in frankfurters with different fatty acid compositions and tocopherol and phenolic contents<br><i>FOOD CHEM.</i> <b>100</b> , #1, 55-63 (2007)<br>Estevez, M.; Ventanas, S.; Cava, R.                                                                                                                                      | headspace                                                  | GC            |
| 2304 | Volatiles in porcine frankfurters | Influence of the addition of rosemary essential oil on the volatiles pattern of porcine frankfurters<br><i>J Ag Food Chem</i> <b>53</b> , #21, 8317-8324 (2005)<br>Estevez, Mario; Ventanas, Sonia; Ramirez, Rosario; Cava, Ramon                                                                                                                           | headspace                                                  | GC/MS         |
| 2896 | Volatiles in pork meat            | Effect of pork meat proteins on the binding of volatile compounds<br><i>FOOD CHEM.</i> <b>108</b> , #4, 1226-1233 (JUN 15 2008)<br>Perez-Juan, Maria; Flores, Monica; Toldra, Fidel                                                                                                                                                                         | headspace                                                  | GC/MS         |
| 2603 | Volatiles in porcine meats        | Effect of ionic strength of different salts on the binding of volatile compounds to porcine soluble protein extracts in model systems<br><i>Food Res. Int.</i> <b>40</b> , #6, 687-693 (July 2007)<br>Flores, Monica; Perez-Juan, Maria; Toldra, Fidel                                                                                                      | headspace                                                  | GC/MS         |
| 1731 | Volatiles from liver pates        | Analysis of volatiles in porcine liver pates with added sage and rosemary essential oils by using SPME-GC-MS<br><i>J Agri Food Chemistry</i> , <b>52</b> , #16, 5168-5174<br>Estevez, Mario; Ventanas, Sonia; Ramirez, R; Cava, R                                                                                                                           | headspace                                                  | GC-MS         |
| 2669 | Volatiles in marinated duck       | Comparative study of volatile compounds in traditional Chinese Nanjing marinated duck by different extraction techniques<br><i>Intl J Food Sci &amp; Tech</i> <b>42</b> , #5, 543-550 (MAY 2007)<br>Liu, Yuan; Xu, Xing-lian; Zhou, Guang-hong                                                                                                              | 75µm Carboxen headspace                                    | GC-MS         |
| 2600 | Volatiles in rosemary oil         | Relative characterization of rosemary samples according to their . geographical origins using microwave-accelerated distillation, . solid-phase microextraction and Kohonen self-organizing maps.<br><i>Anal Bioanal Chem</i> <b>389</b> , #2, 631-641 (2007)<br>Tigrine-Kordjani, N.; Chemat, F.; Meklati, B. Y.; Tuduri, L.; Giraudel, J. L.; Montury, M. | headspace                                                  | GC-MS         |
| 1732 | Volatiles in                      | Determination of volatile compounds in antioxidant rosemary extracts by SPME-GC                                                                                                                                                                                                                                                                             | 50/30µm DVB/CAR                                            | GC-MS, GC-FID |

|                                        |                                                                                                                                                                                                                                                                                       |                                                         |                 |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-----------------|
| rosemary                               | <i>Analytical Letters</i> , 38, #7, 1193-1212<br>Carrillo, Jose David; Tena, Maria Teresa                                                                                                                                                                                             | Preheat 15min @ 70C<br>Extract 60min @ 20C<br>headspace |                 |
| 1733 Volatiles from plantlets          | Kinetin enhanced linalool production by in vitro plantlets of <i>Lippia alba</i><br><i>J. Essent. Oil Res.</i> , 16, #5, 405-408<br>Bizzo, Humberto R.; Lage, Celso L.S.; Leitao, Suzana G.; Lopes, Daise; Tavares, Eliana S.                                                         | headspace                                               | GC              |
| 1734 Volatiles in wine                 | Optimization of wine headspace analysis by SPME capillary GC-w/MS & FID<br><i>Food Chemistry</i> , 93, #2, 361-369<br>Tat, L.; Comuzzo, P.; Stolfo, I.; Battistutta, F.                                                                                                               | 50/30µm DVB/CAR<br>headspace                            | GC-MS           |
| 1735 Chloroanisole in red wine         | Determination of chloroanisole compounds in red wine by headspace SPME AND GC-mass spectrometry<br><i>J. Chromatogr. A</i> , 1052, #1-2, 145-149<br>Belsue, V; Gonzalez-Penas, E; Irigoyen, A; Lizarraga, E                                                                           | headspace                                               | GC-MS           |
| 2207 Volatiles from strawberry wine    | <b>Identification of volatile aroma compounds of strawberry wine using SPME techniques coupled with GC-MS</b><br><i>Flavour and Fragrance Journal</i> 21, #1, 68-71 (2006)<br>Kafkas, E.; Cabaroglu, T.; Selli, S.; Bozdogan, A.; Kurkcuoglu, M.; Paydas, S.; Baser, K.               | headspace & immersion                                   | GC-MS           |
| 1736 Flavor volatiles in madarin wine  | Volatile flavour components of mandarin wine obtained from clementines ( <i>Citrus reticula</i> Blanco) extracted by SPME<br><i>Flavour and Fragrance Journal</i> , 19, #5, 413-416<br>Selli, S.; Kurkcuoglu, M.; Kafkas, E.; Cabaroglu, T.; Demirci, B.; Baser, K. H. C.; Canbas, A. | headspace & immersion sampling                          | GC-MS           |
| 1737 Aroma components in wine          | Validation of a SPME method for headspace analysis of wine aroma components<br><i>Am J of Enology &amp; Viticulture</i> , 56, #1, 37-45<br>Howard, Karen L.; Mike, James H.; Riesen, Roland                                                                                           | 50/30µm DVB/CAR<br>headspace                            | GC-MS           |
| 2178 Chiral volatiles in foods         | <b>Effect of sample freezing on the SPME performance in the analysis of chiral volatile compounds in foods</b><br><i>Food Chemistry</i> 96, #2, 334-339 (2006)<br>Flores, G.; del Castillo, M.; Blanch, G. Herraiz, M.                                                                | headspace                                               | GC-MS           |
| 2525 Heterocyclic amines in meat       | Determination of less polar heterocyclic amines in meat extracts: Fast sample preparation method using SPME prior to HPLC-fluorescence quantification<br><i>Analytica Chimica Acta</i> 582, #2, 259-266 (2007)<br>Martin-Calero, A.; Ayala, J. H.; Gonzalez, V.; Afonso, A. M.        | 50µm CW-TPR                                             | LC-fluorescence |
| 2577 Sulfonamides in meat              | Trace determination of sulfonamides residues in meat with a combination of SPME-LC-MS<br><i>Talanta</i> 72, #3,1082-1087 (2007-05-15)<br>Lu, K. -H.; Chen, C. -Y.; Lee, M. -R.                                                                                                        | 65µm PDMS-DVB                                           | LC-MS           |
| 1738 Volatiles from meat curing agents | Interaction of soluble peptides and proteins from skeletal muscle with volatile compounds in model systems as affected by curing agents<br><i>J Agr Food Chem</i> , 53, #5, 1670-1677<br>Gianelli, M. Pia; Flores, Monica; Toldra, Fidel                                              | headspace                                               | GC              |
| 2590 Volatiles from meat curing agents | <b>Headspace concentration of selected dry-cured aroma compounds in model</b><br><i>FOOD CHEM.</i> 101, #4, 1588-1593 (2007)<br>Flores, M.; Gianelli, M. P.; Perez-Juan, M.; Toldra, F.                                                                                               | headspace                                               | GC-MS           |
| 2179 Volatiles in sausages             | Optimization of multiple headspace SPME for the quantification of volatile compounds in dry fermented sausages<br><i>J Agr Food Chem</i> 55, #21, 8688-8695 (OCT 17 2007)<br>Flores, Monica; Hernandez, Delia                                                                         | headspace                                               | GC-MS           |
| 2224 Volatiles in sausages             | Effect of calcium chloride on the volatile pattern and sensory acceptance of dry-fermented sausages<br><i>European Food Res and Tech</i> 221 #5, 624-630 (2005)<br>Flores, Monica; Nieto, Pablo; Ferrer, Jose Manuel; Flores, Jose                                                    | headspace<br>0.05% calcium chloride                     | GC              |
| 2503 Volatiles in sausages             | Quantitation of selected odor-active constituents in dry fermented sausages prepared with different curing salts<br><i>J Ag Food Chem</i> 55, #8, 3058-3065 (APR 18 2007)<br>Marco, Aurora; Navarro, Jose Luis; Flores, Monica                                                        | headspace                                               | GC              |

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|------|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-------|
| 1739 | Volatiles from sausages            | Effect of <i>Debaryomyces</i> spp. on aroma formation and sensory quality of dry-fermented sausages<br><i>Meat Science</i> , 68, #3, 439-446<br>Flores, Monica; Dura, M-Asuncion; Marco, Aurora; Toldra, Fidel                                                                 | headspace                  | GC-MS |
| 1740 | Volatiles from sausages            | Analysis of volatile components of fermented sausage before and after ripeness by SPME-GC-MS<br><i>Fenxi Ceshi Xuebao</i> , 23, #6, 40-43<br>Zhang, C. H.                                                                                                                      | headspace                  | GC-MS |
| 1741 | Volatiles from pig loin            | Volatile compounds in Iberian dry-cured loin<br><i>Meat Science</i> , 68, #3, 391-400<br>Muriel, E.; Antequera, T.; Petron, M.; Andres, A.; Ruiz, J.                                                                                                                           | headspace                  | GC-MS |
| 2291 | Flavors in goat cheese             | <b>Determination of flavor components in Sicilian goat cheese by automated HS-SPME-GC</b><br><i>Flavour Fragrance J.</i> 20 #6, 659-665 (2005)<br>Chiofalo, B.; Costa, R.; Dugo, G.; Dugo, P.; Mondello, L.; Tranchida, P.; Quinto; Zumbo, Alessandro                          | headspace                  | GC/MS |
| 2533 | Flavors in goat milk               | <b>Effects of ultraviolet irradiation on chemical and sensory properties of goat milk</b><br><i>J Dairy Sci</i> 90, #7, 3178-86 (2007 Jul)<br>Matak, K ; Sumner, S S; Duncan, S E; Hovingh, E; Worobo, R W; Hackney, C R; Pierson, M D                                         | headspace                  | GC/MS |
| 1742 | Flavors in goat milk cheese        | Characterization of Maltese goat milk cheese flavour using SPME-GC/MS<br><i>South African J of Animal Sci</i> , 34, Suppl. 1, 176-180<br>Chiofalo, B.; Zumbo, A.; Costa, R.; Liotta, L.; Mondello, L.; Dugo, P.; Chiofalo, V.                                                  | headspace                  | GC-MS |
| 1743 | Volatiles from cheese              | Comparison of efficiency and stability of two preconcentration techniques (SPME and INDEx) coupled to an MS-based "Electronic Nose"<br><i>Mitteilungen aus Lebensmitteluntersuchung und Hygiene Hygiene</i> , 95, #1, 85-90<br>Pillonel, L; Altieri, D; Tabacchi, R; Bosset, J | headspace                  | GC-MS |
| 1744 | 2-heptanone in goats milk          | Significance of 2-heptanone in evaluating the effect of microfiltration/pasteurisation applied to goats' milk<br><i>International Dairy Journal</i> , 14, #10, 915-921<br>Avalli, Andrea; Povolio, Milena; Carminati, D; Contarini, G                                          | headspace                  | GC-MS |
| 1745 | Volatiles from fruit               | Qualitative and quantitative composition of the flavour components of Taiwan calamondin and Philippine Calamansi fruit<br><i>European J of Horticultural Science</i> , 69, #3, 117-124<br>Yo, S.-P.; Lin, C.-H.                                                                | headspace                  | GC-MS |
| 1746 | Off flavors from soy protein       | Properties of soy protein isolate prepared from aqueous alcohol washed soy flakes<br><i>Food Res. Int.</i> , 38, #3, 273-279<br>Hua, Yufei; Huang, Youru; Liu, Xiaoya; Qiu, Aiyong                                                                                             | headspace                  | GC-MS |
| 1747 | Volatiles from olives              | SPME analysis of volatile compounds from unfermented olives subjected to thermal treatment.<br><i>Anal &amp; Bioanal Chem</i> , 379, #5, 812-817<br>Navarro, T.; de Lorenzo, C.; Perez, R. A.*                                                                                 | 65µm PDMS-DVB headspace    | GC-MS |
| 1748 | Volatiles from olive & walnut oils | A multivariate study of the relationship between fatty acids and volatile flavor components in olive and walnut oils<br><i>JAO C Society</i> , 82, #2, 105-110<br>Torres, M.; Martinez, M.; Maestri, D.                                                                        |                            | GC-MS |
| 1749 | Volatiles from olive oil           | Simultaneous determination of volatile and semi-volatile aromatic hydrocarbons in virgin olive oil by headspace SPME coupled to GC-MS<br><i>J. Chromatogr. A</i> , 1090, #1-2, 146-154<br>Buxaderas, S.; Conte, L.; LopezTamames, E.; Pizzale, L.; Vichi, S.                   | headspace                  | GC-MS |
| 1750 | Cannabinoids in food               | Determination of cannabinoids in hemp food products by use of headspace SPME-GC-MS<br><i>Anal. Bioanal. Chem.</i> , 378, #1, 183-189<br>Kroener, L.; Lachenmeier, ; Madea, B.; Musshoff,                                                                                       | MSTFA derivative headspace | GC-MS |

Use of SPME analysis for adsorption of the volatile



|      |                                          |                                                                                                                                                                                                                                                                                                                                                                      |                                                 |                   |
|------|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|-------------------|
| 1751 | Flavors from pineapple juice             | compounds in juices clarified by microfiltration.<br><i>Alimentaria</i> , 41, #355, 35-39<br>Carvalho, L.; Godoy, R.; Silva, C.; Miranda, R.; Figueira, J.                                                                                                                                                                                                           | 65µm PDMS-DVB headspace                         | GC-MS             |
| 1752 | Volatiles in Brazilian fruits and juices | Analysis of volatile compounds in some typical Brazilian fruits and juices by SPME-GC method<br><i>Food Additives and Contaminants</i> , 22, #6, 508-513<br>Cardeal, Z.; Guimaraes, E.; Parreira, F.                                                                                                                                                                 | 100µm PDMS<br>20min @ 50°C headspace            | GC-MS             |
| 1753 | Flavors from pineapple                   | Storage and ultraviolet-induced tissue stress effects on fresh-cut pineapple.<br><i>J Sci Food and Agri</i> , 84, #14, 1812-1816<br>Lamikanra, O.; Richard, O. A.                                                                                                                                                                                                    | headspace                                       | GC                |
| 2355 | Benzoylureas in orange juice             | <b>SPME For the determination of benzoylureas in orange juice using LC combined with post-column photochemically induced fluorimetry derivatization and fluorescence detection</b><br><i>J Sep Sci</i> 31, #1, 56-63 (Jan -2008)<br>Parrilla Voazquez, Piedad; Mughari, A; Martonez Galera, M.                                                                       | 60µm DVB/PDMS immersion fluorimetric derivative | HPLC fluorescence |
| 1754 | Flavors from navel oranges               | High pressure processing of Australian navel orange juices: Sensory analysis and volatile flavor profiling<br><i>Innovative Food Sci. Emerg. Tech.</i> , 6, #4, 372-387<br>Baxter, I.; Easton, K; Schneebeli, K; Whitfield, F                                                                                                                                        | headspace<br>4°C and 10°C                       | GC-MS             |
| 2850 | Aroma compounds fermented whey           | <b>Evaluation of the thermally dried immobilized cells of Lactobacillus delbrueckii subsp bulgaricus on apple pieces as a potent starter culture</b><br><i>J Agr Food Chem</i> 55, #24, 9829-9836 (NOV 28 2007)<br>Kopsahelis, N.; Panas, P.; Kourkoutas, Y.; Koutinas, A.                                                                                           | headspace                                       | GC                |
| 2774 | Thiabendazole carbendazim in apples      | <b>A sensitive determination method for carbendazim and thiabendazole in apples by SPME-LC with fluorescence detection</b><br><i>Food Additives and Contaminants</i> 25, #3, 314-319 (2008)<br>Hu, Yanxue; Yang, X.; Wang, Chun; Zhao, Jin; Li, Weining; Wang, Zhi                                                                                                   | 60µm DVB/PDMS<br>35min @ 20°C                   | HPLC fluorescence |
| 1755 | Thiabendazole in orange juice & rind     | Determination of thiabendazole in orange juice and rind by LC w/fluorescence detection and confirmation by GC-MS after extraction by matrix solid-phase dispersion<br><i>J AOAC Int</i> , 87, #3, 664-670<br>Albero, B; Sanchez-Brunete, C; Tadeo, Jose L.                                                                                                           | headspace                                       | GC-MS-SIM         |
| 2842 | Volatiles from aniseed-flavored spirits  | <b>Determination of the principal volatile compounds of Turkish Raki</b><br><i>Journal of the Institute of Brewing</i> 113, #3, 302-309 (2007)<br>Anli, R. Ertan; Vural, Nilufer; Gucer, Yalcin                                                                                                                                                                      | headspace                                       | GC-MS             |
| 2402 | Volatiles from aniseed-flavored spirits  | <b>Characterization of aniseed-flavoured spirit drinks by headspace SPME-GC-MS and chemometrics</b><br><i>Talanta</i> 72, #2, 506-511 (2007-04-30)<br>Jurado, J. ; Ballesteros, O.; Alcazar, A.; Pablos, F. ; Martin, M. ; Vilchez, J. L.; Navalon, A.                                                                                                               | headspace                                       | GC-MS             |
| 1756 | Sweetners in orange spirits              | Effects of carbohydrate and noncarbohydrate sweeteners on the orange spirit volatile compounds<br><i>Food Sci. Technol.</i> , 39, #2, 159-165<br>Cordaro, F.; Da Porto, C.; Marcassa, N.                                                                                                                                                                             | headspace                                       | GC                |
| 1757 | Volatiles in orange juice                | Comparison of two headspace SPME fibres for the detection of volatile chemical concentration changes due to industrial processing of orange juice<br><i>J Sci of Food &amp; Agri</i> , 85, #6, 1065-1071<br>Jordan, M.; Goodner, K.; Castillo, M; Laencina, J.                                                                                                       | 100µm PDMS<br>85µm polyacrylate headspace       | GC                |
| 1758 | Volatiles in liquor                      | Studies on the aroma of cupuassu liquor by headspace SPME and gas chromatography.<br><i>J Chromatogr A</i> , 1025, #1, 115-124<br>de Oliveira, A; Pereira, N; Marsaioli, A; Augusto, F                                                                                                                                                                               | 75µm Carboxen headspace                         | GC-MS, GC-AED     |
| 1759 | Volatils from oregano plants             | Seasonal, populational and ontogenic variation in the volatile oil content and composition of individuals of <i>Origanum vulgare</i> subsp. <i>Hirtum</i> , assessed by GC headspace analysis and by SPME sampling of individual oil glands.<br><i>Phytochemical Analysis</i> , 15, #5, 286-292<br>Johnson, C; Kazantzis, A.; Skoula, M.; Mitteregger, U.; Novak, J. | headspace                                       | GC                |

### Polymers & Coatings

# Application of headspace SPME-GC-MS in characterisation of odorous

|      |                                                  |                                                                                                                                                                                                                                                             |                                                                          |                 |
|------|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|-----------------|
| 2620 | Volatiles from polyester magnetic tape           | volatile organic compounds emitted from magnetic tape coatings based on poly(urethane-ester) after natural and artificial ageing<br><i>Polym. Test. (UK) 26, #2, 243-56 (April 2007)</i><br>Thiebaut, B.; Lattuati-Derieux, A.; Hocevar, M.; Vilmont, L.-B. | headspace                                                                | GC              |
| 2643 | Odor from new cars                               | Variations in amounts and potential sources of volatile organic chemicals in new cars<br><i>Sci. Total Environ. 382, #2-3, 228-239 (Sep 1 2007)</i><br>Chien, Yeh-Chung                                                                                     | headspace                                                                | GC-MS           |
| 791  | Organics in packaging materials                  | The simplest sample treatment techniques to assess the quality and safety of food packaging materials.<br><i>Reviews in AnalChem (2000) 19(6), 435-465</i><br>Nerin, C.; Rubio, C.; Salafranca, J.; Battlle, R.                                             | Review article                                                           |                 |
|      |                                                  | SPME as an Effective Means to Isolate Degradation                                                                                                                                                                                                           |                                                                          |                 |
| 254  | Degradation products in polymers                 | Products in Polymers<br>J. Environ. Polym. Degrad. 5 (2): 67-73 (1997)<br>Hakkarainen, M., Karlsson, S., Albetsson, A.                                                                                                                                      |                                                                          |                 |
| 2662 | Ink solvents on paper                            | Ballpoint pen inks: the quantitative analysis of ink solvents on paper by solid-phase microextraction<br><i>J Forensic Sci 52, #1, 209-15 (2007 Jan)</i><br>Brazeau, Luc; Gaudreau, Marc                                                                    | headspace                                                                | ink solvents on |
| 2489 | Volatile in water-based + solvent borne coatings | Comprehensive VOC analysis method for architectural coatings<br><i>JCT CoatingsTech 4, #1, 48-55 (Jan. 2007)</i><br>Brickweg, Lukas; Guillermo, Audrey; Jones, Dane; Wills, Max                                                                             | headspace                                                                | GC-MS<br>GC-FID |
| 361  | Volatile solvents in water-based coatings        | Direct VOC Analysis of Water-Based Coating by GC and SPME<br>J. Coating Technology, June 1997<br>Censullo, A., Jones, D., Wills, M.                                                                                                                         | 65µm Carbowax/PDMS<br>5 min<br>headspace<br>salt added                   | GC-FID          |
| 626  | Volatile solvents in water-based coatings        | Analysis of exempt paint solvents by GC using SPME<br>J. Coat Technol. (2000), 72(900), 69-74<br>Bodrian, R., Censullo, A., Jones, D., Rashkin, M., Wills, M.                                                                                               | 65µm Carbowax/PDMS<br>5 min<br>headspace<br>salt added                   | GC-FID          |
| 466  | Volatiles from varnished wire                    | Analysis of volatile varnishes of coated wires by SPME<br>Fresenius' J. Anal. Chem. 1999, 364(7), 641-642<br>Hinz, D., Kwarteng-Acheampong, W., Wenclawiak, B.                                                                                              | headspace                                                                | GC-MS           |
| 426  | Acetaldehyde in polyethylene bottles             | Determination of Residual Acetaldehyde in Polyethylene Terephthalate Bottles on SPME<br>Czech J. Food Sci. (1998), 36(8), 401-405<br>Cizkova, H., Voldrich, M., Dobias, J.                                                                                  |                                                                          |                 |
| 761  | Terephthalic acid, vinyl acetate in water        | Determination of plastic monomers in water by SPME coupled with liquid chromatography<br><i>JAOAC Intl. Vol 84, No. 2, 2001, 432-436</i><br>Battlle, R., Sanchez, C., Nerin, C.                                                                             | 85µm polyacrylate<br>65µm DVB/PDMS<br>20min. Immersed<br>5% salt, pH 5.7 | LC-UV           |
| 853  | Vinyl chloride in plastic and water              | Vinyl chloride analysis with (SPME)-GC-MS applied to analysis in materials and aqueous samples.<br><i>Analisis (2000) 28(10) 980-987</i><br>Charvet, R.; Cun, C.; Leroy, P                                                                                  | 75µm Carboxen/PDMS<br>headspace                                          | GC-MS           |
| 467  | Bisphenol A in plastic                           | Abbreviated analysis of bisphenol A with SPME in tableware and food containers<br>Shigen Kankyo Taisaku, 1999, 35(5), 447-451<br>Takao, Y., Arizono, K.                                                                                                     |                                                                          |                 |
|      |                                                  | Characterization by SPME-GC-MS of matrix changes of                                                                                                                                                                                                         |                                                                          |                 |

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|------|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|-------|
| 876  | Poly(L-lactide)                                   | poly(L-lactide) exposed to outdoorsoil environment<br><i>Polym. Degrad Stab</i> , 71(2000) 147-151<br>Gallet, G., Lempianinen, R., Karlsson, S                                                                                                                                                                                                              |                                                | GC-MS |
| 943  | Off odors<br>pharmaceutical<br>packaging          | Identification of a pharmaceutical packaging off-odor using<br>solid phase microextraction GC/MS<br><i>J Pharm Biomedical Analysis</i> (2001), 25(3-4), 379-386<br>Burinsky, D.; Polowy, K.; Sides, S.; Thornquest, A.                                                                                                                                      | 100µm PDMS<br>heaspace                         | GC-MS |
| 902  | Residual solvents<br>pharmaceutical<br>samples    | Residual solvents determination in pharmaceutical products<br>by GC-HS and Gc-MS-SPME<br><i>J Pharm &amp; Biomedical Analysis</i> 1998, 18(4-5), 623-638<br>Camarasu, C., Mezei, M., Varga, G.                                                                                                                                                              |                                                |       |
| 468  | Residual solvents<br>pharmaceutical<br>samples    | Headspace SPME method optimization for<br>residual solvent analysis<br><i>Acta pharm. Hung.</i> , 1999, 69(2), 77-84<br>Camarasu, C., Mezei, M., Szabo, A                                                                                                                                                                                                   | 65µm DVB/PDMS<br>30 min headspace<br>2gm NaCl, |       |
| 823  | Residual solvents<br>pharmaceutical<br>samples    | Improving GC determination of residual solvents in<br>pharmaceuticals by the combined use of headspace SPME<br>and isotopic delution<br><i>J. Chromatogr A</i> , 915 (2001) 209-216<br>Coran, S., Giannellini, S., Massimo, B., Pinzauti, S.                                                                                                                | 100µm PDMS<br>16min. @ 20°C<br>heaspace        | GC-MS |
| 845  | Degradation product<br>of diphenhydramine-<br>HCl | The use of SPME-GC-MS for the determination of<br>degradation products of volatile and semivolatile compounds<br><i>J Microcolumn Separations</i> (2001) 13(1), 1-7<br>Snow, Nicholas H.; Karaisz, Kenneth                                                                                                                                                  |                                                | GC-MS |
| 1035 |                                                   | New PVC materials for medical applications - The release profile of<br>PVC/polycaprolactone-polycarbonate aged in aqueous environments<br><i>Polym Degradation Stab</i> (2003) 80 (3), 451-458.<br>Hakkarainen, Minna                                                                                                                                       |                                                | GC-MS |
| 1084 |                                                   | Solid-phase microextraction (SPME) in polymer characterization - Long-term<br>properties and quality control of polymeric materials<br><i>Journal of Applied Polymer Science</i> (2003) 89 (3), 867-873.<br>Albertsson, Ann-Christine; Groning, Mikael; Hakkarainen, Minna                                                                                  |                                                | GC-MS |
| 1109 | VOCs in multi-layer<br>packaging.                 | Multiple headspace solid-phase microextraction for the quantitative<br>determination of volatile organic compounds in multilayer packagings<br><i>Journal of Chromatography A</i> (2003) 999 (1-2), 155-164.<br>Ezquerro, Oscar; Pons, Begona; Tena, Maria Teresa                                                                                           | Carboxen/PDMS, DVB/carboxen/PDMS               |       |
| 1176 | Polyamide<br>thermooxidation                      | Headspace solid-phase microextraction with gas chromatography/mass<br>spectrometry reveals a correlation between the degradation product pattern and<br>changes in the mechanical properties during the thermooxidation of in-plant<br>recycled polyamide 6,6<br><i>J. Appl. Polym. Sci</i> (2002) 86(13), 3396-3407<br>Groning, Mikael; Hakkarainen, Minna |                                                | GC-MS |
| 1321 |                                                   | Qualitative and quantitative solid-phase microextraction gas chromatographic-<br>mass spectrometric determination of the low-molecular-mass compounds<br>released from poly(vinyl chloride)/polycaprolactone-polycarbonate during<br>ageing.<br><i>Journal of Chromatography, A</i> (2003) 1010 (1), 9-16.<br>Hakkarainen, M.                               |                                                | GC-MS |
| 2691 | Organics from<br>water                            | <b>Determination of poly(dimethyl)siloxane-water partition coefficients .<br/>for selected hydrophobic organic chemicals using 14C-labeled analogs</b><br><i>J Chromatogr A</i> 1148, #1, 23-30 (2007 Apr 27)<br>Yang, Ze-Yu; Greenstein, Darrin; Zeng, Eddy Y; Maruya, Keith A                                                                             | PDMS fibers<br>immersed                        | GC-MS |
| 1345 |                                                   | Effect of polymer concentration on partitioning and molecular recognition in<br>plasticized poly(vinyl chloride).<br><i>Analytical Chemistry</i> (2003) 75 (16), 4257-4264.<br>Zhang, X.; Zhao, H.; Chen, Z.; Nims, R.; Weber, S. G.*                                                                                                                       |                                                |       |

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| 2159 | Volatiles from polymers                          | <b>Emission of volatiles from polymers - A new approach for understanding polymer degradation</b><br><i>J Polymers Environ.</i> <b>14</b> , #1, 9-13 (2006)<br>Albertsson, Ann-Christine; Groening, Mikael; Hakkarainen, Minna                                                                                                | headspace                     | GC-MS      |
| 1366 |                                                  | Headspace solid-phase microextraction long dash a tool for new insights into the long-term thermo-oxidation mechanism of polyamide 6.6.<br><i>Journal of Chromatography, A</i> (2001) 932(1-2), 1-11.<br>Groening, M.; Hakkarainen, M. *                                                                                      |                               | GC-MS      |
| 1437 | Polymer/additives                                | Direct solid sampling methods for gas chromatographic analysis of polymer/additive formulations<br><i>Polymer Testing</i> (2001) 20(7), 729-740.<br>Bart, J.C.J.                                                                                                                                                              |                               | GC-FTIR-MS |
| 1518 | Residual styrene monomer                         | Analysis of residual styrene monomer and other volatile organic compounds in expanded polystyrene by headspace solid-phase microextraction followed by gas chromatography and gas chromatography/mass spectrometry.<br><i>Journal of Separation Science</i> (2002) 25(8), 539-542<br>Kusch, Peter; Knupp, Gerd                | 75um Carboxen PDMS, headspace | GC-MS      |
| 1302 |                                                  | Headspace solid-phase micro-extraction - gas chromatography - mass spectrometry applied to quality control in multilayer-packaging manufacture.<br><i>Journal of Chromatography, A</i> (2003) 1008 (1), 123-128.<br>Ezquerro, O.; Pons, B.; Tena, M. T.*                                                                      |                               | GC-MS      |
| 1209 | Diethyl sulfide                                  | TiO/sub2/ reactivation in photocatalytic destruction of gaseous diethyl sulfide in a coil reactor<br><i>Applied Catalysis B: Environmental</i> (2003) 44 (1), 25-40.<br>Lion, Claude; Savinov, Evgueni N.; Smirniotis, Panagiotis G.; Vorontsov, Alexandre V.                                                                 |                               |            |
| 1268 | Monocyclic aromatic compounds in heavy fuel oil. | A GC-MS method for analysis of volatile monocyclic aromatic compounds in heavy fuel oil using headspace-solid phase microextraction.<br><i>Chromatographia</i> (2003) 58 (1-2), 115-117.<br>Mangani, G.; Berloni, A.; Maione, M. *                                                                                            |                               |            |
| 1434 | Methylcyclopentadienyl-manganese tricarbonyl     | Determination of methylcyclopentadienyl-manganese tricarbonyl by solid phase microextraction-direct thermal desorption-quartz furnace atomic absorption spectrometry<br><i>Spectrochim Acta Part B At Spectrosc</i> (2001) 56(2), 215-221.<br>Alava-Moreno, Fausto; Bendicho, Carlos; Fragueiro, Maria Sandra; Lavilla, Isela |                               |            |
| 1760 | Organo-silicates from polyurethane               | Thermal stability analysis of organo-silicates, using solid phase microextraction techniques<br><i>Thermochim Acta</i> , 429, #1, 13-18<br>Edwards, G.; Halley, P.; Kerven, G.; Martin, D.                                                                                                                                    | headspace                     | TGA, GC-MS |
| 1761 | Volatiles from polymer pyrolysis                 | Use of SPME to monitor gases resulting from thermal plasma pyrolysis.<br><i>Chromatographia</i> , 60, #1-2, 85-88<br>Cubas, A.; Carasek, E.; Debacher, N. ; de Souza, I.                                                                                                                                                      | headspace                     | GC         |
| 1762 | Volatiles from phenolic polymers                 | Probing the microwave degradation mechanism of phenol-containing polymeric compounds by sample pretreatment and GC-MS analysis<br><i>Analytica Chimica Acta</i> , 526, #2, 121-129<br>Chang, Yu-Cheng; Chu, Tieh-Chi; Ko, Chu-Jung; Ko, Fu                                                                                    | headspace from 20° to 80°C    | GC-MS      |
| 2822 | Thermal byproducts of polypropylene              | <b>Use of the SPME-GC-MS technique to study the thermal degradation of isotactic polypropylene: Effects of temperature and reaction time, and analysis of the reaction mechanism</b><br><i>E-Polymers Jan 30 2008</i><br>Bortoluzzi, J.; Carasek, E.; Cristiano, R.; Gallardo, H.; Soldi, V.                                  | headspace                     | GC-MS      |

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| 1763 Thermal byproducts of polypropylene           | SPME to concentrate volatile products from thermal degradation of polymers<br><i>Polym Degradation Stab</i> , 89, #1, 33-37<br>Bortoluzzi, J.; Carasek, E.; Pinheiro, E.; Soldi, V                                                                                                                | 100µm PDMS,<br>75µm Carboxen                   | GC-MS          |
| <b>2880 Degradation products of polymers</b>       | <b>Comparison of extraction methods for sampling of low molecular compounds in polymers degraded during recycling</b><br><i>Eur Polym J</i> 44, #6, 1583-1593 (June 2008)<br>Karlsson, Sigbritt; Moller, Johanna; Stromberg, Emma                                                                 | <b>headspace</b>                               | <b>GC</b>      |
| 1764 Odours from polypropylene composites          | Emission of possible odourous low molecular weight compounds in recycled biofibre/polypropylene composites monitored by head-space SPME-GC-MS<br><i>Polym Degradation Stab</i> , 90, #3, 555-562<br>De Las Heras, Luis A.; Espert, Ana; Karlsson, Sigbritt                                        | headspace                                      | GC-MS          |
| 1765 Odor removal by Zn ricinoleate                | Development and analytic of odor absorber<br><i>Tenside Surfactants Deterg</i> , 41, #6, 282-286<br>Bohmer, Thomas; Muller, Felix; Peggau, Jorg                                                                                                                                                   | headspace                                      | GC             |
| 1766 Volatiles from polystyrene                    | Headspace-SPME-GC-MS identification of volatile organic compounds released from expanded polystyrene<br><i>J. Polym. Environ.</i> , 12, #2, 83-87<br>Knupp, Gerd; Kusch, Peter                                                                                                                    | 75µm Carboxen<br>headspace                     | GC-MS          |
| 1767 2-cyclopentyl-cyclopentanone in polyamide 6.6 | Correlation between emitted and total amount of 2-cyclopentyl- cyclopentanone in polyamide 6.6 allows rapid assessment by Head Space and HS-SPME . under non-equilibrium conditions<br><i>J. Chromatogr. A</i> , 1052, #1-2, 151-159<br>Groning, Mikael; Hakkarainen, Minna                       | headspace                                      | GC-MS<br>GC-RI |
| <b>2864 Degradation compounds of Polyamide 6</b>   | <b>Identification and migration of degradation compounds from irradiation of multilayer polyamide 6 films for meat foodstuffs and cheese</b><br><i>Anal. Bioanal. Chem.</i> 391, #3, 847-857 (June 2008)<br>Felix, J.S.; Manzoli, J.E.; Monteiro, M.; Nerin, C.; Padula, M.; Pezo, D.; Romero, J. | <b>100µm PDMS<br/>20 min, 80 °C</b>            | <b>GC-MS</b>   |
| 1768 2-cyclopentyl-cyclopentanone in polyamide 6.6 | Multiple headspace SPME of 2-cyclopentyl- cyclopentanone in polyamide 6.6: Possibilities and limitations in the headspace analysis of solid hydrogen-bonding matrices<br><i>J. Chromatogr. A</i> , 1052, #1-2, 61-68<br>Groning, Mikael; Hakkarainen, Minna                                       | headspace                                      | GC-MS          |
| <b>2308 Volatiles from Asphalt release agents</b>  | <b>Chemical characterization of oil-based asphalt release agents and their emissions</b><br><i>Fuel</i> 85 #9, 1232-1241 (2006)<br>Isacsson, Ulf; Tang, Bing                                                                                                                                      | <b>headspace</b>                               | <b>GC/MS</b>   |
| 1769 Hydrocarbons from asphalt                     | Determination of aromatic hydrocarbons in asphalt release agents using headspace SPME-GC-MS<br><i>J Chromatogra, A</i> , 1069, #2, 235-244<br>Isacsson, Ulf; Tang, Bing                                                                                                                           | headspace                                      | GC-MS          |
| <b>Natural Products</b>                            |                                                                                                                                                                                                                                                                                                   |                                                |                |
| 401 Volatiles in tobacco                           | Analysis of Tobacco Volatiles with SPME<br>Dr. W.D. Koller, Federal Research Centre for Nutrition, Institute of Process Engineering, Engesserstr. 20, 76131 Karlsruhe/Deutschland                                                                                                                 | 100µm PDMS<br>10 min<br>headspace              | GC-MS          |
| 402 Pesticides in water/MeOH extract               | A Simple Screening for Pesticide Residues in Tobacco<br>Dr. W.D. Koller, Federal Research Centre for Nutrition, Institute of Process Engineering, Engesserstr. 20, 76131 Karlsruhe/Deutschland                                                                                                    | 100µm PDMS<br>10 min<br>immersion              | GC-MS          |
| 102 Flavor additives in tobacco                    | Qualitative and Quantitative Analysis of Flavor Additives on Tobacco Products Using SPME-GC-MS<br><i>J. Agric. Food Chem.</i> 45: 844-849 (1997)<br>Clark, J., Bunch, J.                                                                                                                          | 65µm Carbowax/DVB<br>95°C, 15 min<br>KCl added | GC-FID         |
| 430 Alkaloids                                      | Determination of Tobacco Alkaloids Using SPME and GC-NPD<br><i>Chromatographia</i> (1998), 47(7/8), 443-448                                                                                                                                                                                       | 100µm PDMS                                     | GC-NPD         |

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|      | in tobacco                                       | Yang, S., Smetena, I.                                                                                                                                                                                                                                                                                                                   | 12 min, immersed                                                      |           |
| 627  | Acetates<br>in cigarette tobacco                 | Quantitative analysis of acetates in cigarette tobacco<br>using SPME-GC-MS<br><i>J. Chromatogr. Sci</i> (2000), 38(4), 137-144<br>Watson, C., Ashley, D.                                                                                                                                                                                | headspace                                                             | GC-MS     |
| 2554 | Volatile Organics<br>found in<br>cigarette smoke | <b>Analysis of volatile organic compounds in mainstream cigarette smoke</b><br><i>ENVIRON. SCI. TECHNOL.</i> 41, #4, 1297-1302 (15 FEB 2007)<br>Polzin, G. M.; Kosa-Maines, R. E.; Ashley, D. L.; Watson, C. H.                                                                                                                         | headspace                                                             | GC-MS     |
| 2434 | Organics found in<br>cigarette smoke             | <b>Identification and determination of mainstream and sidestream<br/>smoke components in different brands and types of cigarettes<br/>by means of SPME-GC-MS</b><br><i>J. Chromatogr. A</i> 1180, #1-2,138-150 (Feb 8 2008)<br>Bartolucci, G.; Furlanetto, S.; Giannini, I.; Moneti, G.; Orlandini, S.;<br>Pieraccini, G.; Pinzauti, S. |                                                                       | GC-MS     |
| 137  | Phenols in<br>cigarette smoke                    | Quantitative Determination of Phenols in Mainstream Smoke<br>with SPME-GC-Selected Ion Monitoring Mass Spectrometry<br><i>J. Chromatogr. Sci.</i> 34: 272-275 (1996)<br>Clark, J., Bunch, J.                                                                                                                                            | 85µm polyacrylate<br>60 min<br>stirring                               | GC-FID    |
| 2863 | Formaldehyde in<br>incense smoke                 | <b>Determination of particulate-bound formaldehyde from burning<br/>incense by solid phase microextraction</b><br><i>Bull. Environ. Contam. Toxicol.</i> 80, #4, 324-328 (April 2008)<br>Chen, C.Y.; Lin, J.M.; Liou, S.W.; Yang, T.T.                                                                                                  | 65µm PDMS/DVB<br>headspace<br>PFBHA derivative                        | GC-ECD    |
| 2652 | Volatiles in<br>incense smoke                    | <b>Characterization of incense smoke by SPME - Comprehensive two-<br/>dimensional (GC x GC)</b><br><i>Atmospheric Env</i> 41, #27, 5756-5768 (SEP 2007)<br>Tran, Tin C.; Marriott, Philip J.                                                                                                                                            | 65µm PDMS/DVB<br>headspace                                            | GC-GC-FID |
| 628  | Azo dyes<br>in leather & textiles                | Study on determination of prohibited azo dyes by SPME<br><i>Fenxi Deshi Xuebao</i> (2000), 19(1), 76-78<br>Xu, H., Tong, H.                                                                                                                                                                                                             | reduced to aromatic<br>amines w/Na2SO4                                | GC-MS     |
|      | Azo dyes<br>in leather & textiles                | Development of a SPME method for detection of the use of<br>banned Azo dyes in coloured textiles and leather<br><i>Rapid Commun.Mass Spectrom.</i> 13, pp1833-1837<br>Cioni, G., Bartolucci, G., Pieraccini, G., Meloni, S., Moneti, G.                                                                                                 |                                                                       |           |
| 916  | Hexachlorobenzene<br>in color additives          | Rapid Quantification of hexachlorbenzene in the color<br>additives D&C Red Nos. 27 & 28 (phloxine B) using SPME GC-MS<br><i>J Chromatogr A</i> (1999) 863(1) 37-46<br>Andrezejewski, D., Weisz, A.                                                                                                                                      | 100µm PDMS<br>25min @ 26°C<br>immersed<br>stirred                     | GC-MS     |
| 210  | Solvents in<br>water-based coatings              | Derivatization Solid-Phase Microextraction Gas<br>Chromatographic Mass Spectrometric Determination of<br>Organic Acids in Tobacco<br><i>J. Chromatogr. Sci.</i> 35 (5): 209-212 (1997)<br>Clark, T., Bunch, J.                                                                                                                          | 65µm Carbowax/DVB<br>5 min<br>headspace<br>stirring<br><br>salt added | GC-FID    |
| 836  | Biproducs from<br>carvone enantiomers            | Screening of biotransformation products of carvone<br>enantiomers by headspace-SPME/GC-MS<br><i>Z. Naturforsch., C: J. Biosci</i> (2001) 56(1/2) 58-64<br>Demirci, F.; Kirimer, N.; Demirci, B.; Noma, Y.; Baser, K                                                                                                                     | headspace                                                             | GC-MS     |
| 72   | Monoterpenes<br>in conifer needles               | Analysis of Monoterpenes from Conifer Needles Using SPME<br><i>J. High Res. Chromatogr.</i> 18: 587-592 (1995)<br>Schafer, B., Hennig, P., Engewald, W.                                                                                                                                                                                 | 100µm PDMS<br>40°C, 5 min<br><br>headspace                            | GC-FID    |
| 399  | Monoterpenes<br>in conifer needles               | Changes in the Flavor of Monoterpenes During Their<br>Autoxidation Under Storage Conditions<br>Dept. of Food Chemistry, Prague Institute of Chemical                                                                                                                                                                                    | 65µm Carbowax/DVB<br>40°C, 10 min                                     | GC-MS     |

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|      |                                                   | Technology, Technicka 5, CZ-16628 Prague 6, Czechia<br>Pokorny, J., Pudil, F., Volfova, J., Valentova, H.                                                                                                                                                                                                                             | headspace                                                      |        |
| 806  | Monoterpenes                                      | SPME for the determination of volatile organics in the<br>foliage of Fraser fir<br>Vereen, D. A.; McCall, J. P.; Butcher, D. J                                                                                                                                                                                                        |                                                                |        |
| 2772 | Volatiles from<br>mushrooms                       | <b>Correlation between the pattern volatiles and the overall aroma of wild<br/>edible mushrooms</b><br><b>J. Agric.Food Chem. 56, #5, 1704-1712 (MAR 12 2008),<br/>De Pinho, P. ; Ribeiro, B.; Goncalves, R.; Baptista, P.; Valenta, P.;<br/>Seabra, Rosa M.; Andrade, Paula B.</b>                                                   | headspace                                                      | GC-MS  |
| 2481 | Volatiles from<br>herbs                           | <b>Headspace SPME, Headspace Solid Phase Dynamic Extraction<br/>(HS-SPDE) and Headspace Sorptive Extraction (HSSE) - comparing<br/>the methods applied to the analysis of volatile components in herbs.<br/>Zeitschrift fur Arznei- &amp; Gewurzpflanzen 12, #3, 147-153 (2007)<br/>Wolff, A. C.; Schellenberg, I.; Bansleben, D.</b> | headspace                                                      | GC-MS  |
| 159  | Terpenoids<br>in herbs                            | Head-Space SPME for the GC-MS Analysis of Terpenoid<br>in Herb-Base Formulations<br>Fresenius' J. Anal. Chem. 356: 80 (1996)<br>Czerwinski, J., Zygmunt, B., Namiensnik, J.                                                                                                                                                           |                                                                | GC-MS  |
| 629  | Terpenoids<br>in plant materials                  | SPME of Volatile Components from Natural Grassland Plants<br>J. Agric.Food Chem. 2001, 49, 203-209<br>Cornu, A., Carnat, A., Martin, B., Coulon, J.,<br>Lamaison, J, Berdague,J                                                                                                                                                       | 100µm PDMS<br>15 min @ 44°C<br>headspace,<br>1 gm in 40mL vial | GC-MSD |
| 848  | Monoterpenes<br>in essential oils                 | Monoterpene biosynthesis in Agathosma crenulata (Buchu)<br>Flavour and Fragrance Journal (2001) 16(2), 123-135<br>Mosandl, Armin; Fuchs, Sabine; Sewenig, Sabine                                                                                                                                                                      |                                                                | GC-MS  |
| 320  | Terpenoids<br>in herbs                            | Head Space SPME for the GC-MS Analysis of Terpenoids in<br>Herb-Based Formulations<br>J. Anal. Chem. 356 (1): 80-83 (1996)<br>Czerwinski, J., Zygmunt, B., Namiesnik, J.                                                                                                                                                              |                                                                | GC-MS  |
| 630  | Monoterpenes<br>in essential oils                 | Examination of the enatameric distribution of certain<br>monoterpene hydrocarbons in selected essential oils by<br>automated SPME-chiral GC -Mass spectrometry.<br>J. Chromatogr. Sci., Mar.2000, 38(3), 95-99<br>Coleman, W., Lawrence, B.                                                                                           | 6 se. headspace                                                | GC-MS  |
| 631  | Monoterpenes &<br>essential oils<br>in peppermint | Monoterpene composition essential oil from peppermint<br>(Mentah x piperita L.) w/regard to Leaf position using<br>SPME and GC-MS Analysis<br><i>J.Agric. Food Chem</i> 1999, 3782-3786                                                                                                                                               | 100um PDMS<br>1 min @ 25°C<br>headspace                        | GC-MS  |
| 632  | Monoterpenes &<br>essential oils<br>in mint plant | Biogenesis study of essential oils by SPME enatio-<br>multidimensional GC-MS (MDGC/MS)<br><i>GIT Lbor-Gachz (2000), 44(4), 358-362</i><br>Fuchs, S., Beck, T., Mosandl, A.                                                                                                                                                            |                                                                | GC-MS  |
| 859  | Review article                                    | Sample preparation for chromatographic analysis<br>of plant material<br><i>J Planar Chromatog- Modern TLC (2000) 13(6) 404-413</i><br>Namiesnik, Jacek; Gorecki, Tadeusz                                                                                                                                                              |                                                                |        |
| 2513 | Trace residue<br>contaminants<br>from food        | <b>Sample preparation techniques for the determination of trace<br/>residues and contaminants in complex matrices</b><br><b>J. CHROMATOGR. A 1153, #1-2, 36-53 (15 JUN 2007)</b><br><b>Ridgway, K.; Lalljie, S. P. D.; Smith, R. M.</b>                                                                                               | review article                                                 |        |
| 863  | Volatiles<br>from seeds                           | Emission of volatile compounds by seeds under<br>different environmental conditions<br><i>American Midland Naturalist (2001) 145(2) 419-422</i>                                                                                                                                                                                       |                                                                | GC-MS  |

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| 633  | Essential oils<br>in quava fruit                                            | Chemical composition of the essential oil and headspace<br>SPME of the quava fruit<br>J. Essent. Oil Res (2000), 12(2), 153-158<br>Paniandy, J., Chane-Ming, J., Pieribattesti, J.                                                                                      | headspace                                | GC-MS               |
| 469  | Essential oils<br>from aromatic plants                                      | Rapid GC with resistance heated capillary columns.<br>Analysis of essential oils from aromatic plants<br>Git Spez. Sep. (1999), 19(1), 40-43<br>Theuerl, T., Kleibohmer, W., Blanke, R.                                                                                 |                                          |                     |
| 2599 | Cuticular<br>hydrocarbons<br>from insects                                   | <b>Investigation of cuticular hydrocarbons from <i>Bagrada hiliaris</i> genders by SPME/GC-MS</b><br><i>Anal Bioanal Chem</i> 389, #4, 1259-1265 (OCT 2007)<br>De Pasquale, C.; Guarino, S.; Peri, E.; Alonzo, G.; Colazza, S.                                          | 85µm polyacrylate<br>headspace           | GC-MS               |
| 2323 | Cuticular<br>hydrocarbons<br>from insects                                   | <b>Perception of cuticular hydrocarbons by the olfactory organs in <i>Periplaneta americana</i> (L.) (Insecta : Dictyoptera)</b><br><i>Journal of Insect Physiology</i> 51 #12, 1384-1389 (2005)<br>Said, Imen; Gaertner, Cyril; Renou, Michel; Rivault, Colette        | headspace                                | GC                  |
| 389  | Cuticular<br>hydrocarbons<br>in <i>Dinoponera</i><br><i>quadricaps</i> ants | Solid Phase Microextraction and Cuticular Hydrocarbon<br>Differences Related to Reproductive Activity in the<br>Queenless Ant<br>J. Chemical Ecology, 24: 473-490, 1998<br>Monnin, T., Malosse, C., Peeters, C.                                                         |                                          | GC-MS               |
| 89   | Pheromones<br>in insects                                                    | Solid Phase Microextraction, an Alternative Method<br>for the Study of Airborne Insect Pheromones<br>( <i>Metamasius hemipterus</i> , Coleoptera, Curculionidae)<br>J. High Res. Chromatogr. 18: 669-670 (1995)<br>Malosse, C., Ramirez-Luca, P., Rochat, D., Morin, J. | 100µm PDMS<br>5 min<br>headspace         | GC-FID              |
| 818  | Pheromones<br>in insects                                                    | Use of SPME in the investigation of chemical<br>communication in social wasps<br><i>J Chromatogr A</i> , 873, (2000), 73-77<br>Slide, M., Moneti, G., Pieraccini, G., Turillazzi, S.                                                                                    | 7µm PDMS<br>10min @ 170C                 | GC-MSD              |
| 2919 | Pheromones<br>in insects                                                    | <b>Identification of the sex pheromone of <i>Sesamia cretica</i> Lederer</b><br><i>Journal of Chemical Ecology</i> 34, #1, 103-106 (JAN 2008)<br>Avand-Faghih, Arman; Frerot, Brigitte                                                                                  |                                          | GC-MS               |
| 434  | Pheromones<br>in insects                                                    | SPME, A New Tool in Pheromone Identification in Lipidoptera<br>J High Resolut. Chromatogr. (1997), 20(6), 340-342<br>Ferot, B., Malosse, C., Cain, A.                                                                                                                   | 7µm PDMS<br>5 min<br><br>rubbed on fiber | GC-FID or<br>GC-FTD |
| 850  | Pheromones<br>in termite trail                                              | (Z)-dodec-3-en-1-ol, a novel termite trail pheromone identified<br>after SPME from <i>Macrotermes annandalei</i> .<br><i>J Insect Physiology</i> (2001) 47(4-5) 445-453<br>Bordereau, C; Bonnard, O; Ginies, C; Lettère, M; Peppuy, A;<br>Robert, A; Semon, E           |                                          | GC-MS               |
| 2819 | Pheromones<br>of male beetles                                               | <b>Ethyl 4-methyl heptanoate: A male-produced pheromone of <i>Nicrophorus vespilloides</i></b><br><i>Journal of Chemical Ecology</i> 34, #1, 94-98 (Jan 2008)<br>Haberer, Wolf; Schmitt, T.; Peschke, K.; Schreier, P.; Mueller, J.                                     | headspace                                |                     |
| 2813 | Pheromones<br>tenebrionid<br>beetles                                        | <b>1-Tridecene - male-produced sex pheromone of the tenebrionid beetle <i>Parastizopus transgaripepinus</i></b><br><i>Naturwissenschaften</i> 95, #3 247-251 (MAR 2008)<br>Geiselhardt, Sven; Ockenfels, Peter; Peschke, Klaus                                          | 100µm PDMS<br>headspace                  | GC-MS               |
| 2723 | Pheromones<br><i>Harmonia axyridis</i><br>beetles                           | <b>Determination of characteristic odorants from <i>Harmonia axyridis</i> beetles using in vivo solid-phase microextraction and multidimensional gas chromatography-mass spectrometry-olfactometry</b><br><i>J Chromatogr A</i> , 1147, #1, 66-78, 73-77 (2007),        | headspace                                | GC-MS               |



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| 2406 | Pheromones of red flour beetles                            | <b>Detection of <i>Tribolium castaneum</i> (Herbst) volatile defensive secretions by SPME-capillary gas chromatography (SPME-CGC).</b><br><i>J Stored Products Research</i> 43, #4, 540-545 (2007)<br>Villaverde, M. L.; Juarez, M. P.; Mijailovsky, S.                                                            | 75µm Carboxen headspace<br>15-min                                  | GC-MS |
| 634  | Pheromones of Rhinoceros beetles                           | Role of SPME in the identification of highly volatile Pheromones of two Rhinoceros beetles <i>Scapanes australis</i> and <i>Strategus aloeus</i> (Coleoptera, Scarabaeidae, Dynastinae)<br><i>J Chromatogr. A</i> , 885 (2000) 433-444, Rochat, D,<br><br>Ramirez-Lucas,P., Malosse,C., Aldana,R. Kakul,T. Morin,J | Carboxen/PDMS<br>30 min<br>immersion<br>NaCl, borax buffer (pH9.2) | GC-MS |
| 2262 | Pheromones from fire ant                                   | <b>Preparation for the analysis of fire ant trail pheromones using SPME-gas chromatography/mass spectrometry.</b><br><i>Abstracts of Papers Am Chem Society</i> 229 #1, U131 (2005)<br>Smith, Suncerae I.; Mazitelli, Carolyn; Brodbelt, Jennifer S.                                                               |                                                                    | GC/MS |
| 945  | Insecticides                                               | Measurement of Insecticide Uptake and Effective Fraction in a Beneficial Insect Using SPME<br><i>Anal. Chem</i> (2001) 73(13), 3107-3111<br>Alix, A.; Collot, D.; Nenon, J.; Anger, J.                                                                                                                             |                                                                    |       |
| 635  | Volatiles in insecticide                                   | The measurement of volatile compounds in Foray 48B, an insecticide prepared from <i>Bacillus thuringiensis</i> var. <i>kurstaki</i><br><i>Sci. Total Env.</i> , (2000) Vol. 263, No. 1-3, 155-160<br>van Netten, C., Bartlett, K., Chow, Y., Leung, V., Teschke, K.                                                |                                                                    |       |
| 120  | NH <sub>3</sub> , putrescine, methylamine in lure cultures | Solid Phase Microextraction Analysis of Static-Air Emissions of Ammonia, Methylamine, and Putrescine from a Lure for the Mexican Fruit Fly<br><i>J. Agric. Food Chem.</i> 44: 3554-3559 (1996)<br>Robacker, D., Bartelt, R.                                                                                        | 100µm PDMS<br>10 min<br>headspace                                  | FID   |
| 825  | Fly Pheromones in insects                                  | SPME-GC-direct deposition infrared spectrometry as a convenient method for the determination of volatile compounds from living organisms<br><i>J. Chromatogr. A</i> 819 (1998) 45-50<br>Auger, J., Rousset, S., Thibourt, E., Jaillais, B.                                                                         | 100µm PDMS<br>1min.                                                | GC-MS |
| 937  | Chemical attractants from cyanobacterial mats.             | The use of (SPME) devices in analysis for potential mosquito oviposition attractant chemicals from cyanobacterial mats.<br><i>Aquatic Ecology</i> (2000), 34(4), 413-420<br>Rejmankova, E.; Lege, M.; Andre, R.; Higashi, .; Roberts, D.                                                                           |                                                                    | GC-MS |
| 398  | Chemical attractants in soy broth culture                  | Chemicals Attractive to Mexican Fruit Fly from <i>Klebsiella pneumonia</i> and <i>Citrobacter freundii</i> Cultures Sampled by SPME<br><i>J. Chemical Ecology</i> , Vol. 23, No., 12, 1997, 2897-2915<br>Robacker, D., Bartelt, R.                                                                                 | 100µm PDMS<br>27°C, 30 min<br>headspace                            | GC-MS |
| 470  | Pheromones                                                 | Pheromone analysis using capillary GC techniques<br><i>J. Chromatogr.</i> , A 1999, 843(1+2), 199-236<br>Jones, G., Oldham, N.                                                                                                                                                                                     | review of use of SPME                                              | GC    |
| 124  | Pheromones in insects                                      | Solid Phase Microextraction Technique Used for Collecting Semiochemicals, Identification of Volatiles Released by Individual Signaling <i>Phylionorycter sylvella</i> Moths<br><i>Z. Naturforsch. C: Biosci.</i> 51: 599 (1996)<br>Karlson-Borg, A., Mozuitis, R.                                                  | 100µm PDMS<br>1-3 hr<br>headspace                                  | GC-MS |
| 2484 | Pheromones in honey bees                                   | <b>The scent of the waggle dance</b><br><i>PLoS Biology</i> 5, #9, 1862-1867 (SEP 2007)<br>Thom, Corinna; Gilley, David C.; Hooper, Judith; Esch, Harald E.                                                                                                                                                        | headspace                                                          | GC/MS |
| 2332 | Pheromones African elephant                                | Use of SDS page, SPME, and GC-MS for chemical analysis of temporal gland secretions from African elephants.<br><i>Abstracts of Papers Am Chem Society</i> (2004) 227 Part1, U443<br>Freyaldenhoven, D.; Kopper, R.; Goodwin, T.; Lichti, C.; Rasmussen, L.                                                         |                                                                    | GC/MS |

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| 2333 | Urine from African elephant             | Chemical analysis of urine from male african elephants by SDS PAGE, SPME, and GC-MS.<br><i>Abstracts of Papers Am Chem Society (2004) 227 Part1, U425</i><br>Carver, A.; Davis, B.; Kopper, R.; Goodwin, T.; Lichti, C.; Rasmussen, L.; Hollister-Smith, Julie; Alberts, S.                                                                           |                                                                    | GC/MS                    |
| 410  | Pheromones in elephant urine            | Purification, Identification, Concentration and Bioactivity of (Z)-7-dodecen-1-yl acetate: Sex Pheromone of the Female Asian Elephant, <i>Elephas maximus</i><br>Chem. Senses 22: 417-437<br>Rasmussen, L.E.L., Lee, T.D., Zhang, A., Roelofs, W.L., and Daves Jr., G.D.                                                                              |                                                                    | GC-MS                    |
| 773  | Fungal volatiles                        | Application of SPME for the determination of fungal volatile metabolites<br><i>Prog. Biotechnol (2000) 17, 369-377</i><br>Jelen, H.; Wasowicz, E                                                                                                                                                                                                      |                                                                    |                          |
| 394  | Free fatty acids in exocrine secretions | Sampling Techniques for GC-MS Analysis of Long-Chain Free Fatty Acids from Insect Exocrine Glands<br>J. Chromatogr. A 816 (1998) 169-175<br>Maile, R., Dani, F., Jones, G., Morgan, D., Orthius, D.                                                                                                                                                   | 100µm PDMS,<br><br>65µm Carbowax/DVB<br>140°C, 30 min<br>headspace | GC-MS                    |
| 382  | Volatile attractants in cultures        | Attractants from <i>Stryphlococcus aureus</i> Cultures from Mexican Fruit Fly, <i>Anastrepha ludens</i><br>J. Chemical Ecology, Vol. 21, No. 11, 1861-1874 (1995)<br>Robacker, D., Flath, R.                                                                                                                                                          | 100µm PDMS<br>5 min - 24 hr<br>headspace                           | GC-MS                    |
| 471  | Volatile attractants in bracket fungi   | Volatiles of bracket fungi <i>Fomitopsis pinicola</i> and <i>Fomes fomentarius</i> and their functions as insect attractants<br>J. Chem. Ecol. (1999), 25(3), 567-590<br>Faldt, J., Jonsell, M., Norlander, G., Borg-Karlson, A.                                                                                                                      |                                                                    | GC-MS                    |
| 584  | Alcoholols, aldehydes in air            | Volatiles from <i>Fusarium verticillioides</i> (Sacc.) Nirenb. and their attractiveness to Nitidulid beetles.<br>J-Agric-Food-Chem. Jun 1999; 47(6): 2447-2454<br>Bartelt, -RJ; Wicklow, -DT                                                                                                                                                          | 100µm PDMS<br>30 min                                               | GC-FID/MS                |
| 472  | Volatile attractants from apples        | Identification of a new blend of apple volatiles attractive to the apple maggot, <i>Rhagoletis pomonella</i><br>J. Chem. Ecol., 1999, 25(6), 1221-1232<br>Zhang, A., Linn, C., Wright, S., Prokopy, R. Reissig, W., Roelogs, W.                                                                                                                       |                                                                    | GC-FID                   |
| 889  | Volatile attractants from apples        | Volatiles from apple ( <i>Malus domestica</i> ) eliciting antennal responses in female codling moth <i>Cydia pomonella</i> (L.) (Lepidoptera: Tortricidae): Effect of plant injury and s sampling technique<br><i>Zeitschrift fuer Naturforschung Sec C (2001) 56(3-4) 262-268</i><br>Backman, A; Bengtsson, M; Karlsson, A; Liblikas, I; Witzgall, P |                                                                    | GC-Electro-antennography |
| 636  | Pyrazine in Must                        | Headspace SPME method for determining 3-akyl-2 methoxy-pyrazine in musts by PDMS fibers<br><i>J Chromatogr. Sci (2000), 880(1+2), 93-99</i><br>Sala, C., Mestres, M, Marit, M., Busto, O., Guasch, J.                                                                                                                                                 | 100µm PDMS/DVB<br>4 hr. @30°C<br>headspace<br>NaCl added           | GC-NPD                   |
| 892  | Pesticides in must & wine               | Development of a SPME-GC-ECD methodology for selected pesticides in must and wine samples<br><i>Fresenius' J Anal Chem) 369(7-8) 647-651</i><br>Alves, A; Correia, M; Delerue-Matos, C                                                                                                                                                                |                                                                    | GC-ECD                   |
| 211  | Musk compounds in cosmetic products     | Headspace SPME and Gas Chromatography with Atomic-Emission Detection<br><i>Chromatographia 45: 138-144 (1997)</i><br>Struppe, C., Schaefer, B., Engewald, W.                                                                                                                                                                                          | 100µm PDMS<br>80°C, 30 min<br>headspace                            | GC-AED                   |
| 835  | Volaities from                          | SPME-GC-MS analyses of hazelnut creams<br><i>Lab. 2000 (2000) 14(7), 86-88</i>                                                                                                                                                                                                                                                                        |                                                                    | GC-MS                    |

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|      | hazelnut creams                            | Saba, A.; Cuzzola, A.; Raffaelli, A.; Salvadori, P.                                                                                                                                                                                                                                                     |                                             |       |
| 821  | Fragrances on skin                         | A novel technology to study the emission of fragrance from the skin<br><i>Perfumer &amp; Flavorist</i> , vol. 23 (1998) 1-11<br>Mookherjee, B., Patel, S., Trenkle, R., Wilson, R.                                                                                                                      | 100µm PDMS<br>30-60min<br>headspace         | GC-MS |
| 637  | Volatiles in Gardenia flower               | Analysis of headspace constituents of Gardenia flower by GC-MS with SPME and dynamic headspace sampling<br><i>Sepu</i> , (2000-09) 18(5) 425-455<br>Liu, B., Gao, Y.                                                                                                                                    | 100µm PDMS<br>60 min @ 28°C<br>headspace    | GC-MS |
| 2811 | Volatiles in flower                        | <b>Composition of the volatiles from flowers of <i>Bystropogon moderensis</i> Webb by SPME</b><br><i>Planta Medica</i> 73, #9, 949-950 (AUG 2007)<br>Castilho, P. C.                                                                                                                                    |                                             |       |
| 2568 | Fragrance in <i>Syringa oblata</i> flowers | Analysis of volatile compounds emitted from fresh <i>Syringa oblata</i> flowers in different florescence by headspace SPME-GC-MS<br><i>Anal. Chim. Acta</i> 576, #1, 43-49 (2006-08-18)<br>Li, Z. G.; Lee, M. R.; Shen, D. L.                                                                           | 65µm PDMS/DVB<br>headspace<br>30 min @ 25°C | GC-MS |
| 882  | Fragrance in Lavender flowers              | On-site field sampling and analysis of fragrance from living Lavender ( <i>Lavandula angustifolia</i> L.) flowers by SPME coupled to GC and io-trap mass spectrometry<br><i>J. chromatogr. A</i> 917(2001) 245-250<br>An, M., Haig, T., Hatfield, P.                                                    | 100µm PDMS<br>10 min @ 28°C<br>headspace    | GC-MS |
| 2555 | Furfural in Air                            | Diffusive sampling of airborne furfural by SPME device with on-fiber derivatization<br><i>J. Chromatogr.</i> , A 1129, #1, 29-33 (2006-09-29)<br>Tsai, S. W.; Kao, K. Y.                                                                                                                                | 65µm PDMS/DVB<br>25°C<br>PFBHA derivative   | GC-MS |
| 2469 | Aroma volatiles from treacle               | Application of headspace-SPME-HPLC for the analysis of the aroma Volatile components of treacle and determination of its content of 5-hydroxymethylfurfural (HMF).<br><i>Food Chemistry</i> 104, #3, 1310-1314 (2007)<br>Edris, A. E.; Murkovic, M.; Siegmund, B.                                       | headspace                                   | HPLC  |
| 2428 | Fragrance in flowers                       | Isolation and characterization of the volatile aroma compounds from the concrete headspace and the absolute of <i>Jasminum sambac</i> (L.) Ait. (Oleaceae) flowers grown in Egypt<br><i>Eur. Food Res. Technol.</i> 226, #3, 621-626 (January 2008)<br>Chizola, Remigus; Edris, Amr E.; Franz, Chlodwig | 100µm PDMS<br>headspace                     | GC-MS |
| 125  | Fragrance in flowers                       | IFF Announces New Method for Living Flower Analysis<br>Spray Technology & Marketing Oct. 1996, pp 26-30<br>Anon                                                                                                                                                                                         | 75µm Carboxen/PDMS<br>headspace             | GC-MS |
| 126  | Fragrance in flowers                       | Flavors of Heliotrope Flowers, Analyzed by SPME Method<br>Gakkaishi 2: 6 (1995)<br>Nippon, Shokuhin Kagaku                                                                                                                                                                                              |                                             | GC-MS |
| 2365 | Aroma compounds in durian pulp             | <b>The study of the aroma profile characteristics of durian pulp during storage by the combination sampling method coupled with GC-MS.</b><br><i>Flavour and Fragrance J.</i> 22, #1, 71-77 (2007)<br>Zhang ZhuoMin; Zeng DanDan; Li GongKe                                                             | headspace                                   | GC-MS |
| 874  | Aroma compounds in pulp                    | Analysis of the aroma compounds of the pulp of <i>Borassus aethiopum</i> L. (Palmeaceae) from Cameroon using GC-MS, SPME-GC-MS and olfactometry<br><i>Ernaehung (Vienna)</i> 24(2000) 159-161<br>Jirovetz, L., Buchbauer, G., Ngassoum, M.                                                              |                                             | GC-MS |
| 2796 | Volatiles from vegetables                  | Headspace sampling of the volatile fraction of vegetable matrices<br><i>J. Chromatogr. A</i> 1184, #1-2, 220-233 (MAR 14 2008)<br>Bicchi, C.; Cordero, C.; Liberto, E.; Sgorbini, B.; Rubiolo, P.                                                                                                       |                                             |       |

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| 746  | Volatiles from plants                           | Influence of fiber coating in headspace SPME-GC analysis of aromatic and medicinal plants<br><i>J.Chromatogr. A (2000) 892, 469-485</i><br>Bicchi, C., Drigo, S., Rubiolo, P.                                                                                                                                     | Carboxen/DVB/PDMS<br>1hr, headspace                   | GC-FID |
| 2828 | Organochlorine pesticides in mud samples        | <b>Application of microwave-assisted micellar extraction combined with SPME-HPLC with UV detection for the determination of organochlorine pesticides in different mud samples</b><br><i>Int. J. Environ. Anal. Chem.88, #3, 185-197 (March 2008)</i><br>Santana-Rodriguez, Jose Juan; Sosa, Zoraida; Vega, Daura | 65µm DVB/PDMS                                         | LC-UV  |
| 2373 | Organochlorine pesticides in seaweed            | <b>SPME and SPE comparative study for coupling with microwave-assisted micellar extraction in the analysis of organochlorine pesticides residues in seaweed samples</b><br><i>Microchemical Journal 87, #2, 139-146 (DEC 2007)</i><br>Moreno, Daura Vega; Ferrera, Zoraida Sosa; Rodiriguez, Jose                 |                                                       | LC-PAD |
| 792  | Pesticides in medicinal plants                  | SPME associated with microwave assisted extraction of organochlorine pesticides in medicinal plants<br><i>Anal. Chim. Acta (2001) 428(1), 111-120</i><br>Ho, W.-H.; Hsieh, S.-J                                                                                                                                   | PDMS<br>90min,                                        | GC-ECD |
|      |                                                 | Evaluating Peats for their capacities to remove                                                                                                                                                                                                                                                                   |                                                       |        |
| 465  | C2-C10 Acid, phenols, aldehydes in swine manure | odorous compounds from liquid swine manure using headspace SPME<br><i>J. Environ. Sci.Health, B34(4), 709-748 (1999)</i><br>Rizzuti, A., Cohen, A., Hunt, P., Vanotti, M.                                                                                                                                         | 85µm Polyacrylate<br>20 min @ 72°C<br>headspace, pH 2 | GC-MS  |
| 127  | Cinnamon                                        | Classification of the Botanical Origin of Cinnamon by SPME-GC<br><i>Chromatographia 42: 2187 (1996)</i><br>Miller, K., Poole, C., Pawlowski, T.                                                                                                                                                                   |                                                       |        |
| 321  | Epicuticular hydrocarbons in insect culture     | SPME of Insect Epicuticular Hydrocarbons for GC-MS Analysis<br><i>Rapid Commun. Mass Spectrom. 11 (8): 857-862 (1997)</i><br>Moneti, G., Dani, F., Pieraccini, G., Turillazzi, S.                                                                                                                                 |                                                       | GC-MS  |
| 2252 | Antimicrobial activitie of essential oils       | <b>Solid- and vapor-phase antimicrobial activities of six essential oils: Susceptibility of selected foodborne bacterial and fungal strains</b><br><i>J Ag Food Chem, 53, #17, 6939-6946 (2005)</i><br>Lopez, P.; Sanchez, C.; Batlle, R.; Nerin, C.                                                              | headspace                                             | GC/MS  |
| 2217 | Volatile organics in bacteria                   | <b>Determination of microbial volatile organic compounds from Staphylococcus pasteurii against Tuber borchii using SPME-GC-MS</b><br><i>Rapid Communications Mass Spectrometry 19 #22, 3411-3415 (2005)</i><br>Barbieri, E.; Gioacchini, A. M.; Zambonelli, A.; Bertini, L.; Stocchi, V.                          |                                                       | GC-MS  |
| 2372 | poly(3-hydroxy -butyrate) in microbial cells    | <b>Use of headspace solid-phase microextraction for the quantification of poly(3-hydroxybutyrate) in microbial cells</b><br><i>J. Chromatogr., A 1154, #1-2, 34-41 (2007-06-22)</i><br>Monteil-Rivera, F.; Betancourt, A.; van Tra, H.; Yezza, A.; Hawari, J                                                      | headspace                                             | GC-FID |
| 811  | Volatile hydrocarbon from bacterial growth      | Development of a method for the application of SPME to monitor biodegradation of volatile hydrocarbons during bacterial growth on crude oil<br><i>J Indus Microb &amp; Biotech (2000) 25(3), 155-162</i><br>Van Hamme, J. D.; Ward, O                                                                             | 45min @ 30°C<br>headspace                             | GC-FID |
| 1054 | Volatile compounds from Eucalyptus.             | Solid-phase microextraction of volatile compounds from the chopped leaves of three species of Eucalyptus.<br><i>Journal of Agricultural and Food Chemistry (2003) 51 (9), 2679-2686.</i><br>Pawliszyn, Janusz; Caramao, Elina B.; Christensen, Eva; Zanin, Kelen D.; Zini, Claudia A.                             |                                                       |        |
| 1082 | Aromas and fragrances                           | Sampling and sample preparation for analysis of aromas and fragrances.<br><i>Trends in Analytical Chemistry (2003) 22 (3), 160-169.</i><br>Augusto, Fabio; Leite e Lopes, Alexandre; Zini, Claudia Alcaraz                                                                                                        |                                                       |        |

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| 2169 | Selenium, mercury in plants            | Localization and speciation of selenium and mercury in Brassica juncea - Implications for Se-Hg antagonism<br><i>J Anal At Spectrom</i> 21, #4, 404-412 (2006)<br>Caruso, J.; Meija, J.; Mounicou, S.; Shah, M.; Shann, J.; Vonderheide, A.                                                                                                                                                                                                    | headspace                  | GC-ICP-MS<br>GC-TOFMS |
| 1092 | Selenium and sulfur from plants.       | Simultaneous monitoring of volatile selenium and sulfur species from Se accumulating plants (wild type and genetically modified) by gas chromatography mass spectrometry and gas chromatography-inductively coupled plasma mass spectrometry using solid-phase microextraction for sample introduction.<br><br><i>Analytical Chemistry</i> (2002) 74 (22), 5837-5844.<br>Meija, J.; Montes-Bayon, M.; Le Duc, D. L.; Terry, N.; Caruso, J. A.* |                            | GC-ICP MS             |
| 1120 | Volatiles from flowers                 | Use of solid-phase micro-extraction as a sampling technique in the determination of volatiles emitted by flowers, isolated flower parts and pollen<br><br><i>Journal of Chromatography A</i> (2003) 1000 (1-2), 229-233.<br>Cioni, Pier Luigi; Flamini, Guido; Morelli, Ivano                                                                                                                                                                  |                            |                       |
| 2598 | Volatile organics from Jasminum leaves | Enantiomeric purity of (+/-)-methyl jasmonate in fresh leaf samples and commercial fragrances<br><i>J. Sep. Sci.</i> 30, #13, 2117-2122 (August 2007)<br>Blanch, Gracia P.; Ruiz del Castillo, Maria Luisa                                                                                                                                                                                                                                     | headspace                  | GC/MS.                |
| 2220 | Volatiles from califonica leaf         | Composition and antimicrobial activity of Anemopsis californica leaf oil<br><i>J Ag Food Chem</i> , 53, #22, 8694-8698 (2005)<br>Medina, A.; Lucero, M.; Holguin, F.; Estell, R.; Posakony, J.; Simon, J.; O'Connell, M                                                                                                                                                                                                                        |                            | GC                    |
| 2228 | Volatile organics in dalea formosa oil | The composition of dalea formosa oil determined by steam distillation and SPME<br><i>J. Essent. Oil Res.</i> 17 #6, 645-647 (2005)<br>Estell, Rick E.; Lucero, Mary E.; Sedillo, Ruth L.                                                                                                                                                                                                                                                       | 100um PDMS                 | GC-FID and GC/MS.     |
| 1121 | Methyl jasmonate                       | Identification and quantification of methyl jasmonate in leaf volatiles of Arabidopsis thaliana using solid-phase microextraction in combination with gas chromatography and mass spectrometry.<br><i>Phytochemical Analysis</i> (2003) 14 (3), 155-159.<br>Dubery, Ian A.; Meyer, Riaan; Rautenbach, George F.                                                                                                                                |                            | GC-MS                 |
| 1139 | Sulcatol from beetles                  | Identification of sulcatol, a potential pheromone of the ambrosia beetle Gnathotrichus materiarius (Col., Scolytidae).<br><i>Journal of Applied Entomology</i> (2003) 127 (4), 189-194.<br>Flechtmann, C. A. H.; Berisford, C. W.                                                                                                                                                                                                              |                            |                       |
| 1165 | Mercury and tin                        | Elevated lead levels: A possible factor behind the forest die back of Montane forests in Sri Lanka?<br><i>Journal De Physique. IV : JP</i> (2003) 107 (II), 1439.<br>Dissanayake, C.B.; Ranasinghe, P.N.                                                                                                                                                                                                                                       | PDMS                       | GC-MIP/AES            |
| 2902 | Methanol from biodiesel                | Determination of methanol in biodiesel by headspace SPME<br><i>Bioresour. Technol.</i> 99, #13, 5901-5905 (September 2008)<br>Alley, E.; Armbrust, K.; French, W.; Hernandez, R.; Paraschivescu, M.                                                                                                                                                                                                                                            | 75µm Carboxen<br>headspace | GC-FID                |
| 1170 | Ethanol from wood pulp                 | Determination of methanol released from wood and mechanical pulp by headspace solid-phase microextraction<br><i>J Pulp Pap Sci</i> (2002) 28(6), 199-203<br>Eckerman, C.; Holmbom, B.; Pranovich, A.V.                                                                                                                                                                                                                                         |                            |                       |
| 2377 | Chlorophenols in wood samples          | Focused microwave-assisted micellar extraction combined with SPME-GC-MS to determine chlorophenols in wood samples<br><i>Anal. Chim. Acta</i> 582, #1, 10-18 (2007-01-16)<br>Pino, V.; Ayala, J. H.; Gonzalez, V.; Afonso, A. M.                                                                                                                                                                                                               |                            | GC-MS                 |
| 2504 | Pentachlorophenol 2,4-dichlorophenol   | Removal of 2,4-dichlorophenol and pentachlorophenol from waters by sorption using coal fly ash from a Portuguese thermal power plant<br><i>J Hazardous Materials</i> 143, #1-2, 535-540 (MAY 8 2007)                                                                                                                                                                                                                                           |                            | GC-ECD                |

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|      | in water                                         | Estevinho, B.; Martins, Isabel; Ratola, Nuno; Alves, Arminda; Santos, L.                                                                                                                                                                                                                                                                              |                          |        |
| 2264 | Pentachlorophenol in paper samples               | Development of a SPME method for direct determination of pentachlorophenol in paper and board samples: Comparison with conventional extraction method<br><i>J. Chromatogr. A</i> , 1095 #1-2, 8-15 (2005)<br>Domeno, C.; Munizza, G.; Nerin, C.                                                                                                       | PDMS & PA                | GC-ECD |
| 2661 | Pentachlorophenol in plasma                      | Development of a SPME-GC-MS method for the determination of pentachlorophenol in human plasma using experimental design.<br><i>Chemosphere</i> 70, #2, 256-62 (2007 Dec)<br>Zhou, Ying; Jiang, Qingwu; Peng, Qian; Xuan, Dongliang; Qu, Weidong                                                                                                       | headspace<br>acetylation | GC-MS  |
| 2604 | Volatiles from tatami mats                       | The composition of volatiles from tatami mats containing hinoki ( <i>Chamaecyparis obtusa</i> ) wood-wool and its decline over the long term<br><i>J. Wood Sci.</i> 53, #6, 529-532 (December 2007)<br>Hiramatsu, Y.; Imai, Y.; Matsui, N.; Miyazaki, Y.; Ohira, T.                                                                                   | headspace                | GC     |
| 1171 | Volatiles in wood                                | On-line wood species sensor<br><i>Process Control News Pulp Paper Industry</i> (2002) 22(1), 10-11<br>Fuhr, B.; Henry, D.; Sedgwick, G.; Smith, G.; Woolley, J.                                                                                                                                                                                       |                          | GC     |
| 1173 |                                                  | Reevaluation of the chemical secretion of the sternal glands of Polistes social wasps (Hymenoptera Vespidae).<br><i>Ethology Ecology &amp; Evolution</i> (2003) 15 (1), 73-82.<br>Dani, F. R.; Jones, G. R.; Morgan, E. D.; Turillazzi, S.                                                                                                            |                          |        |
| 1181 |                                                  | Characterization of Citrus unshiu ( <i>C. unshiu</i> Marcov. forma Miyagawa-wase ) blossom aroma by solid-phase microextraction in conjunction with an electronic nose.<br><i>Journal of Agricultural and Food Chemistry</i> (2003) 51 (2), 418-423.<br>Choi, H. S.                                                                                   |                          | GC-MS  |
| 1183 | VOCs in herbal drug preparations                 | Chemical composition of some traditional herbal drug preparations: Essential oil and aromatic water of costmary ( <i>Balsamita suaveolens</i> Pers.).<br><i>Journal of Agricultural and Food Chemistry</i> (2001) 49(12), 5907-5910<br>Gallori, Sandra; Bilia, Anna Rita; Flamini, Guido; Landini, Andrea; Morelli, Ivano; Vincieri, Franco Francesco |                          | GC-MS  |
| 2920 | Floral aroma from lilac blossoms                 | Rapid determination of floral aroma compounds of lilac blossom by fast GC combined with surface acoustic wave sensor<br><i>Journal of Chromatography A</i> (Mar 7 2008) 1183(1-2), 170-178<br>Oh, Se Yeon; Du Shin, Hyun; Kim, Sung Jean; Hong, Jongki                                                                                                | headspace                | GC-MS  |
| 1195 | Floral scent                                     | SPME - A valuable tool for investigation of flower scent<br><i>Journal of Separation Science</i> (2003) 26 (8), 715-721.<br>Bartak, Petr; Bednar, Petr; Cap, Lubomir; Ondrakova, Lenka; Stransky, Z.                                                                                                                                                  | Carboxen/PDMS            | GC-MS  |
| 1204 | Catnip aroma.                                    | Sensory and instrumental evaluation of catnip ( <i>Nepeta cataria</i> L.) aroma.<br><i>Journal of Agricultural and Food Chemistry</i> (2003) 51 (13), 3840-3848.<br>Venskutonis, Rimantas P.; Baranauskiene, Renata; Demyttenaere, Jan C. R.                                                                                                          |                          |        |
| 1239 | Alpha pinene, ocimene.                           | Analysis of volatile components of <i>Chrysanthemum coronarium</i> L. by gas chromatography-mass spectrometry with solid-phase microextraction.<br><i>Fenxi Ceshi Xuebao</i> (2003) 22 (3), 87-89.<br>Weng, X. X.; Deng, C. H.; Song, G. X.; Hu, Y. M.; Zheng, X. H.                                                                                  |                          | GC-MS  |
| 1276 | Volatile compounds in Brazilian aromatic plants. | Application of headspace solid-phase microextraction and gas chromatography to the screening of volatile compounds from some Brazilian aromatic plants.<br><i>Chromatographia</i> (2003) 57 (5-6), 351-356.                                                                                                                                           | 100 um PDMS              | GC-MS  |

Volatile compound analysis of ageing *Pinus sylvestris* L. (Scots pine) seeds.

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| 1318 | Volatile compounds from Scots pine seeds. | <i>Flavour and Fragrance Journal</i> (2003) 18 (4), 290-295.<br>Tammela, P.; Hiltunen, R.; Hopia, A.; Laakso, I.; Nygren, M.; Vuorela, H.                                                                                                                                                   |                                              | GC-MS  |
| 1324 | VOC's in coniferous needle litter.        | HS-SPME analysis of volatile organic compounds of coniferous needle litter<br><i>Atmospheric Environment</i> (2003) 37 (33), 4645-4650.<br>Isidorov, V.A.; Rafalowski, K.; Vinogorova, V.T.                                                                                                 |                                              | GC-MS  |
| 1327 | Volatiles in tobacco                      | Optimization of headspace sampling using solid-phase microextraction for volatile components in tobacco.<br><i>Journal of Chromatography A</i> (2002) 942(1-2), 33-39<br>Yang, S. S.; Huang, C. B.; Smetena, I.                                                                             |                                              |        |
| 1352 | Volatiles in <i>Michelia alba</i>         | Rapid determination of volatile constituents of <i>Michelia alba</i> flowers by gas chromatography-mass spectrometry with solid-phase microextraction<br><i>Journal of Chromatography A</i> (2002) 942(1-2), 283-288<br>Hu, Yaoming; Deng, Chunhui; Hu, Keji; Shang, Chunqing               | 100um PDMS, 25 degrees C, 4 hours, headspace | GC-MS  |
| 1379 | Biogenic VOC's                            | Monitoring biogenic volatile compounds (BVOC) emitted by <i>Eucalyptus citriodora</i> using SPME<br><i>Analytical Chemistry</i> (2001) 73(19), 4729-4735.<br>Alcaraz Zini, C.; Augusto, F.; Christensen, E.; Smith, B. P.; Caramao, E. B.; Pawliszyn, J. *                                  | PDMS/DVB                                     | GC     |
| 1398 |                                           | Volatiles from potential hosts of <i>Rhopalicus tutela</i> a bark beetle parasitoid.<br><i>Journal of Chemical Ecology</i> (2001) 27(11), 2219-2231.<br>Pettersson, Eva M<br>Species specificity of trail pheromones of fungus-growing termites from northern Vietnam.                      | Carbowax/DVB                                 | GC-MS  |
| 1404 | Pheromones in termites                    | <i>Insectes Sociaux</i> (2001) 48(3), 245-250.<br>Bordereau, C.; Bonnard, O.; Peppuy, A.; Robert, A.; Semon, E.; Son, Ngo Truong                                                                                                                                                            |                                              | GC-MS  |
| 1455 | Terpenoids in olibanum                    | Optimization of headspace solid phase microextraction for gas chromatography/mass spectrometry analysis of widely different volatility and polarity terpenoids in olibanum.<br><i>Journal of Chromatography A</i> (2003) 1018(1), 73-78<br>Hamm, S.; Lesellier, E.; Bleton, J.; Tchapla, A. | Various fibers compared                      | GC-MS  |
| 1458 | Terpenes in black currant                 | Influence of stage of ripeness on the enantiomeric distribution of chiral terpenes in blackcurrant fruits ( <i>Ribes nigrum</i> L.).<br><i>Journal of Food Science</i> (2002) 67(9), 3284-3288<br>Ruiz del Castillo, M. L.; Dobson, G.                                                      |                                              | GC-FID |
| 2486 | Volatiles from agro-industrial wastes     | <b>Fungal Biotransformation of Monoterpenes Found in Agro-Industrial Residues from Orange and Pulp Industries into Aroma Compounds: Screening Using SPME</b><br><i>Food Sci. Biotech.</i> 16, #1, 37-42 (2007-02-00)<br>Marostica, M. R., Jr.; Mota, N. O.; Baudet, N.; Pastore, G. M.      | headspace                                    | GC     |
| 2511 | Aroma compound in natural products        | Sampling volatile compounds from natural products w/headspace/SPME<br><i>J. Biochem. Biophys. Meth.</i> 70, #2, 235-242 (2007-03-10)<br>Stashenko, E. E.; Martinez, J. R.                                                                                                                   | headspace                                    | GC     |
| 2441 | Aroma compound in roses                   | Development of a headspace-SPME method to monitor changes in volatile profile of rose ( <i>Rosa hybrida</i> , cv David Austin) petals during processing                                                                                                                                     | 60µm PDMS/DVB headspace                      | GC     |

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|      |                                           | <b>J. Chromatogr., A 1150, #1-2, 190-197 (2007-05-25)</b><br><b>Bianchi, G.; Nuzzi, M.; Leva, A. A.; Rizzolo, A.</b>                                                                                                                                                                                        | <b>30 min @ 60°C</b>      |           |  |
|      |                                           | Analysis of rhythmic emission of volatile compounds of rose flowers.                                                                                                                                                                                                                                        |                           |           |  |
| 1466 | Aroma compounds in roses                  | <i>Molecular Methods of Plant Analysis (2002) 21, 199-221</i><br>Verstappen, F. W. A.; Helsper, J. P. F. G.; Davies, J. A.                                                                                                                                                                                  |                           |           |  |
| 1467 | Volatiles in flowers                      | Detection of physiologically active flower volatiles using gas chromatography coupled with electroantennography.<br><i>Molecular Methods of Plant Analysis (2002) 21, 173-198</i><br>Schiestl, F. P.; Marion-Poll, F.                                                                                       |                           |           |  |
| 1469 | Fragrance compounds from <i>Lavandula</i> | Comparison of different extraction methods for the analysis of fragrances from <i>Lavandula</i> species by gas chromatography-mass spectrometry.<br><i>Journal of Chromatography A (2002) 982(1), 31-47</i><br>Lee, Dong-Sun; Kim, Nam-Sun                                                                  | 100µm PDMS                | GC-MS     |  |
| 1477 | Selenium in plants                        | Selenium in plants by mass spectrometric techniques: Developments in bio-analytical methods. Plenary Lecture.<br><i>Journal of Analytical Atomic Spectrometry (2002) 17(9), 1015-1023</i><br>Caruso, Joseph A.; Grant, Tyre D.; Meija, Juris; Montes-Bayon, Maria                                           |                           | GC-ICP-MS |  |
| 2654 | Selenium in cytotoxic drugs               | <b>Chemosensitization of B-cell lymphomas by methylseleninic acid involves nuclear factor-kappa B inhibition and the rapid generation of other selenium species</b><br><i>CANCER RES 67, #22, 10984-10992 (15 NOV 2007)</i><br>Juliger, S.; Goenaga-Infante, H.; Lister, T. A.; Fitzgibbon, J.; Joel, S. P. | headspace                 | GC        |  |
| 2655 | Ochratoxin A in human urine               | Determination of ochratoxin A in human urine by SPME-HPLC-fluorescence detection.<br><i>J Pharm Biomed Anal 44, #4, 1014-8 (2007 Aug 15)</i><br>Vatinno, R.; Aresta, Antonella; Zambonin, Carlo G; Palmisano, Francesco                                                                                     | 65µm PDMS-DVB             | LC-FD     |  |
| 2762 | Ochratoxin A green coffee beans           | Determination of Ochratoxin A in green coffee beans by SPME-LC with fluorescence detection<br><i>J. Chromatogr., A 1187, #1-2, 145-150 (APR 11 2008)</i><br>Aresta, Antonella; Palmisano, F.; Vatinno, Rosa; Zambonin, C.                                                                                   | headspace                 | LC-FD     |  |
| 2382 | Volatiles from medicinal plants           | Reliability of fibres in SPME for routine analysis of the headspace of aromatic and medicinal plants<br><i>J. Chromatogr., A 1152, #1-2, 138-149 (2007-06-08)</i><br>Bicchi, C.; Cordero, C.; Liberto, E.; Sgorbini, B.; Rubiolo, P.                                                                        | Car/DVB 50/30µm headspace |           |  |
| 1508 | Volatiles from medicinal plants           | A review of modern sample-preparation techniques for the extraction and analysis of medicinal plants.<br><i>Analytical and Bioanalytical Chemistry (2002) 373(1-2), 23-30</i><br>Huie, Carmen W.                                                                                                            |                           |           |  |
| 1510 | Capsaicin                                 | Extraction methods for Capsaicin encountered in aerosol defense sprays; a comparative analysis.<br><i>Abstracts of Papers American Chemical Society (2002) 223(1-2), ANYL 76</i><br>Spicer, Oliver; Almirall, Jose R.                                                                                       |                           |           |  |
| 1512 | Fragrances from <i>Laurus nobilis</i>     | Differences in the fragrances of pollen and different floral parts of male and female flowers of <i>Laurus nobilis</i> .<br><i>Journal of Agricultural and Food Chemistry (2002) 50(16), 4647-4652</i><br>Flamini, Guido; Cioni, Pier Luigi; Morelli, Ivano                                                 |                           |           |  |
| 1513 | Aroma volatiles from <i>Eruca stavia</i>  | Aroma compound analysis of <i>Eruca sativa</i> (Brassicaceae) SPME headspace leaf samples using GC, GC-MS, and olfactometry.<br><i>Journal of Agricultural and Food Chemistry (2002) 50(16), 4643-4646</i><br>Jirovetz, Leopold; Buchbauer, Gerhard; Smith, David                                           | headspace                 | GC-MS     |  |
|      |                                           | Automation of solid-phase microextraction-gas chromatography-mass spectrometry extraction of eucalyptus volatiles.                                                                                                                                                                                          |                           |           |  |



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| 1544 | Volatiles in <i>Eucalyptus</i> | <i>Journal of Chromatographic Science</i> (2002) 40(3),140-146<br><br>Zini, Claudia A.; Pawliszyn, Janusz; Lord, Heather; de Assis, Teotonio F.; Caramao, Elina B.; Christensen, Eva<br><br>Semiquantitative determination of off-notes in mint oils by solid-phase microextraction                                              |                                    | GC-ITMS |
| 1545 | Volatiles in mint oils         | <i>Journal of Chromatographic Science</i> (2002) 40(3), 133-139<br><br>Coleman, W. M., III; Cole, S. K.; Lawrence, B. M.<br><br>Analysis of the essential oil of the aerial parts of <i>Viola etrusca</i> from Monte Labbro (South Tuscany, Italy) and in vivo analysis of flower volatiles using SPME                           |                                    |         |
| 1549 | Volatiles from flowers         | <i>Flavour and Fragrance Journal</i> (2002) 17(2), 147-149<br><br>Flamini, Guido; Cioni, P. L.; Morelli, I.<br><br>Essential oil composition of sachalinmint from Norway detected by solid-phase microextraction and gas chromatography-mass spectrometry analysis.                                                              |                                    |         |
| 1553 | Volatiles in sachalinmint      | <i>Journal of Agricultural and Food Chemistry</i> (2002) 50(6), 1543-1547<br><br>Rohloff, Jens<br><br>Production of volatile compounds by hairy root cultures of <i>Cichorium intybus</i> L. under the influence of fungal elicitors and their analysis using solid-phase micro extraction gas chromatography-mass spectrometry. |                                    | GC-MS   |
| 1138 | Volatiles from fungal cultures | <i>Journal of the Science of Food and Agriculture</i> (2003) 83 (8), 769-774.<br><br>Bais, Harsh Pal; Dattatreya, B. S.; Ravishankar, G. A.                                                                                                                                                                                      |                                    | GC-MS   |
| 2208 | Volatiles from benzoin gums    | <b>Volatile constituents of benzoin gums: Siam and Sumatra, part 2. Study of headspace sampling methods</b><br><i>Flavour and Fragrance Journal</i> 21, #1, 59-67 (2006)<br><b>Castel, C.; Fernandez, X.; Lizzani-Cuvelier, L.; Loiseau, A.; Perichet, C.; Delbecque, C.; Arnaudo, J.</b>                                        | DVB/Car 50/30µm<br><br>headspace   | GC-MS   |
| 1317 | Volatiles from benzoin gums    | Volatile constituents of benzoin gums: Siam and Sumatra. Part 1.<br><i>Flavour and Fragrance Journal</i> (2003) 18 (4), 328-333.<br>Lizzani-Cuvelier, Louisette; Delbecque, Claire; Fernandez, Xavier; Loiseau, Andre-Michel; Perichet, Christine                                                                                | Carboxen/PDMS,<br><br>carbowax/DVB | GC-MS   |
| 1397 | Terpenoids                     | Quantitative analysis of terpenoids in the gas phase using headspace solid-phase microextraction (HS-SPME).<br><i>Flavour and Fragrance Journal</i> (2001) 16(6), 411-416.<br>Zabaras, D.; Wyllie, S. G.                                                                                                                         | PDMS                               |         |
| 1022 | Lindane and heptachlor         | The use of pine bark as a natural adsorbent for persistent organic pollutants: Study of lindane and heptachlor adsorption.<br><i>J Chemical Technology and Biotechnology</i> (2003) 78 (2-3), 347-351.<br>Alves, Arminda; Botelho, Cidalia; Ratola, Nuno                                                                         |                                    | GC-ECD  |
| 1094 |                                | Bioconcentration of organic chemicals: is a solid-phase microextraction fibre a good surrogate for biota?<br><i>Environmental Science and Technology</i> (2002) 36 (24), 5399-5404.<br>Leslie, H. A.; Ter Laak, T. L.; Busser, F. J. M.; Kraak, M. H. S.; Hermans, J. L. M.                                                      | 15 µm PDMS                         | GC-ECD  |
| 1333 |                                | Classification of Duvernay sourced oils from central and southern Alberta using Compound Specific Isotope Correlation (CSIC)<br><i>Bulletin of Canadian Petroleum Geology</i> (2003) 51 (5), 357-368.<br>Fowler, Martin G.; Harris, Scott A.; Whitar, Michael J.                                                                 |                                    | CF-IRMS |
| 1039 | Pyrene                         | Sorption of pyrene to dissolved humic substances and related model polymers. 2. Solid-phase microextraction ( SPME ) and fluorescence quenching technique (FQT) as analytical methods.<br><i>Environmental Science and Technology</i> (2002) 36 (20), 4403-4409.<br>MacKenzie, K.; Georgi, A.; Kumke, M.; Kopinke, F. -D.*       | PDMS                               | GC-FID  |
| 1198 |                                | Analysis of the volatile constituents of <i>Apium graveolens</i> L. and <i>Oenanthe</i> L. by gas chromatography-mass spectrometry, using headspace solid-phase microextraction.<br><i>Chromatographia</i> (2003) 57 (11-12), 805-809.                                                                                           | PDMS/DVB                           | GC-MS   |

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| 1343 |                                                | Analysis of the volatile constituents of <i>Schisandra chinensis</i> (Turz.) Bail by gas chromatography-mass spectrometry, using headspace solid-phase microextraction.<br><i>Chromatographia</i> (2003) 58 (5-6), 289-294.<br>Deng, C. H.; Song, G. X.; Hu, Y. M.*; Zhang, X. M.       | PDMS, carbowax/DVB                                             | GC-MS     |
| 1770 | Cuticular hydrocarbons from wood               | Diet-mediated inter-colonial aggression in Formosan subterranean termite <i>Coptotermes formosanus</i><br><i>J Chemical Ecology</i> , 30, #12, 2559-2574<br>Florane, C.; Bland, J.; Husseneder, C; Raina, A.                                                                            | headspace                                                      | GC-MS     |
| 1771 | Pheromones from wasp                           | Evaluation of the major female <i>Eurytoma amygdali</i> sex pheromone components, (Z,Z)6,9-tricosadiene and (Z,Z)-6,9-pentacosadiene for male attraction in field tests<br><i>J Chemical Ecology</i> , 30, #6, 1245-1255<br>Mazomenos, B.; Athanassiou, C; Kavallieratos, N; Milonas, P | headspace                                                      | GC        |
| 1772 | Volatiles from secretion                       | Avian exocrine secretions. I. Chemical characterization of the volatile fraction of the uropygial secretion of the green woodhoopoe, <i>Phoeniculus purpureus</i><br><i>J Chemical Ecology</i> , 30, #8, 1603-1611<br>Burger, B.; Reiter, B.; Borzyk, O.; Du Plessis, M.                | dimethyl disulfide derivatization                              | GC-MS     |
| 1773 | Essential oil <i>P. bituminosa</i> from leaves | Volatile constituents of different organs of <i>Psoralea bituminosa</i> L<br><i>Flavour Fragrance J.</i> , 19,#2, 166-171<br>Bertoli, A; Menichini, F; Morelli, I; Noccioli, C; Pistelli, L                                                                                             | Headspace                                                      | GC, GC-MS |
| 2363 | Volatiles from roots                           | <b>Volatile constituents of the roots of <i>Echinops kebericho</i> mesfin</b><br><i>Flavour Fragrance J.</i> 22. #1, 35-38 (2007)<br>Hymete, A.; Rohloff, J.; Iversen, T. -H.; Kjøsløsh;sen, H.                                                                                         | Headspace                                                      | GC-MS     |
| 1774 | Volatiles from plants                          | Volatile constituents of different parts (roots, stems and leaves) of <i>Smyrniolum olusatrum</i> L<br><i>Flavour Fragrance J.</i> , 19,#6, 522-525<br>Bertoli, A.; Fraternali, D.; Giamperi, L.; Morelli, I.; Pistelli, L.; Ricci, D.                                                  | Headspace                                                      | GC, GC-MS |
| 2153 | Volatiles in cosmetics                         | <b>Headspace SPME-GC-MS method for the identification of cosmetic ingredients causing delamination of packagings</b><br><i>J. Chromatogr. A</i> , 1101, #1-2, 32-37 (2006)<br>Ortiz, Gustavo; Tena, Maria Teresa                                                                        | 75u Carboxen headspace 40°C                                    | GC-MS     |
| 1775 | Formaldehyde in cosmetics                      | Quantitative determination of formaldehyde in cosmetics using a combined SPME-isotope dilution mass spectrometry method.<br><i>J. Chromatogr. A</i> , 1029, #1-2, 217-222<br>Rivero, R. T.; Topiwala, V.                                                                                | 65µm PDMS-DVB pentafluorophenyl hydrazine derivative headspace | GC-MS     |
| 1776 | Solvent esters                                 | Vapor-phase analysis of isobutyl acetate, isopropyl acetate, n-propyl acetate and their respective alcohols using SPME-GC w/ mass selective detector<br><i>J Chromatography, A</i> , 1066, #1-2, 225-230<br>Cobb, G.; Cox, S.; Polydore, C.; Radtke, C.                                 | headspace                                                      | GC-MS     |
| 2387 | Volatiles from paint                           | <b>Sensory and analytical evaluations of paints with and without texanol</b><br><i>Environ. Sci. Technol.</i> 42, #1. 243-248 (01 Jan 2008 )<br>Gallagher, M.; Dalton, P.; Sitvarin, L.; Preti, G.                                                                                      | headspace                                                      | GC-MS     |
| 1777 | Solvents in paint                              | Disposable ionic liquid coating for headspace SPME of benzene, toluene, ethylbenzene, and xylenes in paints followed by GC-FID<br><i>J. Chromatogr. A</i> , 1066, #1-2, 27-32<br>Liu, Jing-Fu; Li, Ning; Jiang, Gui-bin; Liu, Jie-min; Jonsson, Jan Ake; Wen, Mei-juan                  | headspace                                                      | GC-FID    |
| 1778 | Terpenes in spruce trees                       | Comparison of terpene composition in Engelmann spruce ( <i>Picea engelmannii</i> ) using hydrodistillation, SPME and PLE<br><i>Zeitschrift fuer Naturforschung</i> , 59, #9-10, 641-648<br>Mardarowicz, M; Wianowska, D., A.; Sawicki, R.                                               | headspace                                                      | GC        |
| 1779 | Fugal volatiles on Agar                        | Use of headspace SPME and headspace sorptive extraction for the detection of the volatile metabolites produced by toxigenic <i>Fusarium</i> species.<br><i>J Chromatogr A</i> , 1027, #1-2, 147-154<br>Demyttenaere, J; Morina, R; De Kimpere, N; Sandra, P                             | headspace                                                      | GC-MS     |

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| 1780 | Terpenes in plant emissions                   | Natural variability of the enantiomeric composition of bioactive chiral terpenes in <i>Mentha piperita</i><br><i>J Chromatogr A</i> , 1054, #1-2, 87-93<br>Blanch, G.P.; Herraiz, M.; Ruiz Del Castillo, M.L.                                                            | headspace                                      | GC-MS |
| 2391 | Terpenes from Scots pine                      | <b>Enantiomeric monoterpene emissions from natural and damaged Scots pine in a boreal coniferous forest measured using SPME-GC-MS</b><br><i>J. Chromatogr., A</i> 1141 #1, 138-144 (2007-02-02)<br>Yassaa, N.; Williams, J.                                              | 65µm PDMS-DVB<br>1 min air sample              | GC-MS |
| 1781 | Terpenes in plant emissions                   | Analysis of enantiomeric and non-enantiomeric monoterpenes in plant emissions using portable dynamic air sampling/SPME and chiral GC-MS<br><i>Atmos. Environ.</i> , 39, #27, 4875-4884<br>Williams, Jonathan; Yassaa, Nouredine                                          | 65µm PDMS-DVB<br>direct air sampling           | GC-MS |
| 1782 | Terpenes in biomass                           | The release of terpenes during storage of biomass<br><i>Biomass Bioenergy</i> , 28, #1, 29-34<br>Rupar, Katarina; Sanati, Mehri                                                                                                                                          | headspace                                      | GC-MS |
| 1783 | Volatiles from trees                          | Analysis of <i>Platycladus orientalis</i> volatiles and their electroantennogram responses with <i>Semanotus bifasciatus</i><br><i>Forest Research</i> , 18, #3, 260-266<br>Kong X; Zhang Z; Wang H; Yang Jie; Hu Y                                                      | headspace in situ                              | GC-MS |
| 1784 | Volatiles of dried fruit Amomum villosium     | Determination of volatile components of <i>Amomum villosum</i> Lour. by GC-MS with head-space SPME<br><i>Fudan Xuebao Ziranxueban</i> , 43, #4, 676-679<br>Song Guo-xin; Deng Chun-hui; Wu Dan; Hu Y                                                                     | headspace                                      | GC-MS |
| 1785 | Volatiles from leaves                         | A direct quantitative analysis method for monitoring biogenic volatile organic compounds released from leaves of <i>Pelargonium hortorum</i> in situ.<br><i>Anal and Bioanal Chemistry</i> , 380, #7-8, 950-957<br>Deng, X.; Peng, J.; Luo, B.; Wei, M.; Hu, W.; Du, J.  | 50/30µm DVB/CAR<br>20 min extract<br>headspace | GC-MS |
| 2334 | Volatiles from food products                  | <b>(SPME) with GC/MS and GC/matrix isolation-IR analysis in the identification of volatile organic compounds in food products.</b><br><i>Abstracts of Papers Am Chem Society (2004) 227 Part1, U99</i><br>Schneider, J.; Reed, Larry; Sytsma, Louis F.; Anderson, Ken B. |                                                | GC/MS |
| 1786 | Ocetyl-, nonyl-phenol in paper                | Determination of nonylphenol and octylphenol in paper by microwave-assisted extraction coupled to headspace SPME and GC-MS<br><i>J Chromatogr. A</i> , 1065, #2, 251-256<br>Barcelo, D.; Lacorte, S.; Latorre, A.; Montury, M.                                           | Headspace                                      | GC-MS |
| 1787 | Nicotine in cigarette smoke                   | SPME-based approach to determine free-base nicotine in trapped mainstream cigarette smoke total particulate matter.<br><i>J Agr Food Chem</i> , 52, #24, 7240-7245<br>Watson, C. H.; Trommel, J. S.; Ashley, D. L.                                                       | headspace                                      | GC-MS |
| 1788 | Flavour aroma in tobacco                      | Analysis of aroma constituents in tobacco flavour by GC-MS with solid-phase microextraction.<br><i>Fenxi Shiyanshi</i> , 23, #10, 22-25<br>Dong, L.; Zhu, S. K.; Su, X. L.; Wu, C. Y.; Xiong, G. X.; Chen, Z. G.; Li, D.                                                 | 100µm PDMS<br>85µm polyacrylate<br>headspace   | GC-MS |
| 1789 | Diterpenes from moss                          | The moss <i>Physcomitrella patens</i> releases a tetracyclic diterpene<br><i>Plant Cell Reports</i> , 22, #10, 780-786<br>von Schwartzenberg, K.; Schultze, W.; Kassner, H.                                                                                              | Headspace                                      | GC    |
| 1790 | Volatiles from crocatus                       | Identification and synthesis of volatiles released by the myxobacterium <i>Chondromyces crocatus</i><br><i>Tetrahedron</i> , 60, #17, 3863-3872<br>Schulz, Stefan; Fuhlendorff, Jens; Reichenbach, H.                                                                    | headspace                                      | GC    |
| 2151 | Phenolic & sesquiterpenoids in birch bark tar | <b>Molecular characterisation of birch bark tar by headspace SPME-GC-MS: A new way for identifying archaeological glues</b><br><i>J. Chromatogr. A</i> , 1101, #1-2, 245-253 (2006)<br>Regert, A; Alexandre, V.; Thomas, N.; Lattuati-Derieux, A.                        | headspace                                      | GC-MS |
| 1791 | Volatiles in magnolia                         | Determination of volatile compounds in <i>Magnolia</i> bark by microwave-assisted extraction coupled to headspace SPME and GC-MS                                                                                                                                         | headspace                                      | GC-MS |

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| bark                                      | <i>Analytical Sciences</i> , 20, #5, 857-859<br>Sha, Y. F.; Huang, T. M.; Shen, S.; Duan, G. L.*                                                                                                                                                                                                                                 |                                               |              |
| 1792 Volatils of zizanioides              | Chemical components of Vetiveria zizanioides volatiles.<br><i>Yingyong Shengtai Xuebao</i> , 15, #1, 170-172<br>Huang Jinghua; Li Huashou; Yang Jun; Chen Yufen;<br>Liu Yinghu; Li Ning; Nie Chengrong                                                                                                                           | headspace                                     | GC-MS        |
| 1793 Terpens in coniferos needles         | Headspace solid-phase microextraction (HS-SPME): A microscale sampling technique for determination of mono-terpene hydrocarbons in coniferous needles by GC-MS<br><i>Anal. Bioanal. Chem.</i> , 378, #1, 150-158<br>Chvilickova, I.; Kuban, V.                                                                                   | headspace                                     | GC/MS        |
| 2673 2,4,6-trichloranisole in wines       | <b>Comparative study of two chromatographic methods for quantifying 2,4,6-trichloranisole in wines</b><br><i>J. CHROMATOGR. A</i> 1138, #1-2, 18-25 (05 JAN 2007)<br>Riu, M.; Mestres, M.; Busto, O.; Guasch, J.                                                                                                                 | headspace                                     | ECD<br>GC-MS |
| 2319 Chloroanisoles in cork stoppers      | <b>Quantification of chloroanisoles in cork using headspace SPME gas chromatography with electron capture detection</b><br><i>J. Chromatogr. A</i> 1107 #1-2, 240-247 (2006)<br>Busto, O.; Guasch, J.; Mestres, M.; Riu, M.                                                                                                      | headspace                                     | ECD          |
| 2155 Chloroanisoles in cork stoppers      | <b>Determination of total chloroanisoles in different kinds of cork stoppers</b><br><i>Anal. Chim. Acta</i> , 563, #1-2, 310-314 (2006)<br>Busto, O.; Guasch, J.; Mestres, M.; Riu, M.                                                                                                                                           | headspace                                     | GC-MS        |
| 1794 Volatile odors from cork             | Determination of odour-causing volatile organic compounds in cork stoppers by multiple headspace SPME<br><i>J. Chromatogr. A</i> , 1068, #2, 201-208<br>Ezquerro, Oscar; Tena, Maria Teresa                                                                                                                                      | 50/30µm DVB/CAR<br>45min @ 100°C<br>headspace | GC-MS        |
| 2414 Volatiles from Eucalyptol            | <b>GC-MS following pressurized hot water extraction and SPME for quantification of eucalyptol</b> ,<br><i>J. Sep. Sci.</i> 30, #1, 86-89 (2007-01)<br>Dong, L.; Wang, J. Y.; Deng, C. H.; Shen, X. Z.                                                                                                                            | headspace                                     | GC-MS        |
| 1795 Essential oils from chinese medicine | Rapid determination of essential oil in Acorus tatarinowii Schott. by pressurized hot water extraction followed followed by SPME-GC-MS<br><i>J. Chromatogr. A</i> , 1059, #1-2, 149-155<br>Deng, Chunhui; Li, Ning; Zhang, Xiangmin                                                                                              | 10min @ 60°C<br>headspace                     | GC-MS        |
| 1796 Volatiles from aged book             | Identification of volatile organic compounds emitted by a naturally aged book using SPME-GC-MS.<br><i>J. Chromatogr. A</i> , 1026, #1-2, 9-18<br>Lattuati-Derieux, A.; Bonnassies-Termes, S.; Lavedrine, B.                                                                                                                      | headspace<br>contact sampling                 | GC-MS        |
| 1797 Volatiles from wood fungi            | Identification by GC-MS of the volatile organic compounds emitted from the wood-rotting fungi <i>Serpula lacrymans</i> and <i>Coniophora puteana</i> , and from <i>Pinus sylvestris</i> timber<br><i>Mycological Research</i> , 108, #7, 806-814<br>Ewen, Richard J.; Jones, Peter R. H.; Ratcliffe, N.; Spencer-Phillips, Peter | headspace                                     | GC-MS        |
| 1798 t-2-hexenal from acacia leaves.      | Chemical released from host Acacia by feeding herbivores is detected by symbiotic Acacia-ants.<br><i>Caribbean J of Science</i> , 40, #3, 396-399<br>Wood, William F.; Wood, Brenda                                                                                                                                              | headspace                                     | GC           |
| 1799 volatile flavor changpo              | Aroma evaluation of an aquatic herb, changpo ( <i>Acorus calamus</i> var. <i>angustatus</i> Bess), by AEDA and SPME<br><i>J Agr Food Chem</i> , 52, #26, 8099-8104<br>Choi, H. S.                                                                                                                                                | headspace                                     | GC-MS        |
| 2182 Volatiles from pine tree             | <b>Characterization of the volatile fraction emitted by phloems of four pinus species by SPME-GC-MS</b><br><i>J. Chromatogr. A</i> , 1105, #1-2, 191-198 (2006)<br>Branco, M.; Farrall, M.; Gomes Da Silva, M.; Mateus, E.; Paiva, M.R.; Santos, A.M.; Vasconcelos, T.                                                           | headspace<br>50/30µm PDMS/<br>Carboxen        | GC-MS        |
| 1800 Volatiles from pine needles          | Aroma-active compounds of <i>Pinus densiflora</i> (red pine) needles<br><i>Flavour Fragrance J.</i> , 19, #6, 532-537<br>Kim, Kyoung Heon; Kim, Tae Hwan; Lee, Hyong Joo; Yu, E                                                                                                                                                  | 100µm PDMS<br>75µm Carboxen<br>headspace      | GC-MS        |

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| 2622 | Hydrocarbons emissions from wood                      | Headspace-SPME analysis of the sapwood and heartwood of <i>Picea Abies</i> , <i>Pinus Sylvestris</i> and <i>Larix Decidua</i><br><i>J. Essent. Oil Res.</i> 19, #2, 125-133 (March/April 2007)<br>Holmbom, B.; Pranovich, A.; Reunanen, M.; Wajs, A.; Willfor, S.                                       | headspace                                   | GC-MS     |
| 1801 | Hydrocarbons emissions from pine                      | Evaluation of hydrocarbon emissions from heart-And sapwood of Scots pine using a laboratory-scale wood drier<br><i>Holzforschung</i> , 58, #6, 660-665<br>Bengtsson, Peter; Sanati, Mehri                                                                                                               | headspace @ 50°, 70°, and 90°C              | GC-MS     |
| 1802 | Odors from packaging                                  | Representativeness of extracts of offset paper packaging and analysis of the main odor-active compounds<br><i>J Agr Food Chem</i> , 52, #8, 2326-2334<br>Landy, P.; Nicklaus, S.; Semon, E.; Mielle, P.; Guichard, E.                                                                                   | 100µm PDMS<br>3 min @ 40°C<br>headspace     | GC-MS     |
| 2189 | Dimethyl selenodisulfide from <i>Escherichia coli</i> | Identification of biogenic dimethyl selenodisulfide in the headspace gases above genetically modified <i>Escherichia coli</i><br><i>Analytical Biochemistry</i> 348, #1, 115-122 (2006)<br>Swearingen, J.; Frankel, D.; Fuentes, D.; Saavedra, C.; Vasquez, C., Chasteen, Thomas                        | headspace                                   | GC-MS     |
| 2267 | Alcohols from <i>Escherichia coli</i>                 | Production of the long-chain alcohols octanol, decanol, and dodecanol by <i>Escherichia coli</i><br><i>Current Microbiology</i> 51 #2, 82-86 (2005)<br>Hamilton-Kemp, T.; Newman, M.; Collins, R.; Elgaali, H. Yu, K; Archbold, Douglas                                                                 | headspace                                   |           |
| 1803 | E coli volatiles from broth                           | SPME, GC, and MS coupled w/discriminant factor analysis and multilayer perceptron neural network for detection of <i>Escherichia coli</i><br><i>J of Food Protection</i> , 67, #8, 1597-1603<br>Siripatrawan, Ubonratana; Linz, John E.; Harte, Bruce R.                                                | headspace @ 37°C                            | GC-MS     |
| 1804 | Floral volatiles from catnip                          | Catnip, <i>Nepeta cataria</i> (Lamiales: Lamiaceae)<br>A closer look: Seasonal occurrence of epetalactone isomers and comparative repellency of three terpenoids to insects<br><i>Environmental Entomology</i> , 33, #6, 1562-1569<br>Schultz, G; Simbro, E; Belden, J; Zhu, J; Coats, Joel             | headspace                                   | GC-MS     |
| 2190 | Volatiles from tick                                   | Optimization of the SPME method in the determination of <i>Ixodes ricinus</i> (L.) volatiles<br><i>J. Sep. Sci.</i> , 29, #2, 236-241 (2006)<br>Bouman, Edwin A.P.; Zahradnickova, Helena                                                                                                               | 100um PDMS<br>headspace<br>15 min           | GC-MS     |
| 2156 | Volatiles in plants                                   | Practical approaches to plant volatile analysis<br><i>Plant Journal</i> , 45, #4, 540-560 (2006)<br>Tholl, D.; Boland, W.; Hansel, A.; Loreto, F.; Roese, U.; Schnitzler, J.                                                                                                                            | headspace                                   | GC-MS     |
| 1805 | Volatiles from plants                                 | Comparison of different extraction methods for the analysis of volatile secondary metabolites of <i>Lippia alba</i> (Mill) N.E. Brown, grown in Colombia, and evaluation of its in vitro antioxidant activity.<br><i>J Chromatogr A</i> , 1025, #1, 93-103<br>Stashenko, E.; Jaramillo, B.; Martinez, J | headspace                                   | GC-MS     |
| 1806 | Rose/nerol oxides                                     | Biotransformation of (R)-(+)- and (S)-(-)-citronellol by <i>Aspergillus</i> sp. and <i>Penicillium</i> sp, and the use of SPME for screening.<br><i>J Chromatogr A</i> , 1027, #1-2, 137-146<br>Demyttenaere, J; Vanoverschelde, J; De Kimpe, N                                                         | headspace<br>steam distillation @<br>3.5 pH | GC-MS     |
| 1807 | Fragrances from <i>Artemisia</i> plants               | Headspace-SPME & hydrodistillation of two fragrant <i>Artemisia</i><br><i>Flavour Fragrance J.</i> , 20, #4, 395-398<br>Baser, K. Husnu Can; Demirci, Betul; Demirci, Fatih                                                                                                                             | headspace                                   | GC, GC-MS |
| 1808 | Volatiles from slash/loblolly pine                    | Volatiles associated with preferred and non-preferred hosts of the Nantucket pine tip moth, <i>Rhyacionia frustrana</i><br><i>J Chemical Ecology</i> , 30, #5, 977-990<br>Asaro, C.; Sullivan, B.; Dalusky, M.; Berisford, C.                                                                           | direct sampled                              | GC-EAD    |
| 1809 | Pheromone of canalifrons                              | Neocembrene A, a major component of the trail-following pheromone in the genus <i>Prothrinotermes</i> (Insecta, Isoptera, Rhinotermitidae)<br><i>Chemoecology</i> , 15, #1, 1-6<br>Sillam-Dusses, D.; Semon, E.; Moreau, C.;                                                                            | headspace                                   | GC-MS     |

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| 1810 | Pheromone from wasp                      | Partial elucidation of Trichogramma putative sex pheromone at trace levels by SPME-GC-MS studies<br><i>J. Chromatogr. A</i> , 1067, #1-2, 311-321<br>Melo, R.; Posthumus, M.; Silva, I.; Van Beek, T                                                                                                                                                                                                       | headspace for 20-50hr           | GC-MS    |
| 1811 | Sesiidae sex pheromone from hornet moth  | New type of sesiidae sex pheromone identified from the hornet moth <i>Sesia apiformis</i><br><i>J Chemical Ecology</i> , 30, #4, 805-817<br>Francke, W.; Karalius, V.; Plass, E.; Lehmann, L.; dos Santos, A.; Buda, V.; Mozuraitis, R. Borg-Karlson, A.;                                                                                                                                                  | headspace 2-alkenals derivative | GC-MS    |
| 1812 | Pheromone emission from leaf midge       | Flight activity and further evidence for a female-produced sex pheromone of the apple leaf midge, <i>Dasineura mali</i> , in Nova Scotia<br><i>Northeastern Naturalist</i> , 12, #1, 93-102<br>Heath, J.; Zhang, Aijun; R., Wendell L.; Smith, R.                                                                                                                                                          | headspace                       | GC-EAD   |
| 1813 | Pheromone emission from traps            | Effect of aging on pheromone emission from a commercial beet armyworm (Lepidoptera : Noctuidae) lure and trap efficiency<br><i>J Economic Entomology</i> , 98, #2, 373-377<br>Showler, A.; Salgado, E.; Fraser, I.; Robacker, D.                                                                                                                                                                           | headspace                       | GC-MS    |
| 2395 | Volatiles released from Norway spruce    | Semiochemicals related to the aphid <i>Cinara pilicornis</i> and its host, <i>Picea abies</i> : A method to assign nepetalactone diastereomers<br><i>J. CHROMATOGR. A</i> 1180, #1, 165-170 (2 -08 FEB 2008 )<br>Pettersson, M.; Unelius, C. R.; Valterova, I.; Borg-Karlson, A. -K                                                                                                                        | headspace                       | GC/MS    |
| 2825 | Volatiles from                           | Tick repellent substances in the essential oil of <i>Tanacetum vulgare</i><br><i>Journal of Medical Entomology</i> 45, #1, 88-93 (JAN 2008)                                                                                                                                                                                                                                                                | headspace                       | GC/MS    |
|      | Essential oils of aromatic plant         | Palsson, K.; Jaenson, Thomas G.; Baekstrom, P.; Borg-Karlson, A.                                                                                                                                                                                                                                                                                                                                           |                                 |          |
| 2322 | Volatiles from leaf extracts             | Evaluation of extracts and oils of tick-repellent plants from Sweden<br><i>Medical and Veterinary Entomology</i> 19 #4, 345-352 (2005)<br>Jaenson, T. G. T.; Palsson, K.; Borg-Karlson, A.-K.                                                                                                                                                                                                              | headspace                       | GC/MS    |
| 2253 | Volatile releases from aphids and plants | Role of (E)-beta-farnesene in systematic aphid prey location by <i>Episyrphus balteatus</i> larvae (Diptera : Syrphidae)<br><i>European Journal of Entomology</i> 102 #3, 431-436 (2005)<br>Francis, Frederick; Martin, Thibaut; Lognay, Georges; Haubruge, E.                                                                                                                                             | headspace                       | GC/MS    |
| 1814 | Pheromone from aphids                    | A cost of alarm pheromone production in cotton aphids, <i>Aphis gossypii</i><br><i>Naturwissenschaften</i> , 92, #2, 69-72<br>Byers, John A.                                                                                                                                                                                                                                                               | headspace                       | GC-MS    |
| 2254 | Sex pheromone of pine sawfly             | Release of sex pheromone and its precursors in the pine sawfly <i>Diprion pini</i> (Hym., Diprionidae)<br><i>Chemoecology</i> 15 #3, 147-151 (2005)<br>Anderbrant, O.; Ostrand, F.; Bergstrom, G.; Wassgren, A.; Auger-Rozenberg, M.; Geri, C.; Hedenstrom, E.; Hogberg, H.; Hertz, Annette; Heitland, Werner                                                                                              | headspace                       | GC/MS    |
| 2279 | Acetate esters from wheat stem sawfly    | Acetate esters of saturated and unsaturated alcohols (C12-C20) are major components in Dufour glands of <i>Bracon cephi</i> and <i>Bracon lissogaster</i> (Hymenoptera : Braconidae), parasitoids of the wheat stem sawfly, <i>Cephus cinctus</i> (Hymenoptera : Cephidae)<br><i>Biochemical Systematics and Ecology</i> 33 #8 757-769 (2005)<br>Baker, J.; Howard, R.; Morrill, W.; Meers, S.; Weaver, D. | headspace                       | GC-MS    |
| 1815 | Pheromone from fruit borer               | SPME for the investigation of sex pheromone of <i>Eucosma notanthes</i> Meyrick<br><i>Talanta</i> , 65, #3, 743-749<br>Chu, T. Y.; Hung, C. C.; Hsu, C. Y.                                                                                                                                                                                                                                                 | headspace 5min @ 20°C           | GC-MS    |
| 1816 | Fragrance from flowers                   | Rapid determination of volatile compounds emitted from <i>Chimonanthus praecox</i> flowers by headspace SPME-GC-MS<br><i>Zeitschrift fuer Naturforschung</i> , 59, #9-10, 636-640<br>Deng, Chunhui; Song, Guoxin; Hu, Yaoming                                                                                                                                                                              | headspace                       | GC-MS    |
| 1817 | Fragrance from flowers                   | Single step determination of fragrances in Cucurbita flowers by coupling headspace SPME low-pressure GC-tandem mass spectrometry                                                                                                                                                                                                                                                                           | 65µm PDMS-DVB 5min @ 60°C       | GC-MS-MS |

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|      |                                      | <i>J. Chromatogr. A</i> , 1045, #1-2, 173-179<br>Egea Gonzalez, F.; Garrido Frenich, A.; Guerra Sanz, J.;<br>Martinez Vidal, J.L.; Mena Granero, A.                                                                                                                                                          | headspace                                         |                  |
| 2776 | Volatiles from shoot-cultures        | <b>Headspace-SPME of in vitro shoot-cultures and micropropagated plants of <i>Lavandula viridis</i></b><br><i>Biologia Plantarum (Prague)</i> 52, #1, 133-136 (MAR 2008)<br>Goncalves, S.; Serra, H.; Nogueira, J.; Almeida, R.; Custodio, L.; Romano, A.                                                    | headspace                                         | GC-MS            |
| 1818 | Fragrance from Carob flower          | Sex and developmental stage of carob flowers affects composition of volatiles<br><i>J Horticultural Sci &amp; Biotechnology</i> , 79, #5, 689-692<br>Custodio, L.; Nogueira, J. M. F.; Romano, A.                                                                                                            | headspace                                         | GC-MS            |
| 2690 | Volatiles from cooked rice           | <b>Direct extraction of volatiles of rice during cooking using SPME</b><br><i>Cereal Chemistry</i> 4, #5, 423-427 (2007)<br>Zeng Zhi; Zhang Han; Chen JieYu; Zhang Tao; Matsunaga, R.                                                                                                                        |                                                   |                  |
| 2476 | Volatiles from scented rice          | <b>Determination of flavour profile in Iranian fragrant rice samples using cold-fibre SPME-GC-TOF-MS</b><br><i>Flavour and Fragrance J.</i> 22, #5, 377-391 (SEP-OCT 2007)<br>Ghiasvand, Ali Reza; Setkova, Lucie; Pawliszyn, Janusz                                                                         | 100µm PDMS headspace                              | GC-TOF-MS        |
| 2418 | Volatiles from scented rice          | <b>Rapid discrimination of scented rice by SPME, mass spectrometry, and multivariate analysis used as a mass sensor</b><br><i>J. Agric. Food Chem.</i> 55, #4, 1077-1083 (2007-02-21)<br>Laguerre, M.; Mestres, C.; Davrieux, F.; Ringuet, J.; Boulanger, R.                                                 | headspace                                         | GC-MS            |
| 1819 | Essential oils from Chinese rose oil | SPME-GC and olfactory analysis of the scent and fixative properties of the essential oil of <i>Rosa damascena</i> L. from China<br><i>Flavour and Fragrance J.</i> 20, #1, 7-12<br>Jirovetz, Leopold; Buchbauer, Gerhard; S, A; Balinova, A.; Guangjiun, Z.; Xihan, Ma                                       | headspace                                         | GC-FID and GC-MS |
| 1820 | Volatiles from compost               | Comparison of odorous volatile compounds from fourteen different commercial composts using SPME.<br><i>Trans. Am. Soc. Agric. Eng.</i> , 48, #1, 315-320<br>Kim, H.; McConnell, L.L.; Millner, P.                                                                                                            | headspace                                         | GC               |
| 1821 | Nectar odors from flowers            | Why are some floral nectars scented?<br><i>Ecology (Washington D C)</i> , 85, #6, 1486-1494<br>Raguso, Robert A.                                                                                                                                                                                             | headspace                                         | GC-MS            |
| 1822 | Volatiles from China medicine        | Quality assessment of Flos Chrysanthemi Indici from different growing areas in China by SPME-GC-MS<br><i>J. Chromatogr. A</i> , 1047, #2, 281-287<br>Chen, J; Deng, C; Fu, D; Sha, Y; Shen, S Zhang, X                                                                                                       | 65µm PDMS-DVB<br>30min @ 60°C<br>headspace        | GC-M             |
| 1823 | Volatiles from China medicine        | SPME-GC-MS analysis of volatile compounds in compounded Chinese medicinal prescription, Xiao-Cheng-Qi-Tang<br><i>Journal of Pharma Biomed Analysis</i> , 36, #2, 381-385<br>Sha, Yunfei; Shen, Shun; Duan, Gengli                                                                                            | 100µm PDMS<br>20min @ 90°C<br>stirring, headspace | GC-MS            |
| 1824 | Volatiles from osmanthus flowers     | Application of HS-SPME and GC-MS to characterization of volatile compounds emitted from osmanthus flowers<br><i>Annali di Chimica</i> , 94, #12, 921-927<br>Deng, Chunhui; Song, Guoxin; Hu, Yaoming                                                                                                         | 65µm CW/DVB<br>10 min @ 22°C<br>headspace         | GC-MS            |
| 1825 | Odors from biosolids                 | An evaluation of SPME for analysis of odorant emissions from stored biosolids cake<br><i>Water Res.</i> , 38, #17, 3800-3808<br>Parker, W.J.; Visan, M.                                                                                                                                                      | 75µm Carboxen<br>headspace                        | GC-MS            |
| 1826 | Volatiles from maize plants          | Effects of petroleum spray oils on oviposition behaviour and larval survival of <i>Helicoverpa armigera</i> Hubner (Lepidoptera Noctuidae) and <i>Ostrinia nubilalis</i> Hubner (Lepidoptera:Pyralidae)<br><i>Intl J of Pest Mgmt</i> , 51, #2, 111-119<br>Mensah, Robert; Frerot, Brigitte; Al Dabel, Faiza | headspace                                         | GC               |

## Pharmaceuticals

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| 147 | Volatiles in biological fluids | Application of Head-Space SPME for the Analysis of Volatile Metabolites<br><i>J. Microbiol. Methods</i> 25: 245 (1996)<br>Milsson, T., Larsen, T., Montanarella, L., Madsen, J. |  | GC-MS |
|     |                                | Determination of Residual Solvents in Pharmaceuticals                                                                                                                           |  |       |

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| 338  | Solvents in pharmaceutical products              | with Automated SPME<br>Chem. N. Z. 61 (4): 10-12 (1997)<br>Penton, Z.                                                                                                                                                                                                                                                                          | 100µm PDMS<br>15 min<br>headspace                                 | GC-FID           |
| 149  | Components in drugs                              | Analysis of Components in Crude Drugs by Headspace SPME Method<br>Zasshi 16: 251 (1996)<br>Yakugaku                                                                                                                                                                                                                                            |                                                                   |                  |
| 473  | Residual solvents pharmaceutical samples         | Headspace SPME method optimization for residual solvent analysis<br>Acta pharm. Hung., 1999, 69(2), 77-84<br>Camarasu, C., Mezei, M., Szabo, A                                                                                                                                                                                                 | 65µm DVB/PDMS<br>30 min headspace<br>2gm NaCl,                    | GC               |
| 919  | Residual solvents pharmaceutical samples         | Headspace SPME method development for the analysis of volatile polar residual solvents by GC-MS<br><i>J. Pharm. &amp; Biomedical Analysis</i> 2000, 23(1) 197-210<br>Camarasu, C.<br>Verapamil drug metabolism studies by automated in-tube solid phase microextraction.                                                                       |                                                                   |                  |
| 1002 | Verapamil                                        | <i>Jnl of Pharmaceutical and Biomedical Analysis</i> (2002) 30 (2), 307-319.<br><br>Walles, M.; Mullett, W. M.; Levens, K.; Borlak, J.; Wuensch, G.; Pawliszyn, J.                                                                                                                                                                             |                                                                   | LC-MS            |
| 1006 | Trends                                           | New trends in sample preparation for clinical and pharmaceutical analysis<br>TrAC-Trends in Analytical Chemistry (2003) 22 (4), 232-244.<br>Kataoka, Hiroyuki                                                                                                                                                                                  |                                                                   |                  |
| 1024 | clenbuterol                                      | Solid-phase micro extraction (SPME) and headspace derivatization of clenbuterol followed by GC-FID and GC-SIMMS quantification.<br><i>Analytical and Bioanalytical Chemistry</i> (2003) 375 (3), 460-464.<br>Wenclawiak, B. W.; Engelmann, M. D.; Hinz, D.                                                                                     | 85 µm polyacrylate                                                | GC-FID, GC-SIMMS |
| 1032 | Review                                           | Residual solvent testing: A review of gas-chromatographic and alternative techniques.<br><i>Pharmaceutical Research (Dordrecht)</i> (2003) 20 (3), 337-344.<br>B'Hymer, Clayton                                                                                                                                                                |                                                                   |                  |
| 1101 | MPHP in urine                                    | New designer drug 4'-methyl-alpha-pyrrolidinohexanophenone: Studies on its metabolism and toxicological detection in urine using gas chromatography-mass spectrometry.<br><i>Journal of Chromatography B</i> (2003) 789 (1), 79-91.<br>Maurer, Hans H.; Fritschi, Giseler; Peters, Frank T.; Springer, Dietmar                                 |                                                                   | GC-MS            |
| 1107 | Residual solvents                                | Use of solid-phase microextraction coupled with gas chromatography for the determination of residual solvents in pharmaceutical products<br><i>Journal of Chromatography A</i> (2003) 999 (1-2), 195-201.<br>Dugay, Jose; Legrand, Stephanie; Vial, Jerome                                                                                     | Various                                                           |                  |
| 1133 | Residual solvents in drug products               | Unknown residual solvents identification in drug products by headspace solid phase microextraction gas chromatography-mass spectrometry.<br><i>Chromatographia</i> (2002) 56(supplement), S131-S135<br>Camarasu, C. C.                                                                                                                         | headspace                                                         | GC-MS            |
| 1142 | Volatile residual solvents in Chinese medicines. | Determination of volatile residual solvents in traditional Chinese medicines by headspace solid-phase microextraction and cryogenic gas chromatography with flame ionization detection<br><i>Journal of AOAC International</i> (2003) 86 (3), 461-466.<br><br>Jiang, Guibin; Liu, Jiemin; Liu, Jingfu; Liu, Jiyan; Wen, Meijuan; Zhou, Qunfang | PDMS/DVB                                                          | GC-FID           |
| 2608 | Methylmalonic & glutaric acid in urine           | <b>Determination of methylmalonic acid and glutaric acid in urine by aqueous-phase derivatization followed by headspace SPME-GC-MS</b><br><i>J. Sep. Sci.</i> 30, #2, 266-271 (2007-02)<br>Li, N.; Deng, C. H.; Zhang, X. M.<br><br><b>Development of SPME-GC method to determine</b>                                                          | 100 µm PDMS<br>55°C for 30 min,<br>diethyl sulfate<br>derivatives | GC/MS            |



|      |                                   |                                                                                                                                                                                                                                                                                                                                                |                                             |           |
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| 2324 | Methylformamide in urine          | N-hydroxymethyl-N-methylformamide and N-methylformamide in urine<br><i>J. Chromatogr. B</i> , 828 #1-2, 103-107 (2005)<br>Knupp, V.; Alvarez Leite, Edna Maria; de Lourdes Cardeal, Zenilda                                                                                                                                                    | 65µm DVB/PDMS headspace<br>80°C for 15 min, | GC-NPD    |
| 2247 | Clenbuterol in urine              | Determination of clenbuterol in urine using headspace SPME or liquid-liquid-liquid microextraction<br><i>Analytica Chimica Acta</i> 552 #1-2, 67-75 (2005)<br>Melwanki, Mahaveer B.; Hsu, Wei-Hsun; Huang, Shang-Da                                                                                                                            | headspace<br>HMDS derivatives               | GC/MS     |
| 1169 | Clenbuterol in urine              | Quick analysis of small beta -agonists in urine by solid-phase microextraction with headspace derivatization and gas chromatography-mass spectrometry.<br><i>Fenxi Huaxue</i> (2003) 37 (3), 326-328.<br>Liang, Y. L.; Yin, B. Z.; Hu, X. Z.*; Yu, J. X.; Liu, H. W.; Lin, Y. F.; Wu, T.                                                       | Polyacrylate                                | GC-MS     |
| 1279 | Endocrine disruptor contaminants. | Simple and rapid analysis of endocrine disruptors in liquid medicines and intravenous injection solutions by automated in-tube solid-phase microextraction/high performance liquid chromatography.<br><i>Journal of Pharmaceutical and Biomedical Analysis</i> (2003) 32 (3), 469-478.<br>Mitani, K.; Narimatsu, S.; Izushi, F.; Kataoka, H. * |                                             | HPLC      |
| 1308 | Drug analysis                     | Solid-phase microextraction and liquid chromatography/mass spectrometry in drug analysis<br><i>Analytica Chimica Acta</i> (2003) 492 (1-2), 49-67.<br>Kumazawa, Takeshi; Lee, Xiao-Pen; Sato, Keizo; Suzuki, Osamu                                                                                                                             |                                             | LC-MS     |
| 1312 | Pharma process impurities         | Determination of pharmaceutical process impurities by solid phase microextraction gas chromatography<br><i>Journal of Separation Science</i> (2003) 26 (12-13), 1097-1103.<br>Frost, Richard P.; Hussain, Mumtaz S.; Raghani, Anil R.                                                                                                          | Carboxen/PDMS/DVB                           | GC        |
| 2445 | Drugs in biological fluids        | In vivo sampling with solid phase microextraction<br><i>J. Biochem. Biophys. Meth.</i> 70, #2, 181-193 (2007-03-10)<br>Musteata, F. M.; Pawliszyn, J.                                                                                                                                                                                          |                                             |           |
| 1336 |                                   | Development and evaluation of a solid-phase microextraction probe for in vivo pharmacokinetic studies<br><i>Analytical Chemistry</i> (2003) 75 (19), 5103-5115.<br>Fahie, Brian; Grant, Russell P.; Incledon, Bev; Lord, Heather L.; Pawliszyn, Janusz B.; Walles, Markus                                                                      | polypyrrole                                 |           |
| 1361 | Drugs in biological fluids        | Automated sample preparation using in-tube solid-phase microextraction and its applications long dash a review.<br>Analytical and Bioanalytical Chemistry (2002) 373(1-2), 31-45.<br>Kataoka, H.                                                                                                                                               |                                             | LC-MS     |
| 2753 | Drugs in plasma                   | Comparison of SPME and liquid-liquid extraction in 96-well format for the determination of a drug compound in human plasma by LC-MS<br><i>J. PHARM. BIOMED. ANAL.</i> 45, #4, 599-608 (30 NOV 2007)<br>Xie, W.; Pawliszyn, J.; Mullett, W. M.; Matuszewski, B. K.                                                                              |                                             | LC-MS     |
| 2562 | Asarones in plasma                | Development of GC-MS following headspace SPME for fast . determination of asarones in plasma<br><i>Rapid Commun. Mass Spectrom.</i> 20, #14, 2120-2126 (2006-06-09)<br>Deng, C. H.; Lin, S.; Huang, T. M.; Duan, G. L.; Zhang, X. M.                                                                                                           | headspace                                   | GC-MS     |
| 2905 | Nitromethane in blood             | Method for quantifying nitromethane in blood as a potential biomarker of halonitromethane exposure<br><i>Environ. Sci. Technol.</i> 42, #7, 2522-2527 (Apr 1 2008)<br>Alwis, K. ; Blount, Be.; Loose, K; Silva, Lalith K.; Smith, M.                                                                                                           | headspace                                   | GC/MS     |
| 2561 | Carboxylic acid in plasma         | SPME method for carbon isotopic analysis of volatile carboxylic acids in human plasma byGC/combustion/isotope ratio mass spectrometry.<br><i>Rapid Commun. Mass Spectrom.</i> 20, #23, 3573-3578 (2006-11-13)<br>Ferchaud-Rocher, V.; Albert, C.; Champ, M.; Krempf, M.                                                                        | 75µm Carboxen headspace                     | GC/C/IRMS |
|      |                                   | Simultaneous determination of selegiline and desmethylselegiline in                                                                                                                                                                                                                                                                            |                                             |           |

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|-------------------------------------------------------------------|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|---------|
| 2707                                                              | Selegiline<br>in human blood                    | human body fluids by headspace SPME-GC-MS<br><i>J. Chromatogr., B: 844, #2, 283-291 (2006-12-05)</i><br>Kuriki, A.; Kumazawa, T. ; Lee, X. P.; Hasegawa, C.; Kawamura, M.; Suzuki, O.; Sato, K.                                                                                                                                                                                                                                                                 | headspace                                                   | GC/MS   |
| 2456                                                              | Paeonol in plasma                               | Fast determination of paeonol in plasma by headspace SPME followed by gas chromatography-mass spectrometry<br><i>Anal. Chim. Acta 585, #1, 76-80 (2007-02-28)</i><br>Dong, L.; Deng, C. H.; Wang, J. Y.; Shen, X. Z.                                                                                                                                                                                                                                            | headspace                                                   | GC/MS   |
| 2425                                                              | Fluoxetine and<br>norfluoxetine in<br>plasma    | SPME-LC determination of fluoxetine and norfluoxetine in plasma using a heated liquid flow through interface<br><i>J. Chromatogr., B: 847, #2, 217-223 (2007-03-01)</i><br>Fernandes, C.; dos Santos Neto, A.; Rodrigues, J.; Alves, C.; Lancas, F.                                                                                                                                                                                                             | 65µm PDMS/DVB                                               | LC-MS   |
| 1392                                                              | Drugs in plasma                                 | Application of solid-phase micro-extraction technology to drug screening and identification.<br><i>Annals of Clinical Biochemistry (2001) 38(5), 541-547.</i><br>Mosaddegh, M. H.; Richardson, T.; Stoddart, R. W.; McClure, J.                                                                                                                                                                                                                                 | Polyacrylate, carbowax/D                                    | GC-MS   |
| 1470                                                              | Amphetamine-like<br>drugs                       | Simultaneous detection of amphetamine-like drugs with headspace solid-phase microextraction and gas chromatography-mass spectrometry.<br><i>Journal of Chromatography B (2002) 780(1), 183-192</i><br>Macchia, Teodora; Chiarotti, Marcello; Gentili, Stefano; Marsili, Remo; Torresi, Alessio                                                                                                                                                                  |                                                             | GC-MS   |
| 1497                                                              | Residual solvents in<br>pharmaceuticals         | High-speed gas chromatographic analysis of solvents in pharmaceuticals using solid phase microextraction<br><i>Journal of Pharmaceutical and Biomedical Analysis (2002) 29(3), 507-518</i><br>Raghani, A. R.                                                                                                                                                                                                                                                    | 50/30um DVB/Carboxen<br>PDMS, 65um PDMS<br>DVB              | GC      |
| 2769                                                              | citalopram,<br>fluoxetine in<br>human urine     | Simultaneous determination of citalopram, fluoxetine and their main metabolites in human urine samples by SPME-LC<br><i>J Pharma and Biomedical Analysis 46(4), 763-770 (MAR 13 2008)</i><br>Unceta, Nora; Gomez-Caballero, Alberto; Sanchez, Alicia; Millan, S.; Carmen Sampedro, M.; Aranzazu Goicolea, M.; Salles, J.; Barrio, R.<br>Determination of delorazepam in urine by solid-phase microextraction coupled to high performance liquid chromatography. |                                                             | HPLC-UV |
| 1514                                                              | Delorazepam in urine                            | <i>Journal of Pharmaceutical and Biomedical Analysis (2002) 28(5), 965-972</i><br>Zambonin, Carlo Giorgio; Aresta, Antonella; Monaci, Linda                                                                                                                                                                                                                                                                                                                     | 50um Carbowax TPR,<br>60um PDMS DVB                         | HPLC-UV |
| 1201                                                              |                                                 | Rapid screening of 2-"fluorine-18"-fluoro-2-deoxy-D-glucose infusions for volatile organic compound contaminants by solid phase microextraction with gas chromatography-selective ion monitoring mass spectrometry (SPME-GC-SIMMS).<br><i>Applied Radiation and Isotopes (2003) 58 (2), 193-200.</i><br>Kanu, A. B.; Dixon, M.; Zu, Y. Y.; Bailey, J.; Gillies, J. M.; Zweit, J.; Thomas, C. L. P.*                                                             |                                                             |         |
| 1280                                                              |                                                 | Determination of trace retinoic acid by capillary electrophoresis-solid-phase microextraction with direct UV detection.<br><i>Journal of Chromatographic Science (2003), 41 (6), 301-304.</i><br>Fang, M.; Xu, G. W.                                                                                                                                                                                                                                            |                                                             | CE      |
| 1827                                                              | Pharmaceuticals<br>in urine                     | Study of multiple SPME combined off-line w/HPLC<br>Application in analysis of pharmaceuticals in urine<br><i>Anal. Chim. Acta, 516, #1-2, 197-204</i><br>Aikaterini Lontou, M.; Gondova, T.; Michopoulos, F.; Sucha, M.; Theodoridis, G.                                                                                                                                                                                                                        | 100µm PDMS &<br>85µm polyacrylate<br>immersed<br>salt added | HPLC    |
| <b>Biological</b>                                                 |                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                             |         |
| 2205                                                              | Phosphoric acid<br>triesters in<br>human plasma | Determination of phosphoric acid triesters in human plasma using SPME and GC coupled to inductively coupled plasma MS<br><i>J. Chromatogr. A, 1103, #2, 329-336 (2006)</i><br>Shah, Monika; Meija, Juris; Cabovska, Baiba; Caruso, Joseph A.                                                                                                                                                                                                                    | 65µm DVB/PDMS<br>immersion<br>30min @40°C                   | GC-MS   |
| Sample preparation techniques for mass spectrometry in proteomics |                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | deproteinization                                            |         |

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|------|----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|------------------------------------------|
| 2204 | Proteomics                                                                                               | using recently developed highly selective materials<br><i>Current Proteomics 2 #4, 269-285 (2005)</i><br>Huck, Christian W.; Bakry, Rania; Bonn, Guenther K.                                                                                                                |                                                                           | MS                                       |
| 638  | Anesthetics<br>in plasma                                                                                 | Evaluation of SPME for the study of protein binding in human plasma samples<br><i>J. Chromatogr. Sci. (2000), 38(10), 458-464</i><br>Abdel-Rehim, M., Calsson, G., Bielenstein, M., Arvidsson, T., Blomberg, L.                                                             | 60µm Carbowax/DVB<br>32°to 40°C<br>pH 6.4-9.4                             | NPD                                      |
| 2613 | Pyrene diffusion<br>serum albumin                                                                        | Influence of albumin on sorption kinetics in SPME: Consequences for chemical analyses and uptake processes<br><i>Anal. Chem. 79,#18, 6941-6948 (Sep 15 2007)</i><br>Hermens, Joop L. M.; Kramer, Nynke I.; Van Eijkeren, Jan C. H.                                          |                                                                           |                                          |
| 2227 | Drugs in<br>serum albumin                                                                                | Application of SPME in the investigation of protein binding of pharmaceuticals<br><i>J. Chromatogr. B 830 #2, 238-244 (2006)</i><br>Theodoridis, Georgios                                                                                                                   |                                                                           | HPLC                                     |
|      |                                                                                                          | Measurement of the Free Concentration Using SPME:                                                                                                                                                                                                                           |                                                                           |                                          |
| 99   | Aniline, nitrobenzene,<br>4-n-pentylphenol,<br>4-chloro-3-<br>methylphenol<br>in bovine serum<br>albumin | Binding to Protein<br><i>J. Anal. Chem. 68: 4463-4467 (1996)</i><br><br>Vaes, W., Ramos, E., Verhaar, H., Seinen, W., Hermens, J.                                                                                                                                           | 85µm polyacrylate<br>24°C, 9-14 min<br><br>stirring<br><br>K2PO4 buffered | GC-MS                                    |
| 2843 | Flavor compounds<br>bovine serum                                                                         | Modeling bovine serum albumin binding of flavor compounds (alcohols, aldehydes, esters, and ketones) as a function of molecular properties<br><i>Journal of Food Science 73, #1, S56-S63 (JAN-FEB 2008)</i><br>Tan, Y.; Siebert, K. J.                                      | headspace                                                                 | GC                                       |
| 2888 | Estradiol in<br>organic matter                                                                           | Quantification of solute-solute interactions using negligible-depletion SPME: Measuring the affinity of estradiol to bulk organic matter<br><i>Environ. Sci. Technol. 42, #8, 2886-2892 (Apr 15 2008)</i><br>Escher, Beate I.; Neale, Peta A.; Schafer, Andrea I.           |                                                                           |                                          |
| 2320 | Estradiol from<br>bovine serum<br>albumin                                                                | The binding constant of estradiol to bovine serum albumin. An upper-level experiment utilizing tritium-labeled estradiol and liquid scintillation counting<br><i>J Chem Educ 83 #2, 294-295 (2006)</i><br>Adhyaru, Bhavin; Liang, Peihong; Pearson, Wright L.; Williams, K. | headspace                                                                 | GC                                       |
| 140  | Protein in<br><br>bovine serum albumin                                                                   | Solid Phase Microextraction of Biopolymers, Exemplified with Adsorption of Basic Proteins onto a Fiber Coated with Polyacrylic Acid<br><i>J. Microcolumn Sep. 8: 1 (1996)</i><br>Liao, J., Zeng, C., Hjerten, S., Pawliszyn, J.                                             | 85µm polyacrylate<br><br>5-240 sec<br>immersion                           | HPLC-UV                                  |
| 2899 | Review article                                                                                           | Sorbent preconcentration procedures coupled to capillary electrophoresis for environmental and biological applications<br><i>Anal. Chim. Acta 616, #1, 1-18 (May 26 2008)</i><br>Aguilar, Carme; Borrull, Francesc; Calull, Marta; Puig, Patricia                           |                                                                           |                                          |
| 411  | Proteins                                                                                                 | Optimization of SPME-Capillary Zone Electrophoresis-MS for High Sensitivity Protein Identification<br>Electrophoresis (1998), 19(13), 2338-2347<br>Figeys, D., Ahang, Y., Aebersold, R.                                                                                     |                                                                           | capillary zone<br>electrophoresis-<br>MS |
|      |                                                                                                          | Bio-compatible in-tube SPME capillary for the direct extraction and HPLC determination of drugs in human serum.                                                                                                                                                             |                                                                           |                                          |
| 988  | Drugs in human serum                                                                                     | <i>J.Chromatogr. A (2002) 963(1-2), 325-334</i><br>Mullett, W.M.; Levsen, K.; Lubda, D.; Pawliszyn, J.                                                                                                                                                                      |                                                                           | HPLC                                     |
| 2237 | Volatiles from<br>stool samples                                                                          | Rapid diagnosis of ulcerative colitis and Crohns disease by the analysis of flatus<br><i>Gastroenterology 126, #4 Suppl 2, A203 (2004)</i><br>Probert, Christopher S. J.; Garner, C. E.; Ratcliffe, Norman                                                                  | headspace                                                                 | GC/MS                                    |

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| 1020 |                                  | Rapid diagnosis of GI infection from flatus.<br><i>Gut</i> (2003) 52 (Supplement 1), A93.<br>Probert, C. S.; Jones, P.; Ratcliffe, N.                                                                                                                                                                                                                                                                               |                               |           |
| 1036 | Semi-volatiles in saliva         | Solid-phase micro-extraction-gas chromatography-mass spectrometry and headspace-gas chromatography of tetrahydrocannabinol, amphetamine, methamphetamine, cocaine and ethanol in saliva samples<br><i>Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences</i> (2003) 789 (1), 73-78.<br>Alves Silva, Ovandir; De Moraes Moreau, Regina Lucia; Tawil, Nadia; Yonamine, Mauricio | PDMS                          | GC-MS     |
| 2711 | Amphetamines in hair.            | Single hair analysis of methamphetamine and amphetamine by solid phase microextraction coupled with in matrix derivatization<br><i>Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences</i> 842 #2, 106-110. (2006-10-02)<br>Nishida, M.; Yashiki, M.; Namera, A.; Kimura, K.                                                                                                   | N-propoxycarbonyl derivatives | GC        |
| 1037 | Amphetamines in hair.            | Determination of amphetamines in human urine by headspace solid-phase microextraction and gas chromatography<br><i>Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences</i> (2003) 789 (1), 59-63.<br>Christopoulou, Klio; Psaroulis, Dimitrios; Raikos, Nikolaos; Theodoridis, Georgios; Tsoukali, Heleni                                                                      | 100 um PDMS                   | GC-FID    |
| 2869 | 2-Pentylfuran in breath          | Investigation into the production of 2-Pentylfuran by <i>Aspergillus fumigatus</i> and other respiratory pathogens in vitro and human breath samples<br><i>Medical Mycology</i> 46, #3, 209-215 (2008)<br>Syhre, Mona; Scotter, Jennifer M.; Chambers, Stephen T.                                                                                                                                                   | headspace                     | GC/MS     |
| 2743 | Aldehydes in breath              | Determination of aldehydes in human breath by on-fibre derivatization, solid-phase microextraction and GC-MS<br><i>J Chromatogr B</i> 860, #1, 86-91 (2007 Dec 1)<br>Svensson, S.; Larstad, M.; Broo, K.; Olin, A. -C.                                                                                                                                                                                              | 65µm PDMS/DVB headspace       | GC/MS-SIM |
| 2785 | Benzene in breath                | An optimized method for determination of benzene in exhaled air by GC-MS using SPME as a sampling technique<br><i>J Chromatogr B</i> , 865, #1-2, 141-146 (Apr 1 2008)<br>Amorim, Leiliane C.A.; Cardeal, Zenilda L.; Carneiro, Joana P.                                                                                                                                                                            | PFBHA derivative              | GC/MS     |
| 2647 | Organics in breath               | Breath air analysis and its use as a biomarker in biological monitoring of occupational and environmental exposure to chemical agents.<br><i>J Chromatogr B</i> , 853, #1-2, 1-9 (2007 Jun 15)<br>Amorim, Leiliane Coelho A; de L Cardeal, Zenilda                                                                                                                                                                  | air sampling                  | GC        |
| 2249 | Aroma compounds in human breath  | Evaluation of the SPME technique for the analysis of human breath during eating<br><i>Sciences des Aliments</i> 25 #3, 193-206 (2005)<br>Pionnier, E.; Semon, E.; Chabanet, C.; Salles, C.                                                                                                                                                                                                                          | PDMS headspace                | GC/MS     |
| 1038 | Volatiles in breath              | Application of low-temperature glassy carbon-coated macrofibers for solid-phase microextraction analysis of simulated breath volatiles<br><i>Analytical Chemistry</i> (2003) 75 (7), 1604-1614.<br>Giardina, Matthew; Olesik, Susan V.                                                                                                                                                                              | PDMS-DVB                      |           |
| 2501 | VOCs in hand odor samples        | The frequency of occurrence and discriminatory power of compounds found in human scent across a population determined by SPME-GC/MS<br><i>J. CHROMATOGR. B</i> , 846, #1-2, 86-97 (01 FEB 2007)<br>Curran, A. M.; Ramirez, C. F.; Schoon, A. A.; Furton, K. G.                                                                                                                                                      | headspace                     | GC/MS     |
| 2250 | Volatile organic in human odor   | Comparison of the volatile organic compounds present in human odor using SPME-GC/MS<br><i>Journal of Chemical Ecology</i> 31 #7, 1607-1619 (2005)<br>Curran, Allison M.; Rabin, Scott I.; Prada, Paola A.; Furton, K.                                                                                                                                                                                               | headspace                     | GC/MS     |
| 2271 | Perfluorobutane from exhaled air | A respiration-metabolism chamber system and a GC-MS method for studying exhalation of perfluorobutane in rats after intravenous injection of the ultrasound contrast agent Sonazoid™<br><i>J Pharma Biomedical Analysis</i> , 39, #3-4, 746-751 (2005)<br>Uran, S.; Landmark, K.; Normann, P.; Hals, P.I Toft, K.; Skotland, T.                                                                                     | 75µm Carboxen Headspace       | GC-MS     |
| 2342 | 2-heptanone                      | Urine from stressed rats increases immobility in receptor rats forced to swim: role of 2-heptanone                                                                                                                                                                                                                                                                                                                  | headspace                     | GC-MS     |

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|      | from rat urine                          | <i>Physiol Behav</i> 91, #1, 166-172 (2007 May 16)<br>Gutierrez-Garcia, A.; Contreras, C.; Mendoza-Lopez, M.;<br>Garcia-Barradas, O.; Cruz-Soanchez, J                                                                                                                                                                                                                                                                                            |                                         |       |
| 2872 | Pheromones<br>from triatomine<br>bugs   | <b>Metasternal gland volatiles and sexual communication in the<br/>triatomine bug, <i>Rhodnius prolixus</i></b><br><i>Journal of Chemical Ecology</i> 34, #4, 450-457 (APR 2008)<br>Pontes, Gina B.; Bohman, Bjorn; Unelius, C. Rikard; Lorenzo, Marcelo G.<br><br>Male bugs modulate pheromone emission in response to vibratory signals from<br>conspecifics.                                                                                   | headspace                               | GC-MS |
| 1056 | Pheromones from male<br>bugs.           | <i>Journal of Chemical Ecology</i> (2003) 29 (3), 561-574.<br>Renou, Michel; Lasnier, Therese; Miklas, Nadege                                                                                                                                                                                                                                                                                                                                     |                                         |       |
| 1057 | Review article                          | New developments and applications of solvent-free sampling and sample<br>preparation technologies for the investigation of living systems<br><i>Australian Journal of Chemistry</i> (2003) 56 (2-3), 155-158.<br>Pawliszyn, Janusz                                                                                                                                                                                                                |                                         | LC-MS |
| 1076 | Organophosphorus<br>pesticides in blood | Simple determination of 22 organophosphorus pesticides in human blood using<br>headspace solid-phase microextraction and gas chromatography with mass<br>spectrometric detection.<br><i>Journal of Chromatographic Science</i> (2002) 40(1), 29-34<br>Musshoff, F.; Junker, H.; Madea, B.                                                                                                                                                         |                                         | GC-MS |
| 1060 | Phthalic monoesters in<br>urine.        | Determination of phthalic monoesters in aqueous and urine samples by solid-<br>phase microextraction-diazomethane on-fibre derivatization-gas<br>chromatography-mass spectrometry.<br><i>Journal of Separation Science</i> (2003) 26 (1-2), 87-96.<br>Alzaga, R.; Pena, A.; Bayona, J. M.*                                                                                                                                                        | PDMS-DVB<br>25 C, 20 minutes, headspace | GC-MS |
| 1104 | PAHs in urine.                          | Determination of polycyclic aromatic hydrocarbons in urine of coke oven workers<br>by headspace solid phase microextraction and gas chromatography-mass<br>spectrometry.<br><i>Chemico-Biological Interactions</i> (2003) 145 (2), 165-174.<br>Rappaport, Stephen M.; Waidyanatha, Suramya; Zheng, Yuxin                                                                                                                                          |                                         | GC-MS |
| 2326 | 1,8-cineole<br>in blood                 | <b>Rapid absorption of dietary 1,8-cineole results in critical blood<br/>concentration of cineole and immediate cessation of eating in the<br/>common brushtail possum (<i>Trichosurus vulpecula</i>)</b><br><i>J Chemical Ecology</i> 31 #12, 2775-2790 (2005)<br>Boyle, Rebecca R.; McLean, Stuart; Brandon, Sue; Wiggins, Natasha                                                                                                              | headspace                               | GC/MS |
| 1158 | 1,8-cineole in blood                    | Application of solid-phase microextraction to the quantitative analysis of 1,8-<br>cineole in blood and expired air in a Eucalyptus herbivore, the brushtail possum<br>( <i>Trichosurus vulpecula</i> ).<br><i>Journal of Chromatography, B: Analytical Technologies in the Biomedical and<br/>Life Sciences</i> (2002) 780 (2), 397-406.<br>Boyle, R. R.; McLean, S.; Brandon, S.; Pass, G. J.; Davies, N. W.                                    |                                         | GC    |
| 1162 | Fatty acid esters in<br>hair.           | Fatty acid ethyl esters in neonatal hair: A possible biomarker for in utero ethanol<br>exposure.<br><i>Alcoholism Clinical and Experimental Research</i> (2003) 27 (5 supp), 39A.<br>Koren, G.; Klein, J.; Caprara, D.                                                                                                                                                                                                                            |                                         |       |
| 1163 | Pheromones<br>from female elephant      | Headspace solid-phase microextraction (SPME) and gas chromatography-mass<br>spectrometry (GC-MS) for the determination of 5alpha-androst-2-en-17-one and<br>-17beta-ol in the female Asian elephant: Application for reproductive monitoring<br>and prediction of parturition.<br><i>Journal of Steroid Biochemistry and Molecular Biology</i> (2003) 84 (2-3), 383-<br>391.<br>Dehnhard, M.; Eulenberger, K.; Hatt, J.-M.; Ochs, A.; Strauss, G. |                                         | GC-MS |
| 2840 | Pheromones<br>from African<br>elephant  | <b>Use of automated solid phase dynamic extraction (SPDE)/GC-MS<br/>and novel macros in the search for African elephant pheromones</b><br><i>Chemical Signals in Vertebrates</i> 11, 25-35 (2008)<br>Goodwin, T.; Brown, P.; Eggert, M.; Evola, M.; House, S.;<br>Weddell, M.; Chen, C.; Jackson, S.; Aubut, Y.; Eggert, J.<br>Schulte, B.; Rasmussen, L.; Morshedi, R.;                                                                          |                                         |       |

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| 2259 | Pheromones from African elephant | Use of SPME, reverse phase SPE, and GC-MS in a search for African elephant urinary pheromones<br><i>Abstracts of Papers Am Chem Society</i> 229 #1, U395 (2005)<br>Brown, P.; Eggert, M.; Evola, M.; Goodwin, T.; Rasmussen, L., Schulte, B.                                                                                           |                    | GC/MS  |
| 1205 | Busulphan in plasma              | On-line derivatization utilizing solid-phase microextraction (SPME) for determination of busulphan in plasma using gas chromatography-mass spectrometry (GC-MS).<br><i>Therapeutic Drug Monitoring</i> (2003) 25 (3), 400-406.<br>Abdel-Rehim, Mohamed; Blomberg, Lars; Hassan, Moustapha; Hassan, Zuzana                              | Carbowax/DVB       | GC     |
| 1207 | Midazolam in human plasma        | Determination of midazolam in human plasma by solid-phase microextraction and gas chromatography/mass spectrometry.<br><i>Rapid Communications in Mass Spectrometry</i> (2001) 15(24), 2497-2501<br>Davide Ferrara, Santo; Frison, Giampietro; Maietti, Sergio; Tedeschi, Luciano                                                      | 85um Polyacrylate  | GC-MS  |
| 1261 | Elephant urine                   | Use of SPME and GC-MS for chemical analysis of urine from African elephants in musth.<br><i>Abstracts of Papers American Chemical Society</i> (2003) 225 (1-2), CHED 614.<br>Hicks, Adam R.; Goodwin, Thomas E.; Dill, Whitney M.; Davis, Ben L.; Alberts, Susan C.; Hollister-Smith, Julie                                            |                    |        |
| 2255 | Sex pheromone mouse urine        | Monitoring potential semiochemicals in individual mouse urine samples<br><i>Chemoecology</i> 15 #3, 139-146 (2005)<br>Kayali-Sayadi, M. N.; Polo-Diez, L. M.; Salazar, I.                                                                                                                                                              | headspace          | GC/MS  |
| 1262 | Pheromones in urine.             | Chemical analysis of preovulatory female African elephant urine: A search for putative pheromones.<br><i>Abstracts of Papers American Chemical Society</i> (2003) 225 (1-2), CHED 409.<br>Hicks, Adam R.; Goodwin, Thomas E.; Dill, Whitney M.; Davis, Ben L.; Loizi, Helen; Rasmussen, L. E. L.; Schulte, Bruce A.                    |                    |        |
| 1301 | Odours in human armpit.          | Analysis of odours in human armpit by GC-MS with headspace solid-phase microextraction.<br><i>Fenxi Ceshi Xuebao</i> (2003) 22 (4), 21-24.<br>Wu, D. H.; Xu, H. K.; Wang, Z. P.; Zhang, L.; Wang, X. L.*                                                                                                                               | 70 um DVB/carbowax | GC-MS  |
| 1310 | Amitraz in canine plasma.        | Determination of amitraz in canine plasma by solid-phase microextraction-gas chromatography with thermionic specific detection<br><i>Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences</i> (2003) 794 (2), 337-342.<br>Carvalho, D.; Farias, A.; Lancas, F.M.; Queiroz, M.E.C.; Valadao, C.A.A. | PDMS               | GC-TSD |
| 1344 | VOC's in exhaled breath          | Application of solid-phase microextraction and gas chromatography-mass spectrometry to the determination of volatile organic compounds in end-exhaled breath samples.<br><i>Journal of Chromatography, A</i> (2003) 1011 (1-2), 125-134.<br>Prado, C.; Marin, P.; Periago, J. F.                                                       |                    | GC-MS  |
| 2492 | Pheromones from moths            | Mating disruption of codling moth <i>Cydia pomonella</i> with high densities of Ecodian sex pheromone dispensers<br><i>Journal of Applied Entomology</i> 131, #5, 311-318 (JUN 2007)<br>Angeli, G.; Anfora, G.; Baldessari, M.; Germinara, G. S.; Rama, F.; De Cristofaro, A.; Ioriatti, C                                             | field sampling     |        |
| 1346 | Pheromones in ants.              | Investigation by solid-phase microextraction and gas chromatography/mass spectrometry of trail pheromones in ants.<br><i>Rapid Communications in Mass Spectrometry</i> (2003) 17 (18), 2071-2074.<br>di Tullio, A.; de Angelis, F. *; Reale, S.; Grasso, D. A.; Visicchio, R.; Castracani, C.; , A.; le Moli, F.                       |                    | GC-MS  |
| 1359 | Volatile aldehydes               | SPME determination of volatile aldehydes for evaluation of in-vitro antioxidant activity.<br><i>Analytical and Bioanalytical Chemistry</i> (2002) 373(1-2), 70-74.<br>Stashenko, E. E.; Puertas, M. A.; Martinez, J. R.                                                                                                                |                    | GC-MS  |

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| 1360 | VOCs in body fluids                  | Cryogenic oven-trapping gas chromatography for analysis of volatile organic compounds in body fluids.<br>Analytical and Bioanalytical Chemistry (2002) 373(1-2), 75-80.<br>Watanabe-Suzuki, K.; Ishii, A.; Suzuki, O.                                                                                                                 |                                              | GC-MS |
| 1365 | Hydrocarbons in cuticles             | Solid-phase microextraction for the detection of termite cuticular hydrocarbons.<br>Journal of Chromatography, A (2001) 932(1-2), 119-127.<br>Bland, J. M.; Osbrink, W. L. A.; Cornelius, M. L.; Lax, A. R.; Vigo, C. B.                                                                                                              |                                              | GC-MS |
| 1375 | p,p'-DDE in biological samples       | Solid-phase microextraction and GC-MS analysis of p, p' -DDE in biological samples.<br>Journal of Chromatography, B: Biomedical Applications (2001) 761(1), 93-98.<br>Kusakabe, T.; Saito, T. *; Takeichi, S.                                                                                                                         | PDMS                                         | GC-MS |
| 1380 | Perfluorocarbons in blood.           | Detection of perfluorocarbons in blood by headspace solid-phase microextraction combined with gas chromatography-mass spectrometry.<br>Biomedical Chromatography (2001) 15(7), 443-451.<br>Mathurin, J. -C.; de Ceaurriz, J.; Audran, M.; Krafft, M. -P.                                                                              |                                              | GC-MS |
| 1396 | Ropivacaine in plasma                | Determination of ropivacaine and its metabolites in human plasma using solid phase microextraction and GC-NPD/GC-MS.<br><i>Journal of Microcolumn Separations</i> (2001) 13(8), 313-321.<br>Abdel-Rehim, M.; Andersson, M.; Portelius, E.; Norsten-Hoog, C.; Blomberg, L. G.                                                          | Various                                      | Gc-MS |
| 2729 | Volatiles from dairy gel             | <b>Effect of thickeners on aroma compound behavior in a model dairy gel</b><br><i>J Agri Food Chem</i> 55, #12, 4835-4841 (JUN 13 2007)<br>Lubbers, S; Decourcelle, N.; Martinez, D.; Guichard, E.; Tromelin, A.                                                                                                                      | headspace                                    | GC-MS |
| 2343 | Volatiles from milk, cheese          | <b>Study on the Influence of Pasture on Volatile Fraction of Ewes' Dairy Products by SPME-GC-MS</b><br><i>J. Dairy Sci.</i> 90, # 2, 556-569 (2007-02-00)<br>Povolo, M.; Contarini, G.; Mele, M.; Secchiari, P.                                                                                                                       | headspace                                    | GC-MS |
| 2883 | Volatiles from milk                  | <b>SPME-GC-MS analysis of dairy product volatiles for the determination of shelf-life</b><br><i>Int. Dairy J.</i> 18, #8, 819-825 (August 2008)<br>Concurso, C.; Conte, F.; Romeo, V.; Verzera, A.; Ziino, M.                                                                                                                         | headspace                                    | GC-MS |
| 2882 | Volatiles from milk                  | <b>Characterization of volatile compounds in ultra-high-pressure homogenized milk</b><br><i>Int. Dairy J.</i> 18, #8, 828-834 (August 2008)<br>Ferragut, V.; Guamis, B.; Jaramillo, D.P.; Pereda, J.; Quevedo, J.M.; Trujillo, A.J.                                                                                                   | headspace                                    | GC-MS |
| 2705 | Volatiles from soymilk               | <b>Identification of volatile compounds in soymilk using SPME-GC</b><br><i>Food Chem.</i> 99, #4, 759-766 (2006-07-07)<br>Achouri, A.; Boye, J. I.; Zamani, Y.                                                                                                                                                                        | 75µm Carboxen.<br>20 min @ 40°C<br>headspace | GC    |
| 2490 | Volatiles from soymilk               | <b>Selected odor compounds in cooked soymilk as affected by soybean materials and direct steam injection</b><br><i>J of Food Science</i> 72, #7, S481-S486 (SEP 2007)<br>Yuan, S. H.; Chang, S. K. C.                                                                                                                                 | headspace                                    | GC-MS |
| 1413 | Naltrexone, 6,beta-naltrexol in milk | Quantification of naltrexone and 6,beta-naltrexol in plasma and milk using gas chromatography-mass spectrometry. Application to studies in the lactating sheep.<br>Journal of Chromatography B (2001) 761(1), 85-92.<br>Ilett, Kenneth F.; Bencini, Roberta; Chan, Chooi Fen; Chiswell, Gregory M.; Dusci, Leon J.; Hackett, L. Peter |                                              | GC-MS |
| 1225 |                                      | Monitoring and fast detection of mycotoxin-producing fungi based on headspace solid-phase microextraction and headspace sorptive extraction of the volatile metabolites.<br><i>Journal of Chromatography, A</i> (2003) 985 (1-2), 127-135.<br>Demyttenaere, J. C. R.; Morina, R. M.; Sandra, P.                                       |                                              | GC-MS |

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| 1159 | Phthalates from toys                 | Determination of bis(2-ethylhexyl) phthalate of plastic toys leached in stimulant saliva by gas chromatography with solid-phase microextraction<br><i>Fenxi Ceshi Xuebao</i> (2003) 22 (2), 34-36.<br>Yang, Z. J.; Zhang, W. Y.; Pan, K. Y.; Yu, J. X.; Wu, C. Y.; Wang, C. Y.                                                                        | PDMS-fullerene                               | GC               |
| 1210 | Volatile fatty acids in rumen.       | Characterizing volatile fatty acids and other gases in a rumen closed in vitro fermentation system using solid phase microextraction<br><i>Transactions of the American Society of Agricultural Engineers</i> (2003) 46 (2), 585-588.<br>Chirase, Norbert K.; Koziel, Jacek A.; Spinhirne, Jarett P.                                                  | DVB/Carboxen/PDMS                            | GC-MS            |
| 2798 | Crude oil                            | <b>A comparison of results obtained using liquid injection and headspace SPME for crude oil analysis by GC-MS</b><br><i>J of Chrom Sci.</i> 46, #4, 332-338 (APR 2008)<br><b>D'Auria, Maurizio; Racioppi, Rocco; Velluzzi, Vincenzina</b><br><br>Volatile hydrocarbon biodegradation by a mixed-bacterial culture during growth on crude oil.         | headspace                                    | GC-MS            |
| 1412 | Volatile hydrocarbons                | Journal of Industrial Microbiology & Biotechnology (2001) 26(6), 356-362.<br>Van Hamme, J. D.; Ward, O. P                                                                                                                                                                                                                                             |                                              |                  |
| 1311 |                                      | Production of flavoured volatile organic compounds (VOCs) by <i>Candida oleophila</i> GK10: Optimisation using factorial design and response surface analysis<br><i>Enzyme and Microbial Technology</i> (2003) 33 (5), 668-675.<br>Buzzini, Pietro; Davoli, Paolo; Martini, Alessandro; Pagnoni, Ugo Maria                                            |                                              | GC-MS            |
| 2791 | Bromocyclen in fish tissue           | <b>Enantioselective determination of the organochlorine pesticide bromocyclen in spiked fish tissue using SPME-GC-ECD and ICP-MS</b><br><i>Talanta</i> 75, #3, 710-716 (May 15 2008)<br><br><b>Blanco-Gonzalez, E.; Fidalgo-Used, N.; Montes-Bayon, M.; Sanz-Medel, A</b>                                                                             |                                              | GC-ECD<br>ICP-MS |
| 1443 | Organochlorine pesticides in fish    | Solid-phase microextraction as a clean-up and preconcentration procedure for organochlorine pesticides determination in fish tissue by gas chromatography with electron capture detection<br><i>Journal of Chromatography A</i> (2003) 1017(1-2), 35-44<br><br>Blanco-Gonzalez, Elisa; Centineo, Giuseppe; Fidalgo-Used, Natalia; Sanz-Medel, Alfredo |                                              | GC-ECD           |
| 1456 | Pheromones in mouse urine            | Identification of pheromones in mouse urine by head-space solid phase microextraction followed by gas chromatography-mass spectrometry.<br><i>Journal of Chromatography B</i> (2003) 796(1), 55-62<br><br>Kayali-Sayadi, M. N.; Bautista, Jose M.; Polo-Diez, L. M.; Salazar, Ignacio                                                                 | 85um Carboxen PDMS                           | GC-MS            |
| 1468 | Sufentanil in human plasma           | Solid-phase microextraction of human plasma samples for determination of sufentanil by gas chromatography-mass spectrometry.<br><i>Therapeutic Drug Monitoring</i> (2002) 24(6), 768-774<br><br>Boulieu, Roselyne; Bolon, Magali; Dufresne, Christelle; Paradis, Chantal                                                                              | 65um PDMS DVB, 10mins, immersion             | GC-MS            |
| 1485 | Volatiles in live biological samples | Applications of solid-phase microextraction to chemical analysis of live biological samples.<br><i>Trends in Analytical Chemistry</i> (2002) 21(6-7), 428-438<br><br>Augusto, Fabio; Valente, Antonio Luiz Pires                                                                                                                                      |                                              |                  |
| 1487 | Pheromones from <i>Lepidoptera</i>   | Lepidoptera ( <i>Sesamia nonagrioides</i> (Lefebvre) (Lepidoptera Noctuidae)) by solid-phase microextraction<br><i>Redia</i> (2001) 84, 7-18<br><br>Rotundo, Giuseppe; Germinara, Giacinto Salvatore; De Cristofaro, Antonio                                                                                                                          | 100µm PDMS, 20mins, 120 degrees C, headspace | GC-MS            |
| 1503 | Organic compounds in elephant urine  | Implementation of SPME and GC-MS to identify organic compounds in African elephant urine.<br><i>Abstracts of Papers American Chemical Society</i> (2002) 223(1-2), CHED 234<br><br>dwin, Thomas E.; Dowdy, Nichole C.; Rasmussen, L. E. L.                                                                                                            |                                              |                  |



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|      |                                                                                               | Determination of petroleum contamination in shellfish using solid phase micro-extraction with gas chromatography-mass spectrometry.                                                                                                                                                                       |                                                                                   |          |
| 1506 | C9-C20 hydrocarbons in shellfish                                                              | <i>Analytical and Bioanalytical Chemistry</i> (2002) 373(3), 147-152<br><br><i>Stack, Mary A.; James, Kevin J.; O'Connell, Sharon</i>                                                                                                                                                                     | 100um PDMS                                                                        | GC-MS    |
| 1519 | Thymol in humans                                                                              | Systemic availability and pharmacokinetics of thymol in humans.<br><i>Journal of Clinical Pharmacology</i> (2002) 42(7) 731-737<br><br>Veit, Markus; Abel, Gudrun; Brinkhaus, Benno; Derendorf, Hartmut; Graefe, Eva-Ulrike; Kohlert, Claudia; Maerz, Reinhard W.; Schindler, Gernot                      |                                                                                   | LC-MS-MS |
| 2201 | Volatile organics in blood                                                                    | <b>Quantification of 31 volatile organic compounds in whole blood using SPME-GC-MS</b><br><i>J. Chromatogr. B Anal.</i> 832, #2, 292-301 (2006)<br><b>Ashley, D.; Blount, B.; Cardinali, F.; Chambers, D.; Kobelski, R.; McElprang, David O.; Morrow, John C.</b>                                         | headspace                                                                         | GC-MS    |
| 1529 | Ethanol in blood                                                                              | Optimization of solid-phase microextraction conditions for gas chromatographic determination of ethanol and other volatile compounds in blood.<br><br><i>Journal of Chromatography B</i> (2002) 773(1), 75-82<br><br>Zuba, Dariusz; Parczewski, Andrzej; Reichenbacher, Manfred                           | 65um Carbowax DVB, 60 degrees C, 10mins, stirring, NaCl addition, headspace       | GC-FID   |
| 2361 | Hydroxychloro-quine metabolites in human urine                                                | <b>Stereoselective determination of hydroxychloro-quine and its major . metabolites in human urine by SPMEand HPLC</b><br><i>J. Sep Sci</i> 3, #15, 2351-2359 (Oct-2007)<br><b>Moraes del Oliveira, A.; Sueli Bonato, P.</b>                                                                              | 60µm PDMS-DVB<br>40 min at 25°C<br>pH 11<br>10% NaCl                              | HPLC     |
| 2272 | Naproxen in human urine                                                                       | <b>Determination of naproxen in human urine by SPME coupled LC</b><br><i>J Pharma Biomedical Analysis</i> , 39, #3-4, 643-647 (2005)<br><b>Aresta, Antonella; Palmisano, Francesco; Zambonin, Carlo G.</b>                                                                                                | 50µm CW/TPR                                                                       | LC       |
| 1532 | 2-chlorovinylarsonous acid in human urine                                                     | Quantitation of 2-chlorovinylarsonous acid in human urine by automated solid-phase microextraction-gas chromatography-mass spectrometry.<br><br><i>Journal of Chromatography B</i> (2002) 772(1), 147-153<br><br>Calafat, Antonia M.; Ashley, David L.; Wooten, Joe V.                                    |                                                                                   | GC-MS    |
| 1533 | Fluoroacetic acid in biological samples                                                       | Headspace solid-phase microextraction with 1-pyrenyldiazomethane on-fibre derivatization for analysis of fluoroacetic acid in biological samples.<br><br><i>Journal of Chromatography B</i> (2002) 772(1), 45-51<br><br>Pragst, Fritz; Huebner, Sandra; Mills, Graham; Sporkert, Frank                    | 85um Carboxen PDMS Stableflex, on-fiber derivatization with 1-pyrenyldiazomethane |          |
| 1540 | carbamazepine, carbamazepine epoxide, phenytoin, phenobarbital, and primidone in human plasma | Determination of lamotrigine simultaneously with carbamazepine, carbamazepine epoxide, phenytoin, phenobarbital, and primidone in human plasma by SPME-GC-TSD.<br><br><i>Journal of Chromatographic Science</i> (2002) 40(4), 219-223<br><br>Lancas, F. M.; Carvalho, D.; Queiroz, M. E. C.; Silva, S. M. |                                                                                   |          |
| 1427 | Microcystins                                                                                  | Determination of microcystins in cyanobacterial blooms by solid-phase microextraction : High-performance liquid chromatography.<br><i>Environmental Toxicology and Chemistry</i> (2001) 20(8), 1648-1655.<br><br>Lam, Michael Hon-wah; Lam, Paul K. S.; Poon, Ka-Fai; Wong, Bryan S. F.                   |                                                                                   | HPLC     |
| 2597 | Review of Trends forensic analysis                                                            | <b>New trends in hair analysis and scientific demands on validation and technical notes</b><br><i>Forensic Sci Intl</i> 165, #2-3, 204-215 (JAN 17 2007)<br><b>Musshoff, Frank; Madea, Burkhard</b>                                                                                                       |                                                                                   |          |

# Simple and sensitive determination of tetrahydrocannabinol, cannabidiol

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| 2516 | Cannabinols in hair                                 | and cannabinol in hair by combined silylation, headspace SPME-GC-MS<br><i>J. CHROMATOGR. B</i> 846, #1-2, 78-85 (01 FEB 2007)<br>Nadulski, T.; Pragst, F                                                                                                                                                                                                                       | Headspace trifluoroacetamide derivative               | GC-MS        |
| 1828 | Drugs in hair                                       | Rapid screening procedure based on headspace SPME-GC-MS for the detection of many recreational drugs in hair.<br><i>J. Chromatogr. B</i> , 801, #2, 289-296<br>Gentili, S.; Cornetta, M.; Macchia, T. *                                                                                                                                                                        | Headspace, 5min @ 90°C                                | GC-MS        |
| 2273 | Sulfonic acids esters in pharmaceutical ingredients | Determination of methyl and ethyl esters of methanesulfonic, benzenesulfonic and p-toluenesulfonic acids in active pharmaceutical ingredients by solid-phase microextraction<br><i>J Pharma Biomedical Analysis</i> , 39, #3-4, 477-485 (2005)<br>Colon, Ivelisse; Richoll, Stephen M.                                                                                         |                                                       | GC-MS        |
| 2709 | Parabens in water                                   | Optimisation of a SPME method for the determination of parabens in water samples at the low ng per litre level<br><i>J. Chromatogr. A</i> , 1124, #1-2, 3-10 (2006-08-18)<br>Canosa, P.; Rodriguez, I. ; Rubi, E.; Bollain, M. H.; Cela, R.                                                                                                                                    | 85µm polyacrylate immersed TBMS derivative sat. salt  | GC-MS/MS     |
| 1829 | Parabens in pharmaceuticals                         | Determination of parabens in pharmaceutical formulations by SPME ion-mobility spectrometry<br><i>Anal. Chem.</i> , 77, #18, 5938-5946<br>Lokhnauth, John; Snow, Nicholas                                                                                                                                                                                                       |                                                       | GC-IMS       |
| 1830 | Amphetamine drugs in urine                          | Simultaneous derivatization and extraction of amphetamine-like drugs in urine with headspace SPME followed by GC-MS<br><i>Anal. Chim. Acta</i> , 539, #1-2, 49-54<br>Chia, Kan-Jung; Huang, Shang-Da                                                                                                                                                                           | 100µm PDMS 30min @ 90°C HFBA derivative headspace     | GC-MS        |
| 1831 | Amphetamine drugs in urine                          | Poly(methacrylic acid-ethylene glycol dimethacrylate) monolith in-tube SPME coupled to HPLC and analysis of amphetamines in urine samples<br><i>J. Chromatogr. A</i> , 1074, #1-2, 9-16<br>Da, Shi-Lu; Fan, Yi; Feng, Yu-Qi; Zhang, J; Zhang, M                                                                                                                                | polycrylate coated capillary tube                     | HPLC-UV      |
| 1832 | Amphetamine drugs in urine                          | Application of SPME combined with derivatization to the determination of amphetamines by liquid chromatog<br><i>Analytical Biochemistry</i> , 333, #2, 328-335<br>Chafer-Pericas, C.; Campins-Falco, P.; Herraiez-Hernandez, R.                                                                                                                                                | 50µm CW-TPR FMO derivative                            | HPLC-UV      |
| 1833 | Amphetamine drugs in urine                          | Enantiomeric determination of amphetamines: Exploring A novel one-step SPME-based approach<br><i>J. Chromatogr. B</i> , 825, #1, 79-87<br>Wang, Sheng-Meng                                                                                                                                                                                                                     | 100µm PDMS 10min @ 70°C propyl chloride derivative    | GC-SIM-MS    |
| 1834 | Amphetamine in serum                                | SPME with LC-electrospray ionization-tandem MS for analysis of amphetamine and methamphetamine in serum<br><i>Anal. Chim. Acta</i> , 538, #1-2, 49-56<br>Chou, Chi-Chi; Lee, Maw-Rong                                                                                                                                                                                          |                                                       | LC-ESI-MS/MS |
| 2800 | Methyl amphetamine                                  | Comparison and classification of methamphetamine seized in Japan and Thailand using GC with liquid-liquid extraction and SPME<br><i>Forensic Science International</i> 175, #2-3, 85-92 (MAR 5 2008)<br>Kuwayama, K.; Inoue, H.; Phorachata, J.; Kongpatnitiroj, K.; Puthaviriyakorn, V.; Tsujikawa, K.; Miyaguchi, H.; Kanamori, T.; Iwata, Yuko T.;Kamo, Naoki; Kishi, Tohru |                                                       | GC-FID       |
| 2836 | Volatile organics in human urine                    | Excretion of unchanged volatile organic compounds (toluene, ethylbenzene, xylene and mesitylene) in urine as result of experimental human volunteer exposure<br><i>Intl Archives of Occupational Environ. Health</i> 81, #4, 443-449 (2008)<br>Janasik, Beata; Jakubowski, Marek; Jalowicki, Piotr                                                                             | headspace                                             | GC           |
| 1835 | BTX solvents in urine                               | Quantitative analysis of benzene, toluene, and xylenes in urine by headspace SPME<br><i>J Chromatogr A</i> , 1027, #1-2, 37-40<br>Alkalde, T; Peralba, M; Zini, C; Caramao, E.                                                                                                                                                                                                 | headspace                                             | GC-MS        |
| 1836 | PCB metabolite in urine                             | SPME w/ on-fiber derivatization for the determination of hydroxy-polychlorinated biphenyl compounds in urine<br><i>Anal. Chim. Acta</i> , 539, #1-2 55-60<br>Hong, Jee Eun; Lee, Won; Park, Song-Ja; Pyo, Heesoo                                                                                                                                                               | 65µm PDMS-DVB 60min @ 90°C BSTFA derivative headspace | GC/MS        |
|      |                                                     | Single drop microextraction or SPME-GC-MS                                                                                                                                                                                                                                                                                                                                      |                                                       |              |

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| 1837 | Iodine in various matrices               | for the determination of iodine in pharmaceuticals, iodized salt, mil powder and vegetables involving conversion into 4-iodo-N,N-dimethylaniline<br><i>J Chromatogr A</i> , 1023, #1, 33-39<br>Das, P; Gupta, M; Jain, A; Verma, K.                                                                    | iodate derivatives                                                   | GC     |
| 2315 | Quinalphos in blood                      | <b>Determination of quinalphos in blood and urine by direct SPME combined with GC-MS</b><br><i>J. Chromatogr. B</i> 832 #1, 162-168 (2006)<br>Barroso, M.; Cruz, A.; Gallardo, E.; Lopez-Rivadulla, M.; Margalho, C.; Vieira, D.N                                                                      | 100µm PDMS direct                                                    | GC/MS  |
| 2290 | Thujone in blood                         | <b>Investigations on the medico-legal relevance of spirits containing thujone with special regard to toxicological-analytical aspects</b><br><i>Blutalkohol</i> 42 #4, 263-271 (2005) (German)<br>Kroner, L.; Padosch, S.; Lachenmeier, D.; Madea, B.                                                  | headspace                                                            | GC/MS  |
| 1838 | Diazipenes in biological fluid           | Monitoring of drugs and metabolites in whole blood by restricted-access SPME coupled to LC-MS<br><i>J Chromatogr A</i> , 1025, #1, 85-92<br>Wallis, M.; Mullett, W. M.; Pawliszyn, J.                                                                                                                  | restricted access coated fibers<br>headspace                         | LC-MS  |
| 1839 | Methyl mercury from biological specimens | An accurate and sensitive method for determination methylmercury in biological specimens using GC-ICP-MS with solid phase microextraction<br><i>J Anal At Spectrom</i> , 19, #12, 1546-1551<br>Christopher, S.J.; Davis, W. Clay; Day, Rusty D.; Long, S.E.; Schantz, Michele M.; Vander Pol, Stacy S. | 100µm PDMS methyl, ethyl, phenyl derivatives<br>microwave extraction | ICP-MS |
| 1840 | Volatiles in bovine breath               | Sampling and analysis of volatile organic compounds in bovine breath by SPME-GC-MS<br><i>J Chromatogr A</i> , 1025, #1, 63-69<br>Spinhirne, J.; Koziel, J.; Chirase, N.                                                                                                                                | 50/30µm DVB/CAR<br>15min @ 22°C<br>headspace                         | GC-MS  |
| 1841 | Phlated esters in serum                  | High-throughput analysis of phthalate esters in human serum by direct immersion SPME followed by isotope dilution-fast GC/MS<br><i>Anal. Bioanal. Chem.</i> , 380, #2, 275-283<br>Colon, Ivelisse; Dimandja, Jean-Marie D.                                                                             | 85µm polyacrylate direct immersion                                   | GC-MS  |
| 1842 | Ligustilides in Chinese medicines        | Development of pressurized hot water extraction followed by headspace SPME-GC-MS determination ligustilides in Ligusticum chuanxiong and Angelica sinensis<br><i>J. Sep. Sci.</i> , 28, #11, 1237-1243<br>Deng, Chunhui; Ji, Jie; Wang, Xiaochuan; Zhang, X                                            | headspace                                                            | GC-MS  |
| 1843 | Benzene from urine                       | Urinary benzene determination by SPME/GC-MS: A study of variables by fractional factoria design and response surface methodology<br><i>J. Chromatogr. B</i> , 804, #2, 255-261<br>Garrido, J.; Periago, J.F.; Prado, C.                                                                                | 1 min @ 15°C<br>headspace                                            | GC-MS  |
| 1844 | Faty Acids in plasma                     | Rapid measurement of C13-enrichment of acetic, propionic and butyric acids in plasma with SPME coupled to GC-MS<br><i>Anal. Chim. Acta</i> , 512, #2, 305-310<br>Champ, M.; Delepee, R.; Dumon, H.; LeBizec, B.; Martin, L.; Maume, D.; Moreau, N.; Nguyen, P                                          | 75µm Carboxen<br>5min extract<br>headspace                           | GC-MS  |
| 1845 | Monoterpenes from Perilla frutescens     | cDNA isolation and functional expression of myrcene synthase from Perilla frutescens<br><i>Biological &amp; Pharmaceutical Bulletin</i> , 27, #12, 1979-1985<br>Hosoi, Madoka; Ito, Michiho; Yagura, Toru; Adams, Robert Phillip; Honda, Gisho                                                         |                                                                      | GC     |
| 2735 | Acetone in seawater                      | <b>Determination of acetone in seawater using derivatization SPME</b><br><i>Anal. Bioanal. Chem.</i> , 388, #5-6, 1272-1282 (2007-07)<br>Hudson, E. D.; Okuda, K.; Ariya, P. A.                                                                                                                        | headspace<br><br>PFBHA derivative                                    | GC-MS  |
| 1846 | Acetone in plasma                        | Rapid determination of acetone in human plasma by GC-MS and SPME with on-fiber derivatization<br><i>J. Chromatogr. B</i> , 805, #2, 235-240<br>Deng, Chunhui; Zhang, Jie; Zhang, Wei; Zhang, Xiangmin                                                                                                  | 65µm PDMS-DVB<br>PFBHA derivative                                    | GC-MS  |
| 1847 | Amino acids in blood                     | Rapid determination of amino acids in neonatal blood samples based on derivatization with isobutyl chloroformate followed by SPME-GC-MS<br><i>Rapid Communications in Mass Spec</i> , 18, #21, 2558-2564<br>Deng, C. H.; Li, N.; Zhang, X. M.*                                                         | headspace<br>chloroformate derivative                                | GC-MS  |

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| 1848 | Trimethylamine in plasma                | Quantifying trimethylamine and trimethylamine- N -oxide in human plasma: interference from endogenous quaternary endogenous quaternary ammonium compounds.<br><i>Analytical Biochemistry</i> , 334, #2, 403-405<br>Bain, M. A.; Faull, R.; Fornasini, G.; Milne, R. W.; Schumann, R.; Evans, A. M.                                                                                                    |                                                | GC         |
| 1849 | Anigotensin from blood                  | Fast assay of angiotensin 1 from whole blood by cation-exchange restricted-access SPME<br><i>Anal. Chim. Acta</i> , 537, #1-2, 231-237<br>Musteata, F.; Pawliszyn, Janusz; Walles, M.                                                                                                                                                                                                                 | alkyl diol silica coating immersed sampling    | HPLC LC-MS |
| 2287 | Fatty acid ethyl esters in hair         | <b>Comparison of the concentration of fatty acid ethyl esters in hair and phosphatidyl ethanol in blood of alcoholics with other biological state markers and self reported ethanol intake</b><br><i>Alcoholism Clinical and Experimental Res</i> 28 #5, 158A (2004)<br>Wurst, F.; Alling, C.; Aradottir, S; Alexson, S; Wolfersdorf, M.; Jachau, K.; Huber, P.; Auwaerter, V.; Allen, J.; Pragst, F. | Headspace Ethyl ester derivatives              | GC         |
| 1850 | Fatty acid ethyl esters in hair         | Concentration of fatty acid ethyl esters in hair of alcoholics: Comparison to other biological state markers and self reported-ethanol intake.<br><i>Alcohol and Alcoholism</i> , 39, #1, 33-38<br>Wurst, F.; Alexson, S.; Wolfersdorf, M.; Bechtel, G; Forster, S.' Alling.C.; Aradottir, S.; Jachau, K.; Huber, P.; Allen, J.; Auwaerter, V.; Pragst, F.                                            | Headspace Ethyl ester derivatives              | GC-MS      |
| 1851 | Fatty acid ethyl esters in hair         | Comparison of ethyl glucuronide and fatty acid ethyl ester concentrations in hair of alcoholics, social drinkers, and teetotallers<br><i>Forensic Science Intl</i> , 145, #2-3, 167-173<br>Yegles, M.; Labarthe, A.; Auwarter, V.; Hartwig, S.; Vater, H.; Wennig, R.; Pragst, F.                                                                                                                     | Headspace Ethyl ester derivatives              | GC-MS/NCI  |
| 1852 | Anti-inflammatory drugs in water        | SPME with on-fiber derivatization for the analysis of anti-inflammatory drugs in water samples.<br><i>J Chromatogr A</i> , 1024, #1-2, 1-8<br>Rodriguez, I.; Carpinteiro, J.; Quintana, J. B.; . Carro, A. M.; Lorenzo, R. A.; Cela, R                                                                                                                                                                | 85µm polyacrylate MTBSTFA derivative Headspace | GC-MS      |
| 1853 | Fluoroacetamide in body fluids          | Application of SPME-GC-MS in analysis of poison<br><i>Zhipu Xuebao</i> , 25, Suppl, 151-152<br>Cai, X. L.; Wu, G. P.                                                                                                                                                                                                                                                                                  |                                                | LC-MS      |
| 1854 | Fluoroacetamide in body fluids          | Fast detection of fluoroacetamide in body fluid using GC-MS after SPME.<br><i>J Chromatogr, B</i> :802, #2, 239-245<br>Cai, X.; Zhang, D.; Ju, H. X.; Wu, G.; Liu, X.                                                                                                                                                                                                                                 | 100µm PDMS 25min @ 70°C immersed               | GC-MS      |
| 1855 | Trichloroethylene in blood/tissues      | Sensitive methods for trace level analysis of trichloroethylene (TCE) in rat blood and tissues.<br><i>Proc. 50th ASMS Conf. Mass Spectrom. Allied Top.</i> 2002, p629-630<br>Bartlett, Michael G.; Brown, Stacy D.; Bruckner, James V.; Dixon, Amy M.; Muralidhara, S.                                                                                                                                | headspace @ 55°C                               | GC-MS      |
| 2916 | Trichloroethylene in water              | <b>Photocatalytic oxidation of aqueous trichloroethylene using dye sensitized buoyant photocatalyst monitored via micro-headspace SPME-GC-ECD and MS</b><br><i>Microchemical Journal</i> 88, #1, 38-44 (FEB 2008)<br>Alexander, Matt V.; Rosentreter, Jeffrey J.                                                                                                                                      | 100µm PDMS headspace                           | GC/ECD     |
| 2794 | Trichloroethylene in biological samples | <b>Trace level determination of trichloroethylene in biological samples by headspace SPME-GC/negative chemical ionization MS</b><br><i>Rapid Communications in Mass Spectrometry</i> 22, #6 797-806 (2008)<br>Liu, Yongzhen; Muralidhara, S.; Bruckner, James V.; Bartlett, M.                                                                                                                        | 100µm PDMS headspace                           | GC-MS      |
| 2770 | Trichloroethylene in biological samples | <b>Determination of trichloroethylene in biological samples by headspace SPME-GC-MS</b><br><i>J Chromatogr, B</i> : 863, #1, 26-35 (2008)<br>Liu, Yongzhen; Muralidhara, S.; Bruckner, James V.; Bartlett, M.                                                                                                                                                                                         | 100µm PDMS headspace                           | GC-MS      |
| 2457 | Benzodiazepines in blood                | <b>A study of the performance characteristics of immunoaffinity SPME probes for extraction of a range of benzodiazepines.</b><br><i>J. Pharm. Biomed. Anal.</i> 44, #2, 506-519 (2007-06-28)<br>Lord, H. L.; Rajabi, M.; Safari, S.; Pawliszyn, J.                                                                                                                                                    |                                                |            |
| 1856 | Benzodiazepine                          | Analysis of benzodiazepines from whole blood by SPME coupled to LC-MS-MS                                                                                                                                                                                                                                                                                                                              | 50µm CW-TPR                                    | LC-MS-MS   |

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| pinex in whole blood                       | <i>Proc. 50th ASMS Conf. Mass Spectrom. Allied Top.</i><br>2002, p513-514<br>Grant, R.; Incledon, B.; Lord, H.; Pawliszyn, Janusz                                                                                                                                        |                                                                     |         |
| 1857 Benzene in urine                      | Application of the standard addition approach for the quantification of urinary benzene<br><i>J. Chromatogr. B, 818, #2, 293-299</i><br>Acampora, A.; Basilicata, P.; Miraglia, N.; Pieri, M.; Sannolo, N.; Soleo, L.                                                    | headsapce                                                           | GC-MS   |
| 1858 Cresols in urine                      | Determination of urinary ortho- and meta-cresol in humans by headspace SPME-GC-MS<br><i>J. Chromatogr. B, 817, #2, 309-317</i><br>Campo, L.; Foa, V.; Fustinoni, S.; Mercadante, R.; Scibetta, L.; Valla, C.                                                             | 100µm PDMS headspace                                                | GC-MS   |
| 1859 Ibuprofen in urine                    | SPME and chiral HPLC analysis of ibuprofen in urine<br><i>J. Chromatogr. B, 818, #2, 285-291</i><br>Bonato, P.; Cesarino, E.; De Oliveira, A.                                                                                                                            | 65µm PDMS- DVB immersion sampling                                   | HPLC-UV |
| 1860 Ibuprofen metabolites in urine        | Stereoselective determination of the major ibuprofen metabolites in human usrine by off-linecoupling SPME-HPLC<br><i>Anal. Chim. Acta, 538, #1, 25-34</i><br>De Oliveira, A.; DeSantana, Fo; Bonato, P                                                                   | 50µm CW-TPR immersion sampling                                      | HPLC    |
| 1861 Barbiturates in blood/urine           | Simultaneous determination of barbiturates in human biological fluids by direct immersion SPME and GC-MS<br><i>J. Chromatogr. B, 806, #1, 65-73</i><br>Arinobu, T.; Hattori, H.; Ishii, A.; Iwai, M.; Suzuki, O.; Kumazawa, T.; Noguchi, H.; Noguchi, H.; Seno, H.       | immersion sampling salt added                                       | GC-MS   |
| 1862 Acrolein in urine                     | Monitoring of urinary acrolein concentration in patients receiving cyclophosphamide and ifosphamide<br><i>J. Chromatogr. B, 806, #1, 59-63</i><br>Namera, A.; Sakura, N.; Takamoto, S.; Yashiki, M.                                                                      | headsapce                                                           | GC-MS   |
| 1863 Rivastigmine in plasma                | Headspace SPME and capillary GC-MS determination of rivastigmine in canine plasma samples<br><i>J. Chromatogr. B, 806, #2, 271-276</i><br>Deng, Chunhui; Duan, Gengli; Huang, Taomin; Liu, Zhen; Sha, Yunfei; Yang, Bei                                                  | 65µm PDMS/DVB 30min @ 100°C headspace NaOH/NaCO <sub>3</sub> buffer | GC-MS   |
| 1864 Mycophnolic acid in serum             | Determination of the immunosuppressant mycophenolic acid in human seum by SPME coupled to LC<br><i>J. Chromatogr. B, 806, #2, 89-93</i><br>Aresta, A; Palmisano, F; Zambonin, C                                                                                          | 50µm CW-TPR headspace                                               | HPLC-UV |
| 2660 Neat Fuels                            | <b>Fuzzy rule-building expert system classification of fuel using SPME in two-way GC differential mobility spectrometric data</b><br><i>Anal. Chem. 79, #4, 1485-1491 (Feb 15 2007)</i><br>Bunker, C.; Harrington, Peter B.; Karnes, John J.; Rearden, P.                | headspace                                                           | GC-DMS  |
| 2910 JP-8 fuel from soil                   | <b>Determination of JP-8 components in soils using SPME-GC-MS</b><br><i>Fuel 87, #10-11, 2334-2338 (August 2008)</i><br>Brown, Stacy; Caldwell, Thomas; Rickrode, Mark                                                                                                   | headspace                                                           | GC-MS   |
| 2379 JP-8 fuel from rat tissue             | <b>A PBPK modeling assessment of the competitive metabolic interactions of JP-8 vapor with two constituents, m-xylene and ethylbenzene</b><br><i>INHAL. TOXICOL. 19, #3, 265-273 ( MAR 2007)</i><br>Campbell, Jr J. L.; Fisher, J. W.                                    | headspace                                                           | GC-MS   |
| 1865 JP-8 fuel on porcine skin             | Dose related absorption of JP-8 jet fuel hydrocarbons through porcine skin w/ quantitative structure permeability relationship analysis<br><i>Toxic Mechanisms &amp; Methods 14, #3, 159-166</i><br>Muhammad, F.; Baynes, R.; Monteiro-Riviere, N.; Xia, X.; Riviere, J. |                                                                     | GC-FID  |
| 1866 Volatiles in Houttuynia cordata thunb | GC-MS analysis of volatile compounds from Houttuynia cor-data Thunb after extraction by SPME, flash evaporation and steam distillation<br><i>Analytica Chimica Acta, 531, #1,07-104</i><br>Liang, M; Qi, M; Zhang, C; Zhou, S; Fu, R; Huang, J                           | 100µm PDMS headspace                                                | GC-MS   |
| 1867 Serotonin in urine                    | Rapid screening of selective serotonin re-uptake inhibitors in urine samples using SPME-GC-MS<br><i>Anal. Bioanal. Chem., 382, #6, 1351-1359</i><br>Cela, R.; Garcia-Jares, Carmen; Lamas, J.; Llompart, M.; Salgado-Petinal, C.                                         | 65µm PDMS-DVB in-situ derivatization 30min analysis                 | GC-MS   |

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| 1868 | Chlorinated hydrocarbons in urine            | Determination of dichloromethane, trichloroethylene and perchloroethylene in urine samples by HD-SPME-GC-MS<br><i>J. Chromatogr. B, 820, #1, 95-102</i><br>Andreoli, R.; Franchini, I.; Manini, P.; Mutti, A.; Poli, D                                                      | 75µm Carboxen<br>22°C, saturated salt<br>headspace<br>agitated | GC-MS    |
| 1869 | Organo-phosphorus pesticides in blood, urine | SPME-GC analysis of organophosphorus pesticides in biological samples<br><i>J. Chromatogr. B, 822, #1-2, 194-200</i><br>Grigoratou, I.; Raikos, N.; Theodoridis, G.; Tsoukali, H                                                                                            | headspace                                                      | GC-NPD   |
| 1870 | Tramadol in plasma                           | Rapid determination of tramadol in human plasma by headspace SPME and capillary GC-MS<br><i>J Pharma and Biomed Analysis, 37, #1, 143-147</i><br>Sha, Y. F.; Shen, S.; Duan, G. L.                                                                                          | 65µm PDMS-DVB<br>30min @ 100°C<br>0.1 M NaOH<br>headspace      | GC/MS    |
| 2779 | Lung Cancer Biomakers in breath              | <b>Lung cancer diagnosis method by detecting metabolic gases of lung cells</b><br><i>Zhejiang Daxue Xuebao 42, #2, 294-298+348 (Feb 2008)</i><br>Cao, Ming-Fu; Chen, Xing; Hao, Yan; Wang, Ping; Wang, Yong-Qing; Wang, Yue; Xu, Feng-Juan; Zhang, Wei-Min                  | headspace                                                      | GC       |
| 2911 | Volatile organics from stomach tissue        | <b>Identification of volatile organic compounds secreted from cancer tissues and bacterial cultures</b><br><i>J. Chromatogr. B, 868, #1-2, 88-94 (Jun 1 2008)</i><br>Buszewski, B.; Jackowski, M.; Klodzinska, E.; Ligor, T.; Szeliga, J. Ulanowska, A.                     | headspace                                                      | GC/MS    |
| 2881 | Cancer Biomakers in liver cancer             | <b>Investigation of volatile biomarkers in liver cancer blood using SPME-GC-MS</b><br><b>Rapid Comm Mass Spectrometry 22, #8, 1181-1186 (APR 2008)</b><br>Xue, Ruyi; Dong, Ling; Zhang, Si; Deng, Chunhui; Liu, Taotao; Wang, Jiyao; Shen, Xizhong                          | headspace                                                      | GC/MS    |
| 2350 | Cancer Biomakers in breath                   | <b>A study of the volatile organic compounds exhaled by lung cancer cells in vitro for breath diagnosis</b><br><i>Cancer 110, #4, 835-44 (2007 Aug 15)</i><br>Chen, X.; Xu, F.; Wang, Y.; Pan, Y.; Lu, D.; Wang, P.; Ying, K.; Chen, E.; Zhang, W                           | headspace                                                      | GC       |
| 1871 | Cancer Biomakers in blood                    | Investigation of volatile biomarkers in lung cancer blood using SPME and capillary GC-MS<br><i>J. Chromatogr. B, 808, #2, 269-277</i><br>Deng, Chunhui; Li, Ning; Zhang, Xiangmin                                                                                           | headspace                                                      | GC/MS    |
| 1872 | Cancer Biomakers in blood                    | A study of an electronic nose for detection of lung cancer based on a virtual SAW gas sensorsarray and imaging recognition method<br><i>Meas. Sci. Technol., 16, #8, 1535-1546</i><br>Cao, M.; Chen, X.; Hu, W.; Li, Yi.; Pan, H.; Wang, P.; Ying, K.                       | headspace                                                      | GC/MS    |
| 2146 | Dinitrotoluenes in tissue                    | <b>Solid phase microextraction of aminodinitrotoluenes in tissue</b><br><i>Chemosphere, 63, #1, 58-63 (Feb 2008)</i><br>Bowen, Alethea T.; Conder, Jason M.; La Point, Thomas W.                                                                                            | 85µm Polyacrylate<br>immersed<br>agitated                      | GC       |
| 2883 | Trichloro-ethylene in rat blood              | <b>In situ derivatization/SPME-GC negative CI-MS for the determination of trichloroethylene metabolites in rat blood</b><br><b>Rapid Communications in Mass Spectrometry 22, #7, 1021-1031 (2008)</b><br>Liu, Y.; Murailidhara, Srinivasa; Bruckner, James V.; Bartlett, M. | headspace<br>ethyl esters                                      | GC/CI-MS |
| 1873 | Trichloro-ethylene in rat blood              | Optimization of SPME for analysis of trichloroethylene in rat blood and tissues by SPME-GC/MS<br><i>Instrum Sci Technol, 33, #2, 175-186</i><br>Bartlett, M.; Brown, S.; Bruckner, J.; Dixon, A.; Muralidhara, S.                                                           | headspace<br>5 min                                             | GC/MS    |
| 1874 | Fatty acids in plasma                        | Rapid measurement of 13 C-enrichment of acetic, propionic, and butyric acids in plasma w/ SPME coupled to GC-MS<br><i>Analytica Chimica Acta, 512, #2, 305-310</i><br>Moreau, N. M.; Delepee, R.; Maume, D.; le Bizec, B.; Nguyen, P.; Champ, M.; Martin, L.; Dumon, H.     | 75µm Carboxen<br>5 min extract                                 | GC-MS    |
| 1875 | Animal testing                               | Toward more useful in vitro toxicity data with measured free concentrations<br><i>Environ. Sci. Technol., 38, #23, 6263-6270</i>                                                                                                                                            | in-vitro sampling                                              | GC       |

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| 2574 | Camphor and borneol in chinese medicines | <b>Development of microwave-assisted extraction followed by headspace SPME-GC-MS for quantification of camphor and borneol in Flos Chrysanthemi Indici.</b><br><i>Anal. Chim. Acta: 575, #1, 120-125 (2006-08-04)</i><br>Deng, C. H.; Mao, Y.; Yao, N.; Zhang, X. M.                                                                 | 65µm PDMS-DVB<br>20min @ 40°C<br>headspace                     | GC-MS    |
| 1876 | Volatiles in chinese medicines           | SPME followed by GC-MS analysis of the volatile components of Flos Chrysanthemi indici in different growing areas.<br><i>Chromatographia, 59, #11-12, 763-767</i><br>Wu, Q.; Deng, C. H.; Shen, S.; Song, G. X.; Hu, Y. M.; Fu, D. X.; Chen, J. K.; Zhang, X. M.*                                                                    | headspace                                                      | GC-MS    |
| 1877 | Diethyl phthalate on skin                | Application of SPME to in vitro skin permeation experiments example using diethyl phthalate<br><i>Toxicology In Vitro, 19, #2, 253-259</i><br>Frasch, H. Fred; Barbero, Ana M.                                                                                                                                                       |                                                                | GC       |
| 1878 | Volatiles from cell culture              | Identification of biogenic organotellurides in Escherichia coli K 12 headspace gases using SPME-GC<br><i>Analytical Biochemistry, 331, #1, 106-114</i><br>Swearingen, J.; Araya, M.; Plishker, M.; Saavedra, C.; Vasquez, C. Chasteen, T.                                                                                            | 75µm Carboxen<br>headspace                                     | GC-MS    |
| 1879 | Faecal Odor from cats                    | The effect of oligofructose on urea metabolism and faecal odour components in cats<br><i>J Animal Physiology and Animal Nutr, 89, #3-6, 208-214</i><br>Hesta, M.; Hoornaert, E.; Verlinden, A.; Janssens, G. P. J.                                                                                                                   | headspace                                                      | GC       |
| 1880 | Strychnine in blood                      | Application of SPME to determination of strychnine in blood<br><i>J Chromatogr B, 816, #1-2, 29-34</i><br>Barroso, M.; Gallardo, E.; Margalho, C.; Avila, S.; Marques, E.; Vieira, D. N.; Lopez-Rivadulla, M.                                                                                                                        | 65µm CW-DVB<br>20min extraction<br>immersion sampling          | GC/EI-MS |
| 1881 | Hexanal, heptanal in blood               | Development of headspace SPME w/ on-fiber derivatization for determination of hexanal and heptanal in human blood<br><i>J Chromatogr, B: 813, #1-2, 47-52</i><br>Deng, C. H.; Li, N.; Zhang, X. M.*                                                                                                                                  | 65µm PDMS-DVB<br>8min @ 60°C<br>PFBHA derivatives<br>headspace | GC-MS    |
| 2585 | TAMEM, MTBE, ETBE and in urine           | <b>Determination of low level methyl tert-butyl ether, ethyl tert-butyl ether and methyl tert-amyl ether in human urine by HS-SPME GC-MS</b><br><i>ANAL. CHIM. ACTA: 581, #1, 53-62 (02 JAN 2007)</i><br>Scibetta, L.; Campo, L.; Mercadante, R.; Foa&grave;, V.; Fustinoni, S.                                                      | headspace<br>65µm PDMS-DVB                                     | GC-MS    |
| 1882 | Methyl tert-butyl ether in blood         | Identification and elimination of polysiloxane curing agent interference encountered in the quantification of low-picogram per milliliter methyl tert-butyl ether in blood by SPME headspace analysis<br><i>Anal. Chem, 77, #9, 2912-2919.</i><br>Blount, Benjamin C.; Chambers, David M.; Hughes, T.; Mauldin, J.; McElprang, David | headspace                                                      | GC-MS    |
| 1883 | Ephedrine in urine                       | SPME coupled w/ ion mobility spectrometry for the analysis of ephedrine in urine<br><i>J. Sep. Sci. 28, #7, 612-618</i><br>Lokhnauth, John K.; Snow, Nicholas H.                                                                                                                                                                     | immersion sampling                                             | IMS      |
| 1884 | Ehtanol in biological fluids             | Determination of ethanol in human blood and urine by automated headspace SPME and capillary GC<br><i>Anal. Chim. Acta, 522, #2, 163-168</i><br>De Martinis, B.; Martins R.; Maria A.; Santos M., Carmen C.                                                                                                                           | headspace                                                      | GC       |
| 1885 | Aldehydes in blood                       | A simple, rapid and sensitive method for determination aldehydes in human blood by GC-MS and SPME with on-fibre derivatization.<br><i>Rapid Communications in Mass Spect, 18, #15, 1715-1720</i><br>Deng, C. H.; Zhang, X. M.*                                                                                                       | PFBHA derivative<br>headspace                                  | GC-MS    |
| 2164 | Odorou compounds in                      | <b>Identification of components responsible for the odor of cigar smoker's breath</b><br><i>J Ag Food Chem, 54, #2, 497-501 (2006)</i>                                                                                                                                                                                               | headspace                                                      | GC-MS    |
| 2218 | Hydrocarbons in breath                   | SPME for analysis of alkanes and aromatic hydrocarbons in human breath<br><i>J. Chromatogr. B, 826, #1-2, 69-74 (2005)</i><br>Yu, Hao; Xu, Liang; Wang, Ping                                                                                                                                                                         |                                                                | GC       |

|            |                                             |                                                                                                                                                                                                                                                                                |                                                                |           |
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| 1886       | Acetone in human breath & plasms            | Determination of acetone in human breath by GC-MS and SPME with on-fiber derivatization<br><i>J. Chromatogr. B</i> , 810, #2, 269-275<br>Deng, Ci; Yu, X; Zhang, J; Zhang, W Zhang, X                                                                                          | 65µm PDMS-DVB PFBHA derivative<br>4 min extract agitated       | GC-MS     |
| 1887       | Breath marker in blood & breath             | Impact of inspired substance concentrations on the results of breath analysis in mechanically ventilated patients<br><i>Biomarkers</i> , 10, #2-3, 138-152<br>Schubert, J.; Miekisch, W.; Birken, T.; Geiger, K.; Noeige-Schomburg, G                                          | headspace                                                      | GC-MS     |
| 1888       | Flavins                                     | Capillary LC determination of cellular flavins<br><i>J. Chromatogr. A</i> , 1053, #1-2, 71-78<br>Jia, Li; Tanaka, Nobuo; Terabe, Shigeru                                                                                                                                       | in-tube silica-ODS                                             | LC-MS     |
| 1889       | Protein binders                             | Study of ligand-receptor binding using SPME: Investigation of receptor, free, and total ligand concentrations<br><i>J of Proteome Res</i> , 4, #3, 789-800<br>Musteata, Florin Marcel; Pawliszyn, Janusz                                                                       | restricted access molecularly imprinted immobilized antibodies | LC-MS     |
| 1890       | Sterols in serum samples                    | Determination of sterols in biological samples by SPME with on-fiber derivatization and GC/FID<br><i>Anal. Bioanal. Chem.</i> , 381, #8, 1576-1583<br>Domeno, Celia; Nerin, Cristina; Ruiz, Barbara                                                                            | BSTFA derivative headspace                                     | GC-FID    |
| 1891       | Basic drugs in serum                        | Poly (methacrylic acid-ethylene glycol dimethacrylate) monolithic capillary for intube SPME coupled to HPLC and its application to determination of basic drugs in human serum<br><i>Anal. Chim. Acta</i> , 523, #2, 251-258<br>Da, Shi-Lu; Fan, Yi; Feng, Yu-Qi; Shi, Zhi-Guo | polymethacrylate coated tube                                   | HPLC-UV   |
| 1892       | Volatiles from Chinese medicine             | Analysis of Rhioxma Curcumae Aeruginosae volatiles by SPME w/GC-MS<br><i>Zeitschrift fuer Naturforschung Section C J of Biosciences</i> 59, #7-8, 533-537<br>Sha, Yuri F.; Shen, Shun; Duan, Geng L.                                                                           | headspace                                                      | GC-MS     |
| 2754       | BTEX in urine                               | <b>Comparison between dynamic headspace and headspace SPME for gas chromatography of BTEX in urine</b><br><i>ARH. HIG. RADA TOKSIKOL.</i> 58, #4, 421-427 (01 DEC 2007)<br>Karaconji, I. B.; Skender, L.                                                                       | headspace                                                      | GC-PID    |
| 1893       | BTEX in blood                               | Analytical method for evaluation of exposure to benzene, toluene, xylene in blood by GC preceded by SPME<br><i>J Chromatogr B</i> , 809, #1, 183-187<br>Alegretti, Ana Paula; Thiesen, Flavia V.; Maciel, Gisele                                                               | headspace                                                      | GC        |
| 1894       | 1,2,3,4-tetrachloro-benzene in body residue | Chronic toxicity and body residues of the nonpolar narcotic 1,2,3,4-tetrachlorobenzene in Chironomus riparius<br><i>Env Toxicology and Chem</i> , 23, #8, 2022-2028<br>Leslie, Heather A.; Kraak, Michiel; Hermens, Joop L.                                                    | headspace                                                      | GC        |
| 2889       | Bisphenol A cyanobacteria culture media     | <b>Application of SPME to the determination of alkylphenols and bisphenol A in cyanobacteria culture media</b><br><i>Anal. Bioanal. Chem.</i> 391, #1, 425-432 (May 2008)<br>Baptista, M.; Basto, M.; Carvalho, P.; Stoichev, T.; Vasconcelos, M.                              | 65µm CW-DVB headspace<br>sat. salt                             | GC-FID    |
| 1895       | Chlorobenzene in body residue               | Baseline toxicity of a chlorobenzene mixture and total body residues measured and estimated with SPME<br><i>Env Toxicology and Chemistry</i> , 23, #8, 2017-2021<br>Leslie, Heather A.; Hermens, Joop L. M.; Kraak, Michiel H. S.                                              | headspace                                                      | GC        |
| 1896       | Chlorinated bisphenol A in plasma           | Use of SPME followed by on-column silylation for determining chlorinated bisphenol A in human plasma by GC-MS<br><i>J Chromatogra, B</i> , 817, #2, 167-172<br>Del Olmo, M.; Gonzalez-Casado, A.; Suarez, B.; Taoufik, J. Vilchez, J.L.; Zafra, A.                             | 85µm polyacrylate BSTFA derivative                             | GC-MS-SIM |
| Toxicology |                                             |                                                                                                                                                                                                                                                                                |                                                                |           |
| 2633       | Review Trends                               | <b>Application of solid-phase microextraction in analytical toxicology</b><br><i>Anal. Bioanal. Chem.</i> 388, #7, 1393-1414 (August 2007)<br>Pragst, Fritz<br><br>Microextraction of drugs                                                                                    |                                                                |           |



|      |                                                    |                                                                                                                                                                                                                                                          |                                                       |        |
|------|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|--------|
| 639  | Drugs                                              | <i>J. Chromatogr.,A</i> , 922(2000) 17-63<br>Lord, H., Pawliszyn, J.                                                                                                                                                                                     | review article                                        |        |
| 912  | Drugs                                              | High-temperature SPME procedure for the detection of drugs by GC-MS<br><i>J. Chromatogr. B</i> (2000) 745(2), 399-411<br>Staerk, U., Külpmann, W.                                                                                                        | 85µm polyacrylate<br>10min @200°C<br>headspace        | GC-MS  |
| 640  | Drugs<br>in body fluids                            | Solid phase microextraction in biomedical analysis<br><i>J. Chromatogr.,A</i> , 902(2000) 167-194<br>S. Ulrich                                                                                                                                           | acetic anhydride-pyridine<br>review article           |        |
| 641  | Volatile,<br>semivolatiles<br>in biological fluids | Headspace SPME procedures for gas chromatographic analysis of biological fluids and materials.<br><i>J. Chromatogr.,A</i> , 902(2000) 267-287<br>Mills, G., Walker, V.                                                                                   | review article                                        | GC     |
| 847  | Volatile,<br>in urine                              | Headspace SPME profiles of volatile compounds in urine: Application to metabolic investigations<br><i>J. Chromatogr.,B</i> 753(2001) 259-268<br>Mills, G., Walker, V.                                                                                    | 75µm Carboxen/PDMS<br>headspace<br>pH <4 & >9         | GC-MS  |
| 642  | Hydrocarbon mixture<br>in water                    | Assessing the aquatic toxicity of complex hydrocarbons mixtures using SPME<br><i>Toxicol. Lett.</i> 2000, 112-1113, 273-282<br>Parkerton, T, Sone, M., Letiski, D.                                                                                       |                                                       |        |
| 643  | Methadone<br>in saliva                             | SPME in the determination of methadone in human saliva by GC-MS<br><i>J. Anal Toxicol</i> (2000), 24(2), 93-96<br>Dos Santos Lucas, A., Bermejo, A., Fernandez, P., Tabernero, M                                                                         | 100µm PDMS<br>30 min                                  |        |
| 29   | Methadone<br>in urine                              | Gas Chromatographic Analysis of Methadone in Urine Samples after Solid Phase Microextraction<br><i>J. Microcolumn Sep.</i> 6: 577-581 (1994)<br>Chiarotti, M., Marsili, R.                                                                               | 100µm PDMS<br>15 min<br>immersion<br>pH 7.7           | GC-MS  |
| 644  | Methadone, EDDP<br>in human hair                   | Use of SPME for the determination of methadone and EDDP in human hair by GC-MS<br><i>Forensic Sci. Int</i> (2000) 107(1-3), 225-232<br>Luca, A., Bermejo, A., Tabernero, M., Fernandez, P., Strano-Rossi, S.                                             | 100µm PDMS<br>30 min, immersed                        | GC-MS  |
| 563  | Methadone, EDDP<br>in plasma                       | Use of SPME for the determination of Methadone and its main metabolite, EDDP, in plasma by GC-MS<br><i>J. Anal. Toxicol.</i> 24, 66-69 (2000)<br>Bermejo, A., Seara, R., dos Santos Lucas, A., Tabernero, M., Fernandez, P., Marsili, R.                 | 100µm PDMS<br>30 min immersion<br>1:4 delution @ pH 9 | GC-MS  |
| 474  | Anorectics<br>in urine                             | SPME and GC analysis of anorectic compounds in human urine<br><i>J. Microcolumn Sep.</i> 1997, ((4), 249-252<br>Chiarotti, M. Strano-Rossi, S., Marsili, R.                                                                                              |                                                       | GC-MS  |
| 2891 | <b>Tetramethylene disulfotetramine in foods</b>    | <b>Analysis of tetramethylene disulfotetramine in foods using SPME gas chromatography-mass spectrometry</b><br><i>J. Chromatogr. A</i> 1192, #1, 36-40 (May 23 2008)<br>De Jager, Lowri S.; Diachenko, Gregory W.; Perfetti, Gracia A.                   | 70 µm CW/DVB<br>headspace                             | GC/MS  |
| 2715 | <b>Tetramine in human urine</b>                    | <b>Determination of tetramethylenedisulfotetramine in human urine with GC-flame thermionic detection coupling with direct immersed SPME</b><br><i>Forensic Sci. Int.</i> 159, #2-3, 168-174 (2006-06-02)<br>Zeng, D.; Chen, B. ; Yao, S. Z.; Ying, J. Y. | 85µm polyacrylate<br>immersed                         | GC-FPD |
| 645  | Tetramine                                          | Rapid detection of tetramethylenedisulfotetramine in human blood by SPME-GC                                                                                                                                                                              | 100µm PDMS                                            | GC-FPD |

|     |                                         |                                                                                                                                                                                                                                                              |                                                                   |          |
|-----|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|----------|
|     | in blood                                | <i>Anal. Chim. Acta (2000), 404(2), 329-334</i><br>Luan, T., Li, G., Zhao, M., Zhang, Z.                                                                                                                                                                     |                                                                   |          |
|     |                                         | SPME-GC-MS method for the determination of                                                                                                                                                                                                                   |                                                                   |          |
| 930 | Anesthetics<br>in urine                 | inhalation anesthetics in urine<br><i>J. Chromatogr. B (1999), 732(1) 115-125</i><br>Poli, D., Bergamaschi, E., Maini, P., Andreoli, R., Mutti, A.                                                                                                           | 50:30µm DVB/Carboxen/<br>PDMS<br>20min headspace<br>10% NaCl      | GC-MS    |
| 65  | Anesthetics<br>in human blood           | Detection of Ten Local Anesthetics in Human Blood Using<br>Solid Phase Microextraction and Gas Chromatography<br><i>Jpn. J. Forensic Toxicol. 13 (2): 182-188 (1995)</i><br>Kumazawa, T., Lee, X., Sato, K., Seno, H., Ishii, A., Suzuki, D.                 | 100µm PDMS<br>100°C, 40 min<br>headspace<br>perchloric acid added | GC-FID   |
| 144 | Anesthetics<br>in blood                 | Extraction of Local Anesthetics from Human Blood<br>by Direct Immersion-SPME<br><i>Chromatographia 43: 59-62 (1996)</i><br>Kumazawa, T., Sato, K., Seno, H., Ishii, A., Suzuki, O.                                                                           | 100µm PDMS<br>40 min<br>immersion                                 | GC-FID   |
| 342 | Anesthetics<br>in human blood           | Simple Analysis of Local Anesthetics in Human Blood Using<br>Headspace SPME and GC-MS-Electron Impact Ionization<br>Selected Ion Monitoring<br><i>J. Chromatog. B, 709 (1998), 225-232</i><br>Watanabe, T., Namera, A., Yaskiki, M., Iwasaki, Y., Kojima, T. | 100µm PDMS<br>120°C, 45 min<br>headspace<br>NaOH added            | GC-MS    |
| 475 | Nereistoxin in<br>human serum           | Simple and Sensitive Analysis of Nereistoxin and its<br>Metabolites in Human Serum using Headspace<br>SPME-GC-MS<br><i>J. Chromatographic Science 37(3):77-82(1999)</i><br>Namera, A., Watabe, T., Yashiki, Y., Kojima, T., Urabe, T.                        | 65µm DVB/PDMS<br>30 min @ 70°C<br>NaCl added,<br>headspace        | GC-MS    |
| 419 | Lidocaine<br>in urine                   | Direct SPME Combined with Gas and Liquid Chromatography<br>for the Determination of Lidocaine in Human Urine<br><i>Chromatographia (1998), 47(11/12), 678-684</i><br>Koster, E., Hofman, N., DeJong, G.                                                      |                                                                   | GC, HPLC |
| 646 | Lidocaine<br>in plasma                  | Determination of lidocaine in plasma by direct SPME<br>combined with GC<br><i>J. Chromatogr., B. Biomed. Sci. Appl (2000), 739(1), 175-182</i><br>Koster, E., Wemes, C., Morsink, J., deJong, G.                                                             | 65µm PDMS/DVB<br>10 min<br>immersed<br>salt added                 | GC       |
| 647 | Lidocaine<br>in plasma                  | Evaluation of SPME in combination with GC as a tool<br>for quantitative bioanalysis<br><i>J. Microcolumn Sep. 2000, 12(5), 308-315</i><br>Abdel-Rehim, M., Bielenstein, M., Arvidsson, T.                                                                    | Carbowax-DVB<br>pH 9                                              | GC-NPD   |
| 420 | Organochlorine<br>compounds<br>in blood | Determination of Persistent Organochlorine Compounds in<br>Blood by SPME Extraction and GC-ECD<br><i>Fresenius' J. Anal. Chem. (1998), 361(2), 192-196</i><br>Roehrig, L., Puettmann, M., Meisch, H.                                                         |                                                                   | GC-ECD   |
| 141 | Chloroethers<br>in biological samples   | Determination of Chloroethenes in Environmental Biological<br>Samples Using GC Coupled with SPME<br><i>Chromatographia 42(5/6): 313-17 (1996)</i><br>Xu, N., Vandegrift, S., Sewe, G.                                                                        |                                                                   |          |
| 67  | Solvent thinners<br>in urine, blood     | Simple Analysis of 5 Thinner Components in Human-Body<br>Fluids by Headspace SPME<br><i>J. Legal Medicine 107: 310-313 (1995)</i><br>Lee, X., Kumazawa, T., Sato, K.                                                                                         | 100µm PDMS<br>80°C, 5 min<br>headspace                            | GC-FID   |
| 877 | Solvent thinners<br>in urine, blood     | Improved extraction of thinner components from human<br>body fluids by headspace SPME with a Carboxen/PDMS<br>coated fiber<br><i>Leg. Med. 1(1999) 231-237</i><br>Lee, X., Kumazawa, T., Kondo, K., Furuta, S., Sato, K.                                     | 65µm Carboxen/PDMS                                                |          |
| 648 | Volatile organics<br>in blood           | Determination of volatile organic compounds in blood<br>by headspace SPME-GC<br><i>Weosjemg Uamkoi 2000, 29(1), 37-39</i>                                                                                                                                    | 100µm PDMS<br>10 min                                              | GC-FID   |

|      |                                                      |                                                                                                                                                                                                                                                                       |                                                                |               |
|------|------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|---------------|
|      |                                                      | Hao, S., Kang, J., Zhou, S, Cui, J., Qi, Q., Han, K.                                                                                                                                                                                                                  |                                                                |               |
| 649  | Volatile organics<br>in blood                        | The use of SPME in conjunction with benchtop quadropole MS<br>for the analysis of volatile organic compounds in human<br>blood at low ppt. Levels<br><i>J. Chromatogr. Sci. (2000), 38(2), 49-54</i><br>Cardinali, F., Ashley, D., Wooten, J., McCraw, J., Lemire, S. | 100µm PDMS<br>10 min, headspace                                | GC-MS         |
| 795  | Benzene<br>in urine                                  | Urinary benzene as a biomarker of exposure among<br>occupationally exposed and unexposed subjects.<br><i>Carcinogenesis (Oxford) (2001) 22(2), 279-286</i><br>Rappaport, S; Bechtold, W; Dosemeci, M; Fustinoni, S<br>Guilan, Li; Hayes, R                            |                                                                | GC-MS         |
| 2386 | Organochlorine<br>pesticides, PCBs<br>in human serum | <b>Determination of organochlorine pesticides and PCBs in human<br/>serum using headspace SPME-GC-ECD</b><br><i>J. Chromatogr., B: 846, #1, 298-305 (2007-02-01)</i><br><b>Lopez, R.; Goni, F.; Etxandia, A.; Millan, E.</b>                                          | <b>100µm PDMS<br/>50min @ 85°C<br/>headspace</b>               | <b>GC-ECD</b> |
| 914  | PAHs<br>in blood serum                               | Determination of PAHs in human blood seum by proteolytic<br>digestion-direct immersion SPME<br><i>Analytica Chimica Acta (1999) 396(2-3) 303-308</i><br>Poon, K., Lam, P., Lam, M.                                                                                    |                                                                |               |
| 887  | PAHs                                                 | Quantification of the PAH (Polycyclic Aromatic hydrocarbons)<br>metabolites as a biomarker for PAH exposure.<br><i>Abstracts of Papers ACS (2001) 221(1-2) ANYL117</i><br>Walcott, C; Smith, C; Patterson, D; Maggio, V;<br>Huang, W; Grainger, J                     |                                                                |               |
|      |                                                      | Analysis of Inflammable Substances in Blood Using                                                                                                                                                                                                                     |                                                                |               |
| 146  | HydrocarbonsC9-C20<br>blood<br>in blood              | Head Space-SPME and Chemical Ionization and<br>Chemical Ionization Selected Ion Monitoring<br>Jpn. J. Forensic Toxicol. 13 (2): 189-194 (1995)<br>Iwasaki, Y., Yahiki, M., Nagsawa, N., Kojima, T., Miyazaki, T.                                                      | 100µm PDMS<br>10min. @90C                                      | GC-MS         |
| 476  | Flammables<br>blood, urine                           | Analysis Method of Flammables in Blood by<br>using headspace- SPME and Chemical<br>ionized MS Detection<br>Jpn. J. Legal. Med (49 Append): 80(1995)<br>Iwasaki, Y., Yashiki, M., Nagasawa, N.,<br>Miyazaki, T., Kojima, T                                             | 100µm PDMS<br>10 min @ 90°C<br>headspace                       | GC-MS         |
| 195  | Cresol, phenols<br>in human blood                    | Detection of Cresol Isomers and Phenol in Human Whole Blood<br>by Headspace SPME and Capillary GC<br>Jpn. J. Forensic Toxicol. 15 (1): 21-28 (1996)<br>Lee, X., Kumazawa, T., Furuta, S., Kurosawa, T., Akiya, K.,<br>Skiya, I., Sato, K.                             | 85µm polyacrylate<br>30 min @ 100°C<br>NaCl added<br>headspace | GC-FID        |
| 420  | Chlorophenols<br>in urine                            | Application of SPME and GC-MS for the Determination<br>of Chlorophenols in Urine<br>J. Chromatogr. B: Biomed. Sci. Appl. (1998), 707(1+2), 91-97<br>Lee, M., Yeh, Y., Hsiang, W., Chen, C.                                                                            | 85um polyacrylate<br>50 min, immersed<br>pH 1                  | GC-MS         |
| 583  | 4-Chlorophenol<br>in urine                           | Total 4-chlorophenol determination in urine samples of<br>subjects exposed to chlorobenzene, using SPME and GC-MS.<br>J-High-Resolut-Chromatogr. Jul 1999; 22(7): 427-428<br>Guidotti, -M; Ravaoli, -G; Vitali, -M                                                    | 85µm polyacrylate<br>30 min<br>salt added                      | GC-MS         |
| 2530 | O-cresol, toluene<br>in urine                        | <b>Comparison between urinary o-cresol and toluene as biomarkers<br/>of toluene exposure</b><br><i>J. Occup. Environ. Hyg. (USA) 4, #1, 1-9 (Jan. 2007)</i><br><b>Fustinoni, S.; Mercadante, R.; Campo, L.; Scibetta, L.; Valla, C.;<br/>Consonni, D.; Foa, V.</b>    | <b>headspace</b>                                               | <b>GC-MS</b>  |
| 2788 | PCBs in<br>biological tissue                         | <b>Immersed SPME to measure chemical activity of lipophilic<br/>organic contaminants in fatty tissue samples</b><br><i>Chemosphere 71, #8, 1502-1510 (April 2008)</i>                                                                                                 |                                                                |               |

## Sample pretreatment method for the determination of PCBs in bird livers

|      |                                                     |                                                                                                                                                                                                                                                                                                                  |                                                                                                        |                 |
|------|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-----------------|
| 2712 | PCBs in bird liver                                  | using ultrasonic extraction followed by headspace SPME-GC-MS<br><i>J. Chromatogr. A</i> <b>1124</b> , #1-2, 97-105 (2006-08-18)<br>Lambropoulou, D. A.; Konstantinou, I. K.; Albanis, T. A.                                                                                                                      | headspace                                                                                              | GC-MS           |
| 477  | PCBs in human serum                                 | Determination of PCBs in human blood serum by SPME<br><i>Cheosphere</i> , 1999, 39(6), 905-912<br>Poon, K., Lam, P., Lam, M.                                                                                                                                                                                     |                                                                                                        | GC-ECD          |
| 68   | Valproic acid in human plasma                       | Solid Phase Microextraction for the Determination of the Free Concentration of Valproic Acid in Human Plasma by Capillary GC<br><i>J. Chromatogr. B</i> <b>673</b> : 299-305 (1995)<br>Krogh, M., Johansen, K., Gonnesen, F., Rasmussen, K.                                                                      | 100µm PDMS<br>3 min<br>immersion<br>pH 2                                                               | GC-FID          |
| 69   | Nicotine, cotinine in urine                         | Rapid Analysis of Nicotine and Cotinine in Urine Using Head Space Solid Phase Microextraction and Selected Ion Monitoring<br><i>Jpn. J. Forensic Toxicol.</i> <b>13</b> (1): 17-24 (1995)<br>Yashiki, N., Magasawa, T., Kojima, T., Miyazaki, T., Iwasaki, Y.                                                    | 100µm PDMS<br>80°C, 5 min<br>headspace                                                                 | GC-MS           |
| 478  | Cartap in human serum                               | Simple Analysis of Cartap and Its Metabolites Using Solid Phase Microextraction and GC/MS<br><i>Jpn. J. Forensic Toxicol.</i> <b>16</b> (2):142-143(1998)<br><br>Namera,A., Watanabe,T., Yashiki,M., Iwasaki,Y., Kojima,T.                                                                                       | 65µm DVB/PDMS<br>30 min @ 70°C<br><br>immersed, NaOH added                                             | GC-MS           |
| 479  | Nicotine, cotinine in urine                         | Analysis of Nicotine and Cotinine in biological fluid sample by SPME<br><i>Jpn. J. Legal. Med</i> (49 Append): 80(1995)<br>Iwasaki,Y., Yashiki,M., Nagasawa,N., Miyazaki,T., Kojima,T.                                                                                                                           | 100µm PDMS<br>80°C, 5 min<br>headspace                                                                 | GC-MS           |
| 480  | Stimulants in blood & urine                         | Analysis of Stimulants and Narcotics<br><i>Bunseki</i> <b>10</b> :816-822(1995)<br>Yashiki,M., Kojima,T.                                                                                                                                                                                                         | 100µm PDMS<br>20 min @100°C<br>3pH, (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> ,NaCl<br>headspace | GC-NPD          |
| 918  | Stimulants urine, hair samples                      | Determination of stimulants in human urine and hair samples by polypyrrole coated capillary in-tube SPME coupled w/ LC-MS<br><i>Talanta</i> <b>2001</b> , <i>54</i> (4) 655-672<br>Wu, J., Lord, H., Pawliszyn, J.                                                                                               | polypyrrole capillary                                                                                  | LC-MS           |
| 650  | Fenfluramine, amphetamine, methamphetamine in blood | Simple and simultaneous analysis of fenfluramine, amphetamine, and methamphetamine in whole blood by GC-MS after headspace SPME and derivatization<br><i>Forensic Sci. Int.</i> <b>2000</b> , <i>109</i> (3), 215-223<br>Namera, A., Yahiki, M., Liu, M., Okajima, K., Hara, K., Imamura, T., Kojima, T.         | 15 min, headspace                                                                                      | GC-MS           |
| 808  | Amphetamine, methamphetamine in blood               | Highly sensitive analysis of methamphetamine and amphetamine in human whole blood using headspace GC-MS<br><i>Forensic Sci. Int.</i> <b>2000</b> , <i>116</i> (1), 15-22<br>Namera, A., Kojima, T., Okajima, K., Tskue, I., Yashiki, M.                                                                          | 30 min @ 90°C<br>headspace                                                                             | GC-MS<br>EI-SIM |
| 842  | 4-(4-methoxybenzyl) pyrimidine in tablets           | Synthesis of 4-methyl-5-arylpyrimidines and 4-arylpyrimidines: route specific markers for the Leuckardt preparation of amphetamine, 4-methoxyamphetamine and 4-methylthioamphetamine.<br><i>Forensic Sci Intl</i> (2001) <i>115</i> (1-2) 53-67<br>Kirkbride, K.; Ward, A; Jenkins, N.; Klass, G.; Coumbaros, J. | headspace                                                                                              | GC-MS           |
| 866  | Impurities from drug                                | Application of solid-phase microextraction to the profiling of an illicit drug: Manufacturing impurities in illicit 4-methoxyamphetamine<br><i>J.Forensic Sciences</i> (1999 ) <i>44</i> (6), 1237-1242<br>Kirkbride, K. Paul; Coumbaros, John C.; Klass, Gunter                                                 |                                                                                                        |                 |

| 2900 Volatiles from |                                           | Use of volatile organic components in scat to identify Canid species<br><i>Journal of Wildlife Management</i> 72, #3, 792-797 (APR 2008)                                                                                                                                                                                     | headspace                                                                                                     | GC-FID          |
|---------------------|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-----------------|
| Canid species       |                                           | Burnham, Eric; Bender, Louis C.; Eiceman, G.; Pierce, K.; Prasad, S.                                                                                                                                                                                                                                                         |                                                                                                               |                 |
| 481                 | Amphetamines, ecstasy in powder & tablets | SPME/Capillary GC for the profiling of confiscated ecstasy and amphetamine<br><i>Chromatographia</i> , (1999) 50 (3/4), 247-252<br>Kongshaug, K., Pedersen-Bjergard, S., Krogh, M., Rasmussen, K                                                                                                                             | 65µm DVB/PDMS<br>headspace/immersed<br>0.1M acetate buffer<br>pH 5                                            | GC-NPD          |
| 482                 | Ecstasy and amphetamines in urine         | Automated determination of ecstasy and amphetamines in urine by SPME and capillary GC after polychloroformate derivatization.<br><i>J. Pharm. Biomed. Anal.</i> (1999), 19(3+4), 463-475<br>Ugland, H., Kogh, M., Rasmussen, K.                                                                                              | 100µm PDMS<br>16 min, immersed<br>pH10                                                                        | GC-NPD<br>or MS |
| 927                 | Amphetamine, methamphetamine              | Determination of amphetamine, methamphetamine and dimethamphetamine in human urine by SPME-GC-MS<br><i>J. chromatogr. B</i> (1998), 716(1-2) 359-365                                                                                                                                                                         | 100µm PDMS<br>30 min, immersed<br>pH 12.4 KOH, NaCl added<br>stirred                                          | GC-MS           |
| 562                 | Amphetamines in urine                     | Myung, S., Min, H., Kim, S., Kim, M., Cho, J., Kim, T.<br><br>Rapid analysis of amphetamine, methamphetamine, MDA, and MDMA in urine using SPME, direct On-Fiber derivatization, and analysis by GC-MS<br><i>J. Anal. Toxicol.</i> 24, 11-16 (2000)<br>Jurado, C., Gimenez, M., Soriano, T.,<br><br>Menedez, M., Repetto, M. | 100µm PDMS<br>10 min @ 100°C<br>headspace, 2N NaOH<br>20 min @ 60°C on fiber<br><br>trifluoroacetic anhydride | GC-MS           |
| 483                 | Amphetamines in urine & blood             | Rapid Analysis Amphetamines in Blood Using SPME<br>20th Japan Biomedical Mass Spectrometry:127-130(1995)<br>Yashiki, M., Kojima, T.                                                                                                                                                                                          | 100µm PDMS<br>5 min @ 80°C<br>immersed, NaOH added                                                            | GC-MS           |
| 484                 | Amphetamines in urine & blood             | Detection of Amphetamines and Inflammable Compounds in Biological Materials Using GC/MS and SPME<br><i>Jpn. J. Forensic Toxicol.</i> 12(2):120-121(1994)<br>Yashiki, M., Kojima, T., Miyazaki, T.                                                                                                                            | 100µm PDMS<br>5 min @ 80°C<br>immersed, NaOH added                                                            | GC-MS           |
| 188                 | Amphetamines in urine                     | Quantitative and Qualitative Analysis of MDMA, MDEA, MA, and Amphetamine in Urine by Headspace/SPME and GC/MS<br><i>Forensic Sci. Intl.</i> 83 (3): 161-166 (1996)<br>Centini, F., Masti, A., Comparini, I.                                                                                                                  | 100µm PDMS<br>5 min @ 90°C<br>headspace                                                                       | GC-MS           |
| 70                  | Amphetamines in urine                     | Detection of Amphetamines in Urine Using Head Space<br>SPME and Chemical Ionization Selected Ion Monitoring<br><i>Forensic Sci Intl.</i> , 76(2), 169-177 (1995)<br>Yashiki, M., Kojima, T., Miyazaki, T.,<br>Nagasawa, N., Iwasaki, Y., Hara, K.                                                                            | 100µm PDMS<br>5 min<br>80°C<br>stirring                                                                       | GC-FID          |
| 173                 | Amphetamines in blood                     | Rapid Analysis of Amphetamines in Blood Using Headspace<br>SPME and Selected-Ion Monitoring<br><i>Forensic Sci. Intl.</i> 78 (2): 95-102 (1996)<br><br>Nagasawa, N., Yashiki, M., Iwasaki, Y., Hara, K., Kojima, T.                                                                                                          | 100µm PDMS<br>5 min @ 80°C<br><br>heptafluorobuty- amide derivative                                           | GC-SIM-MS       |
| 327                 | Amphetamines in urine                     | Method Optimization for the Analysis of Amphetamines in Urine by SPME<br><i>Anal. Chem.</i> 69 (19): 3899-3906 (1997)<br>Lord, H., Pawliszyn, J.                                                                                                                                                                             | 100µm PDMS<br>15-60 min<br>headspace<br>stirring                                                              | GC-FID          |
| 192                 | Amphetamines in urine                     | Simple Clean-up of Methamphetamine and Amphetamine in Human Urine by Direct-Immersion SPME<br><i>Jpn. J. Forensic Toxicol.</i> 14 (3): 228-232 (1996)<br>Ishii, A., Seno, H., Kumazawa, T., Suzuki, O.,<br>Nishikawa, M., Watanabe, K., Hattori, H.                                                                          | 100µm PDMS<br>30 min @ 65°C<br>Na <sub>2</sub> CO <sub>3</sub> added<br>immersed                              | GC-NPD          |

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|------|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------|
| 145  | Amphetamines<br>in urine                     | Application of SPME Technique for the Detection of Urinary<br>Methamphetamine and Amphetamine by GC<br>J. Can. Soc. Forensic Sci. 29(2): 43-48, (1996)<br>Ameno, K., Fuke, C., Ameno, S., Kinoshita, H., Ijirei, I.                                                                                   |                                                                                      | GC                    |
| 2744 | Impurities in<br>metamphetamine              | <b>Identification of impurities and the statistical classification of<br/>methamphetamine using headspace SPME-GC-MS</b><br><i>Forensic Sci. Int.</i> <b>160</b> , #1, 44-52 (2006-06-27)<br>Kuwayama, K.; Tsujikawa, K.; Miyaguchi, H.; Kanamori, T.; Iwata, Y.;<br>Inoue, H.; Saitoh, S.; Kishi, T. | Car/DVB 30/50µm<br>30 min @ 85°C<br>headspace                                        | GC-MS                 |
| 421  | Amphetamines,<br>methamphetamine<br>in hair  | Determination of Amphetamine and Methamphetamine in Human Hair<br>by Headspace SPME and GC-NPD<br>J. Chromatogr. B: Biomed. Sci. Appl. (1998), 707(1+2) 99-104<br>Koide, I., Noguchi, O., Okada, K., Yokoyama, A., Oda, H.,<br>Yamamoto, S., Kataoka, H.                                              | 100µm PDMS<br>15 min @45°C<br>immersed, NaOH added                                   | GC-NPD                |
| 194  | Methamphetamine,<br>cocaine<br>in urine      | Rapid Analysis of Methamphetamine and Cocaine in the<br>Urine of Drug Abusers with SPME<br>Chromatography 18 (3): 185-188 (1996)<br>Makino, Y., Takagi, T., Ohta, S., Hirobe, M.                                                                                                                      | 100µm PDMS<br>15 min<br>immersion<br>pH 10.5                                         | GC-FTD                |
| 198  | Amphetamines<br>in urine                     | Screening Procedure for 21 Amphetamine-Related<br>Compounds in Urine Using SPME and<br>Gas Chromatography-Mass Spectrometry<br>J. Chromatogr. Sci. 36: 1-7 (1998)<br>Battu, C., Marquet, P., Fauconnet, A., Lacassie, E.,<br>Lachatre, G.                                                             | 100µm PDMS<br>80°C, 10 min<br>headspace<br>salt added                                | GC-MS                 |
| 566  | Amphetamines in<br>urine                     | Automated drug analysis by in-tube SPME-LC-MS<br>Chromatography. Jun 1999; 20(2): 142-145<br>Kataoka,-H; Lord,-HL; Pawliszyn,-J                                                                                                                                                                       | 60cm x 0.25mm ID tube<br>Omegawax 250                                                | LC-MS<br>electrospray |
| 651  | Amphetamines<br>in urine                     | Simple and rapid determination of amphetamine,<br>methamphetamine and their methylenedioxy derivatives in<br>urine by automated in-tube SPME coupled with LC-electro-<br>spray ionization mass spectrometry<br><i>J. Anal. Toxicol</i> (2000), 24(4), 257-265<br>Kataoka,-H; Lord,-HL; Pawliszyn,-J   | In-tube Omegawax 250<br>60cmx0.25mm.i.d.x0.25µ<br>m                                  | LC-MS<br>electrospray |
| 652  | Amphetamines<br>methamphetamine<br>in serum  | Determination of amphetamine and methamphetamine<br>in serum via headspace derivatization SPME-GC-MS<br><i>J. Chromatogr. A</i> , 896, (2000) 265-273<br>Lee, M., Song, Y., Hwang, B., Chou, C.                                                                                                       | PDMS<br>40 min, headspace<br>pH 9.5<br>heptafluorobutyric<br>anhydride ethyl acetate | GC-MS                 |
| 831  | Amphetamines                                 | On-fiber derivatization for direct immersion SPME part I:<br>acylation of amphetamine with pentafluorobenzoyl chloride<br><i>J. Sep. Sci.</i> (2001) 24(2), 116-122<br>Koster, E; Bruins, C.; Wemes, C; De Jong, G.                                                                                   |                                                                                      |                       |
| 765  | Beta blockers<br>in urine, serum             | Determination of automated In-tube SPME-LC-MS<br>for drug analysis<br><i>J.MicroSeparation</i> ,(2000-9), 12(9), 493-500<br>Kataoka,-H; Lord,-HL; Pawliszyn,-J                                                                                                                                        | In-tube Omegawax 250                                                                 | LC-MS<br>electrospray |
| 794  | Beta blockers<br>in urine, serum             | Determination of beta-blockers by HPLC w/SPME<br>from urine and plasma samples<br><i>Analytical Letters</i> (2001) 34(1), 91-101<br>Tanabe, S; Shimokawa, K; Matsuda, Y.,Katayama, M;<br>Daimon, H,Hara. I; Kaneko, S; Sato, T.                                                                       | 85µm polyacrylate                                                                    | HPLC                  |
| 71   | Amphetamines,<br>alcohols<br>in urine, serum | Comparison of New Solid Phase Extraction Methods for<br>Chromatographic Identification of Drugs in Clinical<br>Toxicology Analysis                                                                                                                                                                    | 100µm PDMS,<br>85µm polyacrylate                                                     | GC-FID                |

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|      |                                                        | Degel, F., Weidemann, G.                                                                                                                                                                                                                                                      | 60°C, 15 min<br>headspace                                               |                          |
| 485  | Amphetamines in<br>biological fluids                   | Some Problems of Detecting Amphetamines in Biological<br>Materials by using Triage<br>Pract. Forens. Med. 40:99-102 (1997)<br>Watanabe,T., Namera,A., Yashiki,M., Iwasaki,Y., Kojima,T.                                                                                       | 100µm PDMS<br>5 min @ 80°C<br>CaCO <sub>3</sub> added<br>headspace      | GC-MS                    |
| 234  | Drug Summary                                           | Analysis of Drugs and Poisons in Legal Medicine<br>J. Mass Spectrom. Soc. Jpn. 44: 321-333 (1996)<br>Suzuki, O., Seno, H., Ishii, A.                                                                                                                                          | Various fibers &<br>conditions                                          |                          |
| 79   | Drugs of abuse<br>in urine                             | Determination of Drugs of Abuse Using SPME (German)<br>Labor-Med. 18 (2): 112-118 (1995)<br>Singer, K., Wenz, B., Seefeld, V., Speer, U.                                                                                                                                      | 100µm PDMS,<br>85µm polyacrylate<br>40°C, 20 min<br>immersion, stirring | GC-MS                    |
| 2541 | Cocaine in<br>plasma                                   | <b>Determination of cocaine and cocaethylene in plasma by SPME-GC-MS</b><br><b>J. Chromatogr., B: 845, #1, 90-94 (2007-01-01)</b><br>Alvarez, I.; Bermejo, A. M.; Tabernero, M. J.; Fernandez, P.; Lopez, P                                                                   | headspace                                                               | GC-MS                    |
| 2534 | Cocaine<br>in polymethyl<br>methacrylate               | <b>Evidence on unusual way of cocaine smuggling: Cocaine-polymethyl<br/>methacrylate (PMMA) solid solution-study of clandestine laboratory<br/>samples</b><br><b>FORENSIC SCI. INT. 169, #2-3, 210-219 (04 JUL 2007)</b><br>Gostic, T.; Klemenc, S.                           |                                                                         | GC-MS                    |
| 81   | Cocaine<br>in urine                                    | Detection of Cocaine in Human Urine by SPME and Capillary<br>GC with Nitrogen-Phosphorus Detection<br>Jpn. J. Forensic Toxicol. 13 (3): 207-210 (1995)<br>Kumazawa, T., Watanabe, K., Sato, K., Seno, H.,<br>Ishii, A., Suzuki, O.                                            | 100µm PDMS<br>30 min<br>immersion, stirring<br>NaF added                | GC-FPD                   |
| 2210 | Cocaine from<br>coca leaves                            | <b>Focused microwave-assisted extraction combined with SPME-<br/>GC-MS for the selective analysis of cocaine from coca leaves</b><br><b>J. Chromatogr. A, 1112, #1-2,127-132 (2006)</b><br>Bicchi, C.; Bieri, Stefan; Christen, P.; Ilias, Yara; Veuthey, J.                  | 100µm PDMS<br>immersion                                                 | GC-MS                    |
| 653  | Volatiles<br>from cocaine, heroin                      | SPME/GC-MS characterization of volatiles associated<br>with cocaine and heroin<br>Am. Lab, Sept. 2000, 32-34<br>Vu, D., Nicholas, P. Erikson, C.                                                                                                                              | 30/50Carboxen/DVB/PD<br>MS<br>85µm polyacrylate<br>90 min<br>headspace  | GC-MSD                   |
| 486  | Methyl Benzoate<br>on currency                         | Field and Laboratory comparison of the sensitivity and<br>reliability of cocaine detection on currency using<br>chemical sensors, humans, K-Os and SPME/GC/MS<br>Proceeding SPIE-Int. Soc. Opt. Eng. 3576:41-46 (1999)<br>Furton, K., Hsu, Y., Luo, T., Norelus, A., Rose, S. |                                                                         | GC-MS-MS                 |
| 907  | Daidzein, isoflavon<br>aglycones genistein<br>in urine | Detection of the isoflavone aglycones genistein and daidzein<br>in urine using SPME-HPLC-electrospray MS<br>J. Chromatogr. B (2001), 759(1) 33-41<br>Satterfield, M., Black, D., Brodbelt, J.                                                                                 |                                                                         | LC-MS                    |
| 164  | Barbiturates<br>in water                               | Determination of Barbiturates by SPME and Ion Trap GC-MS<br>J. Chromatogr. A 777: 275-282 (1997)<br>Hall, B., Brodbelt, J.                                                                                                                                                    | 65µm Carbowax/DVB<br>20 min<br>immersion, stirring                      | GC-MS                    |
| 572  | Benzoyllecgonine<br>in urine                           | Aqueous phase hexyl chloroformate derivatization and SPME<br>determination of benzoyllecgonine in urine by GC-<br>Quadrapole ion trap mass spectrometry<br>J-Forensic-Sci. May 1999; 44(3): 527-534<br>Hall,-BJ; Parikh,-AR; Brodbelt,-JS                                     | 100µm PDMS<br>10 mi. @ 55°C<br>hexyl chloroformate<br>derivative        | GC-EMIS                  |
| 224  | Barbiturates<br>in urine and serum                     | Determination of Barbiturates by SPME and Capillary<br>Electrophoresis<br>Anal. Chem. 69: 1217-1222 (1997)<br>Li, S., Weber, S.                                                                                                                                               | polyvinyl coated<br>metal rod<br>5, 10, 30 min                          | electrophoresis<br>230nm |
|      |                                                        | Detection of Meperidine (Pethidine) in Human Blood and Urine                                                                                                                                                                                                                  |                                                                         |                          |

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|------|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|--------------------------------------|
| 80   | Meperidine                                  | Artificial receptor-facilitated SPME of barbiturates.                                                                                                                                                                                                                                     | 100µm PDMS                                                  | GC-FID                               |
| 596  | Barbiturates<br>in urine/serum              | Anal-Chem. 1 Jun 1999; 71(11): 2146-2151<br>Li,-S; Sun,-LF; Chung,-Y; Weber,-SG                                                                                                                                                                                                           | PVC/steel rod<br>5 min<br>immersed                          | CE                                   |
| 654  | Meperidine<br>in urine and blood            | Detection of Meperidine (Pheonthiazin) in human blood and urine by Headspace SPME and Gas Chromatography<br><i>Jpn. J. Forensic Toxicol. 13 (3): 211-215 (1995)</i><br>Seno, H., Kumazawa, T., Ishii, A., Nishikawa, M., Hattori, H., Suzuki, O.                                          | 100°C, 30 min<br>headspace<br>salt & NaOH added             | GC                                   |
| 196  | Phencyclidine in<br>blood and urine         | Simple Extraction of Phencyclidine from Human Body Fluids by Headspace SPME<br>Chromatographia 43 (5-6): 331-333 (1996)<br>Ishii, A., Kumazawa, T., Watanabe, K., Hattori, H., Suzuki, O.                                                                                                 | 100µm PDMS<br>90°C, 30 min<br>headspace                     | GC-surface<br>ionization<br>detector |
| 487  | Diphenylmethane<br>blood and urine          | Simple Analysis of Diphenylmethane Antihistaminics and their Analogous in bodily Fluids by headspace SPME capillary gas chromatography<br>J. Chromatogr. Sci. 35:275-279(1997)<br>Nishikawa,M., Seno,H., Ishii,A. Suzuki,O., Kumazawa,T., Watanabe,K., Hattori,H.                         | 100µm PDMS<br>10 min @ 98°C<br>10N NaOH                     | GC-FID                               |
| 2260 | Antioxidant in<br>martinis                  | <b>Shaken not stirred: an analytical assay for antioxidant activity in martinis using quenched luminol chemiluminescence and SPME-GC-MS</b><br><i>Abstracts of Papers Am Chem Society 229, #1, U394 (2005)</i><br>McCrum, Erin C.; Shear, Ruth I.                                         |                                                             | GC/MS                                |
| 2261 | Organics in<br>urine                        | <b>Comparison of different SPME fibers for the GC-MS analysis of trace organics in a biological matrix (urine).</b><br><i>Abstracts of Papers Am Chem Society 229 #1, U353 (2005)</i><br>Eggert,M.; Brown,P.; Evola,M.; Goodwin,T.; Rasmussen,L.;Schulte, B.                              |                                                             | GC/MS                                |
| 179  | Ethanol<br>in blood                         | Blood Alcohol Determination with Automated SPME:<br>A Comparison with Static Headspace Sampling<br>J. Can. Soc. Forens. Sci. 30(1): 7-12 (1997)<br>Penton, Z.                                                                                                                             | 65µm Carbowax/DVB<br>3 min<br>headspace<br>salt & NaF added | GC-FID                               |
| 191  | Ethanol in<br>blood, urine                  | Detection of Ethanol in Human Body Fluids by Headspace SPME/Capillary GC<br>Chromatographia 43 (7-8): 393-397 (1996)<br>Kumazawa, T., Seno, H., Lee, X., Ishii, A., Suzuki, O., Sato, K.                                                                                                  | 65µm Carbowax/DVB<br>70°C, 10 min<br>headspace, (NH4)2SO4   | GC-MS                                |
| 418  | Ethanol in<br>blood, urine                  | Improved Extraction of Ethanol from Human Body Fluids by Headspace SPME with a Carboxen/PDMS Fiber<br>Chromatographia (1998), 47(9/10), 593-595<br>Lee, Z., Kumazawa, T., Sato, K., Seno, H., Ishii, A., Suzuki, O.                                                                       | Carboxen/PDMS                                               |                                      |
| 206  | Antihistamine drugs<br>in blood, urine      | Simple Analysis of Diphenylmethane Antihistamines and Their Analogue in Bodily Fluids by Headspace SPME-Capillary Gas Chromatography<br>J. Chromatogr. Sci. 35 (6): 275-279<br>Nishikawa, M., Seno, H., Ishii, A., Suzuki, O., Kumazawa, T., Watanabe, K., Hattori, H.                    | 100µm PDMS<br>90°C, 10 min<br>headspace                     | GC-FID                               |
| 2719 | Sulfonamide<br>antibiotics<br>in wastewater | <b>Determination of sulfonamide antibiotics in wastewater: A comparison of solid phase microextraction and solid phase extraction methods</b><br><i>J. Chromatogr., A 1131, #1-2, 1-10 (2006-10-27)</i><br>Balakrishnan, V. K.; Terry, K. A.; Toito, J.                                   | 65µm CW/DVB<br>20 MIN<br>4.5pH, sat. salt                   | GC                                   |
| 2648 | Antibiotics in<br>plasma                    | <b>Determination of antibiotic drug concentrations in circulating human blood by means of solid phase micro-extraction</b><br><i>Clinica Chimica Acta 386, #1-2, 57-62 (NOV-DEC 2007)</i><br>Schubert, J.; Miekisch, W.; Fuchs, P.; Scherzer, N.; Lord, H.; Pawliszyn, J.; Mundkowski, R. |                                                             | LC-MS                                |
|      |                                             | <b>Simultaneous determination of nontricyclic antidepressants in human</b>                                                                                                                                                                                                                |                                                             |                                      |



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|------|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|---------------|
| 2734 | Nontricyclic antidepressants in plasma    | plasma by (SPME-LC).<br><i>J. Anal. Toxicol.</i> 31, #6, 313-320 (Jul-Aug 2007)<br>Silva, B. J. G.; Queiroz, R. H. C.; Queiroz, M. E. C.                                                                                                                   |                                                                          | LC-MS         |
| 2507 | Tricyclic antidepressants in plasma       | Analysis of tricyclic antidepressant drugs in plasma by means of SPME-liquid chromatography-mass spectrometry<br><i>J Mass Spectrometry</i> 42, #10, 1342-1347 (OCT 2007)<br>Alves, C.; Santos-Neto, A.; Fernandes, C.; Rodrigues, J.; Lancas, F.          | 65µm PDMS/DVB<br>30min @ 30°C<br>direct extraction                       | LC-MS         |
| 64   | Tricyclic antidepressants in urine        | Simple Extraction of Tricyclic Antidepressants in Human Urine by Headspace SPME<br><i>Jpn. J. Forensic Toxicol.</i> 13 (1): 25-30 (1995)<br>Kumazawa, T., Lee, X., Tsai, M., Seno, H., Ishii, A., Sato, K.                                                 | 100µm PDMS<br>100°C, 15 min<br>headspace<br>stirring                     | GC-FID        |
| 95   | Tricyclic antidepressants in blood        | Detection of Tricyclic Antidepressants in Whole Blood by Headspace SPME-Capillary GC<br><i>J. Chrom. Sci.</i> 35: 302-308 (1997)<br>Lee, X., Kumazawa, T., Sato, K.                                                                                        | 100µm PDMS<br>100°C, 60 min<br>headspace<br>NaOH added                   | GC-FID        |
| 488  | Tricyclic antidepressants in urine, blood | Analysis of Tricyclic Antidepressant and that application for fatal intoxication by Headspace SPME<br><i>Jpn. J. Legal. Med.</i> 52:69(1998)<br>Watanabe, T., Namera, A., Yashiki, M., Iwasaki, Y., Kojima, T.                                             | 100µm PDMS<br>45 min @ 120°C<br>headspace, NaOH                          | GC-MS         |
| 352  | Tetracyclic antidepressants in blood      | Simple Analysis of Tetracyclic Antidepressants in Blood Using Headspace SPME and GC-MS<br><i>J. Anal. Toxicology</i> , Vol. 22 (5), 1998, 396-400<br>Namera, A., Watanabe, T., Yahiki, M., Iwasaki, Y., Kojima, T.                                         | 100µm PDMS<br>120°C, 45 min<br>headspace<br>NaOH added                   | GC-MS         |
| 655  | Antidepressant in urine                   | Direct coupling of microcolumn liquid chromatography with in-tube SPME for the analysis of antidepressant drugs<br><i>Analyst (Cambridge UK)</i> 2000, 125(5), 807-809<br>Saito, Y., Kawazoe, M., Jinno, K., Nayhashida, M.                                | In-tube                                                                  | HPLC          |
| 227  | Diazepam in serum                         | Solvent-Modified Solid-Phase Microextraction for the Determination of Diazepam in Human Plasma Samples by Capillary Gas Chromatography<br><i>J. Chromatogr. B</i> 689: 357-364 (1997)<br>Krough, M., Grefslie, H., Rasmussen, K.                           | 85µm polyacrylate<br>4 min<br>immersion<br>pH 5.5<br><br>1-octanol added | GC-FID or FPD |
| 656  | Amitriptyline in human urine              | SPME coupled with microcolumn LC for the analysis of amitriptyline in human urine<br><i>Chromatographia</i> , (2000 Sept.) 52(5-6) 309-313<br>Jinno, K., Kawazoe, M., Hayashida, M.                                                                        |                                                                          | HPLC          |
| 371  | Benzophenone-3 in water and urine         | Determination Benzophenone-3 and Metabolites in Water and Human Urine by SPME and Quadrupole Ion Trap GC-MS<br><i>Anal. Chimica Acta</i> 371 (1998) 195-203<br>Felix, T., Hall, B., Brodbelt, J.                                                           | 65µm Carbowax/DVB<br>45 min<br>immersion                                 | GC-MS         |
| 871  | Benzoyllecgonine in urine                 | Aqueous phase hexylchloroformate derivatization and SPME Determination of benzoyllecgonine in urine by GC quadrupole ion trap mass spectrometry.<br><i>J Forensic Sci</i> (1999) 44(3) 527-534<br>Brodbelt, Jennifer S.; Hall, Brad J.; Parikh, Aashish R. | 100µm PDMS<br><br>hexyl chloroformate derivative                         | GC-MS         |
| 168  | Antidepressants in blood                  | Solid Phase Microextraction with Capillary GLC and NDPD for the Assay of Antidepressant Drugs in Human Plasma<br><i>J. Chromatogr. B</i> 696: 217-234 (1997)<br>Ulrich, S., Martens, J.                                                                    | 100µm PDMS<br>60 min<br>immersion                                        | GC-NDPD       |
| 657  | Phenothiazines urine, blood               | Determination of Phenothiazines in human body fluids by SPME and LC-tandem mass spectrometry<br><i>J. Mass Spec.</i> (2000-9) 35(9) 1091-1099<br>Seno, H., Kumazawa, T., Ishii, A., Hattori, H., Nishikawa, M., Watanabe, K., Suzuki, O.                   | 85µm Polyacrylate<br>60 min @ 40°C<br>pH 8<br>stirring                   | LC-MS         |

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| 142  | Phenothiazines<br>urine, blood                                             | Detection of Some Phenothiazines by Headspace SPME and GC<br><i>Jpn. J. Forensic Toxicol. 14: 30 (1996)</i><br>Kumazawa, T., Seno, H., Ishii, A., Hattori, H., Sato, K., Watanabe, K., Suzuki, O.                                                                                                             | 100µm PDMS<br>40 min @ 140°C<br>headspace<br>NaCl added                | GC-FID          |
| 947  | Propranolol                                                                | In-Tube Molecularly Imprinted Polymer SPME for the selective Determination of Propranolol<br><i>Anal. Chem (2001) 73(11) 2383-2389</i><br>Mullett, Wayne M.; Martin, Paul; Pawliszyn, Janusz                                                                                                                  |                                                                        |                 |
| 2480 | Furan<br>in plasma, urine                                                  | <b>Quantification of plasma and urinary levels of furan in healthy individuals</b><br><b><i>FASEB Journal. 21, #6, A1066 (APR 2007)</i></b><br><b>Jun, Hee-Jin; Chung, Mi Ja; Park, Young-Sik; Lee, Kwang-Geun; Lee, S.</b>                                                                                   |                                                                        | GC-MS           |
| 946  | Carbofuran<br>in seum                                                      | Application of (SPME) technique for the detection of carbofuran in serum<br><i>J. Can. Soc. Forensic Sci(2001) 34(1), 23-26</i><br>Ameno, K.; Lee, S-K.; Ameno, S.; Kinoshita, H.; Kubota, T.; Zhang, X.; Ijiri,                                                                                              |                                                                        |                 |
| 908  | Dinitroaniline<br>in blood, urine<br>and water                             | Headspace SPME and GC determination of dinitroaniline herbicide s in human blood, urine and environmental water<br><i>J. Chromatogr. B. (1998), 714(2), 205-213</i><br>Guan, F., Watanabe, K., Ishii, A., Seno, H., Kumazawa, T., Hattori, H., Suzuki, O.                                                     | 100µm PDMS<br>30 min @ 70°C<br>headspace<br>NaSO4                      | GC-ECD          |
| 2809 | Pesticides                                                                 | <b>Reliable identification of pesticides using linear retention indices as an active tool in GC-MS analysis</b><br><b><i>J. Chromatogr. A.1186 (1-2), 430-433 (Apr 4 2008)</i></b><br><b>Casilli, A.; Dugo, G.; Dugo, Paola; Mondello, L.; Salvatore, Angelo; Tranchida, Peter Quinto</b>                     |                                                                        | GC-MS           |
| 2636 | Pesticides in<br>ground water                                              | <b>Evaluation of the pesticide contamination of groundwater sampled over two years from a vulnerable zone in Portuga</b><br><b><i>J Agri Food Chem 55, #15, 6227-6235 (2007)</i></b><br><b>Goncalves, C. M.; Silva, J. C. G. E. da; Alpendurada, M. F</b>                                                     |                                                                        | GC-ECD<br>GC-MS |
| 2412 | Phenylurea and<br>propanil herbicides<br>in ground water                   | <b>Analysis of phenylurea and propanil herbicides by SPME-LC combined with post-column photochemically induced fluorimetry derivatization and fluorescence detection</b><br><b><i>Anal. Chim. Acta 593, #2, 157-163 (2007-06-19)</i></b><br><b>Mughari, A. R.; Parrilla Vazquez, P. ; Martinez Galera, M.</b> | 60µm PDMS/DVB<br><br>fluorimetry<br>derivatization                     | HPLC-PIF-FD     |
| 183  | Herbicides<br>in water and<br>biological fluids                            | SPME and GC-ECD Determination of Dinitroaniline Herbicides in Surface Water and Biological Fluids<br><i>Jpn. J. Forensic Toxicol. 15 (2): 151-153 (1997)</i><br>Prosen, F., Watanabe, K., Ishii, A., Seno, H., Suzuki, O.                                                                                     | 100µm PDMS<br>30 min @ 70°C water<br>@ 90°C blood<br>Na2SO4, headspace | GC-ECD          |
| 860  | Organochlorine &<br>organophosphorus<br>pesticides in<br>biological fluids | Gas chromatographic determination of organochlorine and organophosphorus pesticides in human fluids using SPME<br><i>Analytica Chimica Acta (2001) 433(2) 217-226</i><br>Hernandez, F.; Beltran, J.; Egea, S.; Lopez, F. J.; Pitarch, E.                                                                      |                                                                        | GC/ECD/FPD      |
| 66   | Organophosphate<br>pesticides<br>in urine, blood                           | Detection of Organophosphate Pesticides in Human Body Fluids by Headspace SPME and Capillary GC with Nitrogen-Phosphorus Detection<br><i>Chromatographia 42(3/4): 135-140 (1996)</i><br>Lee, X., Kumazawa, T., Taguchi, T., Sato, K., Suzuki, O.                                                              | 100µm PDMS<br>100°C, 20 min<br>pH 3 with HCl                           | GC-NPD          |
| 875  | Organophosphorus<br>pesticides in<br>whole blood                           | Optimisation of SPME conditions for headspace analysis of organophosphorus pesticides in whole blood<br><i>Z Zagadnien Nauk Sadowych, 42(2000) 47-59</i><br>Asri, K., Anderson, R.                                                                                                                            |                                                                        |                 |
| 2777 | Malathion bait                                                             | <b>Malathion bait consumption and mortality of <i>Anastrepha suspensa</i> (Diptera : Tephritidae)</b><br><b><i>Annals of the Entomological Society of America 101, #2, 418-429</i></b>                                                                                                                        | headspace                                                              | GC-MS           |

|      |                                                                     |                                                                                                                                                                                                                                                                                          |                                                                 |                   |
|------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|-------------------|
| 103  | Malathion<br>in blood                                               | Rapid Analysis of Malathion in Blood Using Head Space<br>Solid Phase Microextraction and Selected Ion Monitoring<br><i>Forensic Sci. Int. 88: 125-131 (1997)</i><br>Namer, A., Yashiki, M., Nagasawa, N., Iwasaki, Y.,<br>Kojima, T.                                                     | 100µm PDMS<br>90°C, 5 min<br>headspace                          | GC-MS             |
| 489  | Parathion<br>in blood                                               | Rapid analysis of parathion in biological samples using<br>headspace SPME and GC-MS<br><i>Clin. Chem. Lab. Med. 1999, 37(6), 639-642</i><br>Muschhoff, F., Junker, H., Madea, B                                                                                                          | headspace                                                       | GC-MS             |
| 136  | Carbamate in<br>urine, serum                                        | Determination of Some Carbamate Pesticides in Human Body<br>Fluids by Headspace SPME/GC<br><i>Jpn. J. Forensic Toxicol. 14 (3): 199-203 (1996)</i><br>Seno, H., Kumazawa, T., Ishii, A., Nishif, M.                                                                                      | 100µm PDMS<br>70°C, salt<br>headspace                           | GC-NPD            |
| 797  | Amino pesticides<br>in biological samples                           | Separation methods for amino group-possessing pesticides<br>in biological samples.<br><i>J Chromatogr B (2000) 747(1&amp;2), 241-254</i><br>Kumazawa, T; Suzuki, O.                                                                                                                      | 100µm PDMS<br>30min @ 95°C, salt<br>headspace                   | GC-FID, NPD       |
| 490  | Arylamide Herbicides<br>in Serum                                    | Simple Analysis of Arylamide Herbicides in Serum using<br>Headspace SPME and GC-MS<br>6th Indo Pacific Congress on Legal Medicine and<br>Forensic Science. 770-773(1998)<br>Namera,A., Watanabe,T., Yashiki,M., Iwasaki,Y., Kojima,T.                                                    | 100µm PDMS<br>45 min @ 90°C<br>headspace, NaCl                  | GC-MS             |
| 107  | Diazepam in<br>biological fluids                                    | Solid-Phase Microextraction/Liquid Chromatography (SPME/LC)<br>for Drug Analysis in Biological Fluids<br>Chromatography (1997), 18(4), 244-245,<br>Jinno, K                                                                                                                              | 85µm polyacrylate<br>30°C, 3 hr                                 | HPLC-UV,<br>200nm |
| 658  | Drugs<br>in biological fluids                                       | SPME of drugs from biological matrices<br><i>J. Chromatogr. A 885(2000) 445-455</i><br>Snow, N.                                                                                                                                                                                          | review article                                                  |                   |
| 234  | Drugs in<br>biological fluids                                       | Analysis of Drugs and Poisons in Legal Medicine<br><i>J. Mass Spectrom. Soc. Jpn. 44: 321-333 (1996)</i><br>Suzuki, O., Seno, H., Ishii, A.                                                                                                                                              | 100µm PDMS &<br>85µm polyacrylate<br>headspace<br>NaCl, Na2SO4, | GC-MS             |
| 108  | Volatiles<br>in urine                                               | Confirmation of Volatiles by SPME and GC-MS in the<br>Investigation of Two Traffic Fatalities:<br><i>J. Anal. Toxicol. 1997, 21(4), 286-290</i><br>Brewer, W., Galipo, R., Morgan, S., Habben, K.                                                                                        | 85µm polyacrylate<br>60°C, 10 min<br>headspace                  | GC-MS             |
| 564  | Tetrachloroethylene<br>trichloroethylene in<br>tissue, urine, serum | Tetrachloroethylene and trichloroethylene fatality:<br>case report and simple headspace SPME-capillary<br>GC determination in Tissues<br><i>J. Anal.Toxicol, 24 (1), 22-26, (2000)</i><br>Dehon, B., Humbert, L., Devisme, L., Stievenart, M., Mathieu, D.<br>Houdret, N., Lhermitte, M. | 100µm PDMS<br>1 min headspace<br>60°C                           | GC-ECD            |
| 2783 | steroidal<br>glycoalkaloids                                         | SPME followed by on-fiber derivatization of solasodine and<br>solanidine aglycones of steroidal glycoalkaloids<br><i>J. Liq. Chromatogr.Relat. Technol. 31, #8, 1132-1146 (Jan 2008)</i><br>Eanes, Ritchie C.; Tek, Neslihan                                                             | 60µm CW/DVB<br>immersion<br>TMSI derivative                     | GC/MS             |
| 2239 | Steroid<br>hormones in<br>biological<br>samples                     | SPME with on-fiber silylation for simultaneous determinations<br>endocrine disrupting chemicals and steroid hormones by GC-MS<br><i>J. Chromatogr. A, 1104, #1-2, 23-32 (2006)</i><br>Lan, Chongyu; Luan, Tiangang; Yang, Lihua                                                          | 85µm polyacrylate<br>immersion<br>derivatization                | GC/MS             |
| 113  | Estrogen, steroids in<br>water/biological fluids                    | Analysis of Steroids from Human Serum by SPME with<br>Headspace Derivatization & GC<br><i>J. High Res. Chromatogr. 20: 171-173 (1997)</i>                                                                                                                                                | 85µm polyacrylate<br>30 min                                     | GC-MS             |

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|-----|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|--------|
|     |                                                  | Okeyo, P., Rentz, S., Snow, N.                                                                                                                                                                                                                                   | immersion, stirring<br>BSTFA derivative                                        |        |
| 373 | Estrogen, steroids in<br>water/biological fluids | Analysis of Estrogens and Anabolic Steroids by SPME with<br>On-Fiber Derivatization and GC-MS<br><br>J. Microcolumn Separations, 10(7) 551-556 (1998)<br>Okeyo, P., Snow, N.                                                                                     | 85µm polyacrylate<br><br>30 min<br>immersion, stirring<br>BSTFA derivative     | GC-MS  |
| 404 | Estrogen, steroids in<br>water/biological fluids | On-Fiber Derivatization for Analysis of Steroids by SPME-GC-MS<br>Book chapter<br>Snow, N.                                                                                                                                                                       | 60µm Carbowax/DVB<br>60°C, 30 min<br>immersion<br>stirring<br>BSTFA derivative | GC-MS  |
| 200 | Ethanol, acetone,<br>isoprene in<br>human breath | Solid Phase Microextraction for the Analysis of Human Breath<br>Anal. Chem. 69 (4): 587-596 (1997)<br>Grote, C., Pawliszyn, J.                                                                                                                                   | 100µm PDMS<br>10-60 sec<br>headspace                                           | GC-MS  |
| 659 | Isoprene<br>in human breath                      | Determination of isoprene in human expired breath using<br>SPME with GC-MS<br><i>J. Chromatogr. B. Biomed Appl.</i> 739(1), 183-190<br>Hyspler, R, Crhova, S. Gasparic, J., Cizkova, M.,<br>Balasova, V., Zadak, Z.                                              | Carboxen/PDMS<br>10 min @ 40°C from<br>tedlar bag sample                       | GC-MS  |
| 322 | Chloroethenes<br>in biological fluids            | Determination of Chloroethenes in Environmental Biological<br>Samples Using GC Coupled with SPME<br><i>Chromatographia</i> 42 (5/6): 313-317 (1996)<br>Xu, N., Vadegrifts, S., Sewell                                                                            |                                                                                |        |
| 660 | Halothane<br>in biological samples               | Rapid analysis of halothane in biological samples<br>using headspace SPME and GC-MS -<br>a case of double homicide<br><i>J. Anal. Toxicol.</i> (2000), 24(5), 372-376<br>Muschhoff, G., Junker, H., Madea, B.                                                    |                                                                                | GC-MS  |
| 867 | 4-Heptanone<br>in urine                          | Urine 4-heptanone: A beta-oxidation product of<br>2-ethylhexanoic acid from plasticisers<br><i>Clinica Chimica Acta</i> (2001) 306(1-2) 51-61<br>Walker, Valerie; Mills, Graham A                                                                                |                                                                                | GC-MS  |
| 491 | Clozapine in<br>human plasma                     | SPME for the assay of clozapine in human plasma<br><i>Fresenius' J. Anal. Chem.</i> 1999, 364(7), 654-655<br>Kruggel, S., Ulrich, S.                                                                                                                             | 100µm PDMS<br>30 min<br>pH adj. NaOH                                           |        |
| 843 | Levomepromazine<br>in human plasma               | SPME for the assay of levomepromazine in human plasma<br><i>Therapeutic Drug Monitoring</i> (2000) 22(6), 723-728<br>Kruggel, S., Ulrich, S.                                                                                                                     | 100µm PDMS<br>30 min @30°C<br>chloramitriptyline added<br>0.1 M -NaOH          | GC-NPD |
| 575 | Homocysteine in<br>plasma/water                  | Determination of homocysteine and its related compounds<br>by SPME-gas chromatography-mass spectrometry.<br><i>J-Chromatogr.-B:-Biomed-Appl.</i> 30 Apr 1999; 727(1-2): 1-8<br>Myung,-S-W; Kim,-M-S; Min,-H-K; Yoo,-E-A; Kim,-K-R                                | 85µm polyacrylate<br>30 min immersed<br>pH 3                                   | GC-MS  |
| 906 | Ranitidine                                       | Automated in-tube SPME-LC-electrospray ionization mass<br>spectrometry for the determination of ranitidine.<br><i>J. Chromatogr.B</i> (1999), 731(2), 353-359<br>Kataoka, H., Lord, H., Pawliszyn, J.                                                            |                                                                                | LC-MS  |
| 949 | g-Hydroxybutyrate<br>in human urine<br>and water | Determination of gamma-hydroxybutyrate in water and<br>human urine by SPME-GC/quadrupole iontrap MS<br><i>J. Forensic Sci</i> (2001), 46(3), 688-693<br>Blair, S.; Song, M.; Hall, B.; Brodbelt, J.                                                              |                                                                                | GC-MS  |
| 869 | g-Hydroxybutyrate<br>in human whole<br>blood     | Simple extraction of gamma-hydroxybutyrate in human whole<br>blood by headspace solid-phase microextraction<br><i>Jpn. J. Forensic Toxicol</i> (2001) 19(1) 38-45<br>Kurihara, R; Ishii, A; Watanabe-Suzuki, K; Kumazawa, T;<br>Seno, H; Suzuki, O; Katsumata, Y |                                                                                |        |

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|------|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|-------------------|
|      |                                        | Determination of gamma-Hydroxybutyric Acid (GHB) in                                                                                                                                                                                                       |                                                                        |                   |
| 405  | g-Hydroxybutyric acid in plasma, urine | Plasma and Urine by Headspace SPME and GC-Positive Ion Chemical Ionization MS<br>Rapid Commun. Mass Spec(2000) 14(24), 2401-2407<br>Frison, G; Tedeschi, L; Maietti, S; Ferrara, Santo D                                                                  | 50µm Carbowax/TPR100 GC-PICI-MS<br>70°C, 15 min<br>headspace<br>pH 6-7 |                   |
| 323  | 1-Phenylethylamine in urine            | Simple Extraction of 1-Phenylethylamine in Human Urine by Headspace SPME<br>Jpn. J. Forensic Toxicol. 15(3): 189-193 (1997)<br>Ishii, A., Seno, H., Prosen, F., Watanabee, K., Kumanzawa, T., Hattori, H., Suzuki, O.                                     | 65µm PDMS/DVB<br>30 min @ 90°C<br>10M NaOH, K2CO3<br>headspace         | GC-NPD            |
| 324  | Benzodiazepines in urine               | Detection of Benzodiazepines in Human Urine by Direct Immersion SPME-GC<br>Jpn. J. Forensic Toxicol. 15 (1): 16-20 (1997)<br>Seno, H., Kumazawa, T., Ishii, A., Watanbe, K., Hattori, H., Suzuki, O.                                                      | 65µm PDMS/DVB<br>30 min<br><br>immersion                               | GC-FID            |
| 325  | Benzodiazepines in water & urine       | Determination of Five Benzodiazepines in Aqueous Solution and Biological Fluids, Using SPME with Carbowax/DVB Fiber Coating<br>J. Microcolumn Sep. 10 (2): 193-201 (1998)<br>Luo, Y., Pan, L., Pawliszyn, J.                                              | 65µm Carbowax/DVB<br>45°C, 60 min<br>stirring<br>pH 7, salt added      | GC-FID,<br>GC-MS  |
| 351  | Benzophenones in urine                 | SPME and GC-ECD of Benzophenones for Detection of Benzodiazepines in Urine<br>J. Anal. Toxicology, Vol. 23, Jan/Feb 1999 , 54-61<br>Prosen, F., Seno, H., Ishii, A., Watanabe, K., Kumazawa, T., Hattori, H., Suzuki, O.                                  | 100µm PDMS<br>30 min<br>immersion, stirring<br>pH 9.4<br>KOH added     | GC-ECD            |
| 357  | Benzodiazepines in urine               | SPME-Microcolumn LC for the Analysis of Benzodiazepines in Human Urine<br>Analisis (1998), 26(5), M27-M30<br>Jinno, K., Taniguchi, M., Hayashida, M.                                                                                                      | Carbowax/TPR100<br>60 min<br>immersion                                 | HPLC-UV<br>220nm  |
| 779  | Benzodiazepines in urine & serum       | Automated in-tube solid-phase microextraction coupled with LC-electrospray ionization MS for the determination of selected benzodiazepines<br>J. Anal. Toxicology, (2000) Vol. 24(8), 718-725<br>Yuan, H. ; Mester, Z.; Lord, H.; Pawliszyn, J.           | Supelco-Q capillary<br>60cmx0.25mm I.d.                                | LC-ESI-MS         |
| 326  |                                        | SPME for Sample Preparation During Drug Metabolism Studies<br>Pharmazie 53 (3): 172-177 (1998)<br>Kroll, C., Borchert, H.                                                                                                                                 |                                                                        |                   |
| 2739 | Cyanide in blood                       | <b>An improved method for cyanide determination in blood using SPME and gas chromatography/mass spectrometry</b><br><b>Rapid Commun. Mass Spectrom. 20, #19, 2932-2938 (2006-09-12)</b><br><b>Frison, G.; Zancanaro, F.; Favretto, D.; Ferrara, S. D.</b> | <b>75µm Carboxen headspace</b>                                         | <b>GC-MS-SIM</b>  |
| 328  | Cyanide in blood                       | Analysis of Cyanide in Blood by Headspace SPME and Capillary GC<br>Chromatographia 47 (3/4): 209-214 (1998)<br>Takekawa, K., Oya, M., Kido, A., Suzuki, O.                                                                                                | Carbowax/DVB<br>50°C, 45 min<br>headspace<br>Na2SO4 added              | GC-NPD            |
| 492  | Lead in whole blood & Urine            | Determination of Lead in Blood and Urine by SPME-GC<br>Anal. Chem. 1999, 71(15), 2998-3002<br>Yu, X., Yuan, H., Gorecki, T., Pawliszyn, J.                                                                                                                | headspace<br>sodium tetraethyl borate derivative                       |                   |
| 747  | Lead in whole blood & Urine            | Speciation of Alkyllead and Inorganic lead by derivatization with deuterium-labeled sodium tetraethylborate and SPME GC-MS<br>Anal. Chem. 2000, 72, 1788-1792<br>Yu, X, Pawliszyn, J.                                                                     | 100µm PDMS<br>10 min, headspace<br>sodium tetraethyl borate derivative | GC-MS             |
| 2519 | Methylmercury                          | <b>Production of artifact methylmercury during the analysis of certified reference sediments: Use of ionic exchange in the</b>                                                                                                                            | <b>either ethylated</b>                                                | <b>GC-MIP-AED</b> |

| in sediment                                        | sample treatment step to minimise the problem<br><i>Anal. Chim. Acta</i> 582, #1, 109-115 (Jan 16 2007)<br>de Diego, Alberto; Delgado, Alejandra; Madariaga, Juan Manuel; Prieto, Ailette; Zuloaga, Olatz                                                      | derivatives                                                                  | GC-MS    |
|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|----------|
| 2914 Methylmercury in sediment                     | Optimisation of the headspace-SPME for organomercury and organotin compound determination in sediment and biota<br><i>J Separation Science</i> 31, #4, 768-774 (MAR 2008)<br>Delgado, A.; Usobiaga, A.; Prieto, A.; Zuloaga, O.; de Diego, A.; Madariaga, Juan | 30µm PDMS headspace<br>NaBEt <sub>4</sub> derivative<br>3-24 min @ 20-90 °C  | GC-MS    |
| 416 Methylmercury in biological fluids or sediment | Determination of Methylmercury in Biological Samples and Sediments by Capillary GC Coupled with Atomic Adsorption after hydride derivatization and SPME<br><i>J. Anal. At. Spectrom.</i> (1998), 13(10), 1141-1144<br>He, B., Jiang, G., Ni, Z.                | 5cm fused silica fiber<br>90 min<br>headspace<br>KBH <sub>4</sub> derivative | GC-AA    |
| 493 Alkalated Hg, Pb, Sn in urine                  | Simultaneous determination of Hg(III) and alkylated Hg, Pb, and Sn species in human body fluids using SPME-GC-MS-MS<br>Fresenius' J.. <i>Anal. Chem.</i> (1999), 363(5-6), 466-468<br>Dunemann, L., Hajimiragha, H., Begerow, J.                               | 100µm PDMS<br>10 min<br>NaBEt <sub>4</sub> derivatives<br>pH 5.3             | GC-MS-MS |
| 661 Organometallic                                 | Coupling of SPME and GC-AED for the determination of organometallic compounds<br><i>Mikrochim Acta</i> , (2000) 135 (No.1&2) 91-95<br>Mothes, S, Wennrich, R.                                                                                                  |                                                                              | GC-AED   |
| 329 Methanol in blood                              | Simple Extraction of Methanol in Human Whole Blood by Headspace SPME<br><i>Jpn. J. Forensic Toxicol.</i> 16 (1): 64-68 (1998)<br>Lee, X., Kumazawa, T., Jurosawa, T., Akiya, K., Akiya, Y., Fruta, S., Sato, K.                                                | Carboxen/PDMS<br>60°C, 10 min<br>headspace<br>stirring                       | GC-FID   |
| 330 Aromatic amines in urine, blood, milk          | Solid Phase Microextraction of Monocyclic Aromatic Amines from Biological Fluid<br><i>Anal. Chem.</i> 70 (9): 1986-1992 (1998)<br>DeBruin, L., Josephy, P., Pawlisyzy, J.                                                                                      | 65µm PDMS/DVB<br>45°C, 15 min<br>headspace, salt added<br>KOH added, pH >13  | GC-FID   |
| 494 Trimethylamineuria in urine                    | Quantitative determination of trimethylamine in urine by<br>SPME-GC-MS<br><i>J. Chromatogr. B: Biomed Sci. Appl.</i> , 1999, 723(1+2), 281-285<br>Mills, G., Walke, V., Mughal, H.                                                                             | 65µm Carboxen/PDMS,<br>100µm PDMS<br>15 min @ 59°C<br>headspace<br>stirred   | GC-MS    |
| 950 Acrolein in biological fluids                  | Determination of acrolein by headspace SPME-GC-MS<br><i>J. Chromatogr., B: Biomed</i> (2001), 758(1), 123-128<br>Takamoto, S.; Sakura, N.; Yashiki, M.; Kojima, T.                                                                                             |                                                                              |          |
| 331 PAHs in urine                                  | Fast Screening Method for the Profile Analysis of Polycyclic Aromatic Hydrocarbon Metabolites in Urine, Using Derivatization-SPME<br><i>J. Chromatogr. G: Biomed. Sci. Appl.</i> 705 (1): 132-138 (1998)<br>Gmeiner, G., Krassnig, C., Schmid, E., Tausch, H.  | 85µm polyacrylate<br>35°C, 45 min<br>stirring<br>BSTFA derivative            | GC-MS    |
| 495 BTEX in in urine & blood                       | SPME and GC-MS for determination of monoaromatic hydrocarbons in blood and urine. Application to people exposed to air pollutants<br><i>Chromatographia</i> , 1999, 50(3/4), 167-172<br>Andreoli, R., Manini, P. Bergamaschi, E., Brustolin, A., Mutti, A.     | 75µm Carboxen/PDMS<br><br>headspace                                          | GC-MS    |
| 591 BTEX in urine                                  | Headspace solid-phase micro-extraction for the determination of BTEX in urine.<br><i>J-Chromatogr.-B:-Biomed-Appl.</i> 19 Feb 1999; 723(1-2): 105-115<br>Fustinoni,-S; Giampiccolo,-R; Pulvirenti,-S; Buratti,-M; Colombi,-A                                   | 100µm PDMS<br>15 min @ 30°C<br>headspace                                     | GC-EMIS  |
| 662 Toluene in blood                               | The comparison of toluene determination between headspace SPME and Headspace methods in glue sniffer's blood and urine samples<br><i>J. Forensic Sci.</i> (2000), 45(3), 702-707<br>Kim, N., Park, S.                                                          | 100µm PDMS                                                                   |          |

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|------|-------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|--------------|
| 496  | Toluene, xylene<br>in urine                           | Method for analyzing urinary toluene and xylene by SPME and its application to workers using organic solvents<br>Bull. Environ. Contam. Toxicol. (1999), 62(2), 109-116<br>Asakawa, F., Jitsunari, F., Choi, J., Suna, S., Takeda, N., Kitamado, T.                                             | 100µm PDMS<br>5 min,<br>NaCl, stirring                                                                  | GC-FID       |
| 497  | Toluene, benzene<br>in human blood                    | Biomonitoring of benzene and toluene in human blood by headspace SPME<br>Fresenius' J. Anal. Chem. (1999), 363(1) 88-91<br>Schimmiing, E., Levsen, K., Koehme, C., Schuermann, W.                                                                                                               | 65µm Carboxen/PDMS<br>30 min @ 20°C<br>headspace                                                        | GC-MS        |
| 332  | Erythromycin<br>in water                              | A Study of Erythromycin A Decomposition Products in Aqueous Solution by SPME-LC-MS<br>Rapid Commun. Mass Spectrom. 10 (2): 225-234 (1998)<br>Volmer, D., Hui, J.                                                                                                                                | 65µm PDMS/DVB<br>15 min<br>immersed<br>50% MeOH extr.                                                   | LC-MS        |
| 333  | Corticosteroids<br>in urine                           | Rapid Determination of Corticosteroids in Urine by Combined SPME-LC-MS<br>Rapid Commun. Mass Spectrom. 11 (17): 1926-1934 (1997)<br>Volmer, D., Hui, J.                                                                                                                                         |                                                                                                         | LC-MS        |
| 663  | Beta blockers<br>in urine, serum                      | Polypyrrole coated capillary in-tube SPME coupled with HPLC electrospray ionization MS for the determination of beta blockers in urine and serum samples<br>J. Microcolumn Sep. (2000) 12(4), 255-266<br>Wu, J., Lord, H., Pawliszyn, J., Kataoka, H.                                           | Polypyrrole capillary                                                                                   | LC-ESI-MS    |
| 334  | Flavor compounds<br>in staphylococci                  | Evaluation of SPME for Analysis of Volatile Metabolites Produced by Staphylococci<br>J. Agric. Food Chem. 46 (1): 228-234 (1998)<br>Vergnaise, L., Masson, F., Montel, M., Berdague, J., Talon, R.                                                                                              | 100µm PDMS,<br>85µm polyacrylate<br>headspace<br>stirring, salt added<br>pH 3 for esters                | GC-FID       |
| 2576 | <b>Volatiles from<br/>soil bacteria</b>               | <b>Evaluation and identification of potential organic nematicidal volatiles from soil bacteria</b><br><b>Soil Biology &amp; Biochem 39, #10, 2567-2575 (OCT 2007)</b><br><b>Gu, Ying-Qi; Mo, Ming-He; Zhou, Jun-Pei; Zou, Chang-Song; Zhang, K.</b>                                             | <b>headspace</b>                                                                                        | <b>GC-MS</b> |
| 498  | Aldehydes, esters<br>from bacteria                    | Application of SPME to measure volatile metabolites<br>produced by Staphylococcus carnosus and Staphylococcus xylosus<br>Book- Applied SPME, 1999, 364-371 Royal Society of Chemistry, Cambridge, UK Coden: 67TUA8<br>Talon, R., Montel, M.                                                     | 100µm PDMS,<br>85µm polyacrylate<br>15 min, stirring<br>esters @ 80°C,<br>aldehydes @ 25°C<br>headspace | GC-FID       |
| 392  | Volatile metabolites<br>in penicillium fungi          | Application of Head-Space SPME for the Analysis of Volatile Metabolites Emitted by Penicillium Species<br>J. Microbiological Methods, 25 (1996) 245-255<br>Nilsson, T., Larsen, T., Montanarella, L., Madsen, J.                                                                                | 100µm PDMS,<br>85µm polyacrylate<br>25°C, 30 min (PDMS),<br>50 min (PA)                                 | GC-MS        |
| 895  | Volatile metabolites<br>from limonen                  | Biotransformation of (R)-(+)- and (S)-(-)-limonene by fungi and the use of SPME for screening.<br>Phytochemistry (Oxford) (2001) 57(2) 199-208<br>Demyttenaere, J.; De Kimpe, N; Van Belleghem, K                                                                                               |                                                                                                         |              |
| 2730 | <b>Volatile<br/>metabolites from<br/>monoterpenes</b> | <b>Fungal biotransformation of monoterpenes found in agro-industrial residues from orange and pulp industries into :<br/>aroma compounds screening using SPME</b><br><b>Food Sci Biotech 16, #1, 37-42 (2007)</b><br><b>Marostica, M. R., Jr.; Onoyama Mota, N.; Baudet, N.; Pastore, G. M.</b> | <b>headspace</b>                                                                                        | <b>GC</b>    |
| 802  | Volatile metabolites<br>in penicillium fungi          | Biotransformation of geraniol, nerol and citral by sporulated surface cultures of Aspergillus niger and Penicillium sp.<br>Phytochemistry (2000) 55(4), 363-373<br>Demyttenaere, J., del Carmen Herrera, M.; De Kimpe, N                                                                        |                                                                                                         |              |
| 393  | Volatiles in<br>bacteria on poultry                   | Use of Digital Aroma Technology and SPME GC-MS to Compare Volatile Compounds produced by Bacteria Isolated from Processed Poultry                                                                                                                                                               | 100µm PDMS<br>37°C, 30 min                                                                              | GC-MS        |

|      |                                    |                                                                                                                                                                                                                             |                                                                                           |             |
|------|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------|
|      |                                    | J. Sci Food Agric. 1998, 78, 343-348<br>Arnold, J., Senter, S.                                                                                                                                                              | headspace                                                                                 |             |
| 664  | Volatiles in lactic acid bacteria  | Evaluation of SPME for the Isotopic Analysis of volatile compounds produced during fermentation by lactic acid bacteria<br><i>J. Agric Food Chem.</i> 2000, 48, 2222-2227<br>Goupry, S., Rochut, N., Robins, R., Gentil, E. | 70µm Carboxen/PDMS<br>10 min<br>headspace<br>salt added                                   | GC-C-IRMS   |
| 570  | Fatty acid esters in faeces        | Headspace SPME with 1-pyrenyldiazomethane in-fiber derivatization for analysis of fecal short-chain fatty acids<br><i>J-Chromatogr,-B:-Biomed-Appl.</i> 25 Jun 1999; 730(1): 113-122<br><br>Mills,-GA; Walker,-V; Mughal,-H | 85µm polyacrylate<br>15 min<br><br>1-pyrenyldiazomethane derivative                       | GC-EMIS     |
| 335  | Cannabinoids in water/saliva       | Determination of Cannabinoids in Water and Human Saliva by SPME and Quadrupole Ion Trap GC-MS<br><i>Anal. Chem.</i> 70 (9): 1788-1796 (1998)<br>Hall, B., Satterfield-Doeerr, M., Parikh, A., Brodbelt, J.                  | 30µm PDMS<br>10 min<br>immersion                                                          | GC-MS       |
| 665  | Dibenzylamine in saliva            | Direct comparison of SPE and SPME for the GC determination of dibenzylamine in artificial saliva: leachates from baby bottle teats<br><i>Anal Chim Acta</i> 2000, 414(1-2), 133-140<br>Niessner, G., Klampfl, C.            | 85µm polyacrylate<br><br>pH 10                                                            | GC-MS       |
| 2185 | Cannabinoids from Cannabis samples | <b>Extraction and analysis of different Cannabis samples by headspace SPME combined with GC-MS</b><br><i>J SepSci.</i> 28, #17, 2293-2300 (2005)<br>Ilias, Y.; Rudaz, S.; Mathieu, P.; Christen, P.; Veuthey, Jean          | headspace                                                                                 | GC-MS       |
| 340  | Cannabinoids in hair               | Solid-Phase Microextraction for Cannabinoids Analysis in Hair and Its Possible Application to Other Drugs<br><i>J. Anal. Toxicology</i> , Vol. 23, Jan./Feb. 1999<br>Strano-Rossi, S., Chiarotti, M.                        | 30µm PDMS<br>15 min, immersion<br>hair digested with 1N NaOH                              | GC-MS       |
| 666  | Lipophilic drugs in hair           | Use of headspace SPME in hair analysis for organic compounds<br><i>Forensic Sci. Int.</i> (2000), 107(1-3), 129-148<br>Sporkiert, F., Pragst, F.                                                                            | headspace<br>hair digested with 4% NaOH                                                   |             |
| 941  | Lipophilic drugs in hair           | Analysis of hair by headspace SPME and GC-MS.<br><i>Chromatogr Separation Tech</i> (2001), 17(2), 4-8<br>Pragst, F                                                                                                          | headspace<br>hair digested with 4% NaOH                                                   |             |
| 336  | Review of use                      | SPME in Forensic Toxicology<br><i>Jpn. J. Forensic Toxicol.</i> 16 (1): 1-15 (1998)<br>Namera, A., Yashiki, M., Kojima, T., Fukunaga, N.                                                                                    | various fibers and conditions                                                             |             |
| 337  | Acylcarnitines in urine            | Determination of Urinary Acylcarnitines by ESI-MS Coupled with SPME<br><i>J. Mass Spectrom.</i> 32 (11): 1195-1204 (1997)<br>Mioder, M., Loster, H., Hraschuh, R., Popp, R.                                                 |                                                                                           | ESI-MS      |
| 499  | Methylxanthines in blood/urine     | Extraction of methylxanthines from human body fluids by SPME<br><i>Anal. Chim. Acta.</i> , 1999, 387(1), 53-60<br>Kumazawa, T., Seno, H., Lee, X., Ishii, A.                                                                | 65µm Carbowax/DVB<br>1 hr @ 40°C<br>1ml of 1M HClO4                                       | GC-NPD      |
| 414  | Organic acid esters in urine       | Urinary Organic Acid Screening by SPME of the Methyl Esters<br><i>J. Chromatogr. B: Biomed Sci. Appl.</i> (1998), 713(2), 427-432<br>Liebich, H., Gesele, E., Woll, J.                                                      | 85µm polyacrylate<br>20 min<br>immersion w/stirring<br>trimethyloxonium tetrafluoroborate | GC-FID, -MS |
| 667  | Semivolatile in tissue/blood       | Validation of negligible depletion SPME as a tool to determine tissue/blood partition coefficient for semivolatile: and nonvolatile organic chemicals<br><i>Toxicol. Appl. Pharmacol.</i> (2000), 166(2), 138-144           |                                                                                           |             |



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| 415  |                                     | New Mass Spectrometric Methods for the Fast Analysis of Biomedical-Relevant Substances<br>CLB Chem. Labor Biotech. (1998), 49(11), 414-420<br>Volmer, D.                                                                                                                                                                                                                                                                                 | GC-MS                   |
| 417  | Verpamil & norverapamil in urine    | SPME-HPLC Determination of Verpamil and Norverpamil Enantiomers in Urine<br>J. Mass Spectrom. (1997), 32(11), 1195-1204<br>Asafu-Adjaye, E., Shiu, G.                                                                                                                                                                                                                                                                                    | HPLC                    |
| 971  | Pesticides in water                 | Pesticide toxicity assessment using an electrochemical biosensor.<br><i>Analytical and Bioanalytical Chemistry</i> (2002) 373(8), 696-703<br>Farre, M.; Goncalves, C.; Lacorte, S.; Barcelo, D.; Alpendurada, M.F.                                                                                                                                                                                                                       | GC-MS                   |
| 1034 | Jet fuel in porcine skin.           | Absorption through porcine skin exposed to various doses of jet fuel marker components determined with GC-FID using head space SPME fiber.<br><i>Toxicological Sciences</i> (2003) 72 (S-1), 383.                                                                                                                                                                                                                                        |                         |
|      |                                     | Xia, X. R.; Riviere, J. E.; Muhammad, F.; Monteiro-Riviere, N. A.; Baynes, R. E.                                                                                                                                                                                                                                                                                                                                                         |                         |
| 1050 | PAH                                 | Determination of selected monohydroxy metabolites of 2-, 3- and 4-ring polycyclic aromatic hydrocarbons in urine by solid-phase microextraction and isotope dilution gas chromatography-mass spectrometry.<br><i>Journal of Chromatography, B: Analytical Technologies in the Biomedical and Life Sciences</i> (2002) 778 (1-2), 157-164.<br>Smith, C. J.; Walcott, C. J.; Huang, W. L.; Maggio, V.; Grainger, J.; Patterson, D. G., Jr. | GC-MS                   |
| 1294 |                                     | Biomimetic solid-phase microextraction to predict body residues and toxicity of chemicals that act by narcosis.<br><i>Environmental Toxicology and Chemistry</i> (2002) 21(2), 229-234<br>Leslie, Heather A.; Busser, Frans J. M.; Hermens, Joop L. M.; Kraak, Michiel H. S.; Oosthoek, Annelies J. P.                                                                                                                                   | GC-MS                   |
| 1349 | Fatty acid ethyl esters in hair     | Fatty acid ethyl esters in hair as markers of alcohol consumption. Segmental hair analysis of alcoholics, social drinkers, and teetotalers.<br>Clinical Chemistry (2001) 47(12), 2114-2123.<br>Auwaerter, V.; Sporkert, F.; Hartwig, S.; Pragst, F. *; Vater, H.; Diefenbacher, A.                                                                                                                                                       | GC-MS                   |
| 1381 | Tricyclic antidepressants in urine. | Sample preparation with fibre-in-tube solid-phase microextraction for capillary electrophoretic separation of tricyclic antidepressant drugs in human urine.<br>Electrophoresis (2001) 22(17), 3785-3790.<br>Jinno, K.; Kawazoe, M.; Saito, Y.; Takeichi, T.; Hayashida, M.                                                                                                                                                              |                         |
| 1391 | Fatty acid ethyl esters in hair.    | Analysis of fatty acid ethyl esters in hair as possible markers of chronically elevated alcohol consumption by headspace solid-phase microextraction (HS SPME ) and gas chromatography-mass spectrometry (GC-MS).<br>Forensic Science International (2001) 121(1-2), 76-88.<br>Pragst, F.; Auwaerter, V.; Sporkert, F.; Spiegel, K.                                                                                                      | 65 um PDMS/DVB<br>GC-MS |
| 1417 |                                     | Pollution prevention screening of simulated Hanford waste for polychlorinated biphenyls by solid phase microextraction/GC-ECD.<br>Abstracts of Papers American Chemical Society (2001) 222(1-2), ANYL118.<br>Okemgbo, Asopuru A.; Metcalf, Steven G.                                                                                                                                                                                     |                         |
| 1438 | Methylene chloride in urine         | Monitoring of occupational exposure to methylene chloride: Sampling protocol and stability of urine samples.<br><i>Journal of Toxicology Clinical Toxicology</i> (2003) 41(5), 735-735<br>Tabak, A.; Scherb, I.; Hoffer, E.; Bentur, Y.; Weiner, A.                                                                                                                                                                                      |                         |

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| 2755             | Fentanyl in human plasma                | <b>Determination of fentanyl in human plasma by head-space SPME-GC-MS</b><br><i>J. PHARM. BIOMED. ANAL.</i> 43, #5, 1763-1768 (11 APR 2007)<br>Bagheri, H.; Es-haghi, A.; Khalilian, F.; Rouini, M. -R.                                                                                                                                                                      | headspace                                                                 | GC-MS   |
| 1489             | Fentanyl and midazolam in plasma        | Simultaneous determination of fentanyl and midazolam in plasma using direct solid-phase microextraction before gas chromatography-mass spectrometry analysis.<br><i>Analytical Letters</i> (2002) 35(9), 1575-1590<br>Dufresne, C.; Bureau, J.; Favetta, P.; Gonin, R.; Guitton, J.                                                                                          | 65µm PDMS/DVB                                                             |         |
| 1501             | Amphetamines and designer drugs in hair | Fully automated determination of amphetamines and synthetic designer drugs in hair samples using headspace solid-phase microextraction and gas chromatography-mass spectrometry.<br><i>Journal of Chromatographic Science</i> (2002) 40(6), 359-364<br>Musschoff, Frank; Junker, Heike P.; Kroener, Lars; Lachenmeier, Dirk W.; Madea, Burkhard                              |                                                                           | GC-MS   |
| 2351             | GHV, MAMP, KET, MDMA in urine           | <b>A validated SPME-GC-MS method for simultaneous quantification of club drugs in human urine.</b><br><i>Forensic Sci Int</i> 71, #2-3, 142-50 (2007 Sep 13)<br>Brown, Stacy D; Rhodes, Daniel J; Pritchard, Boyd J                                                                                                                                                          | 100µm PDMS<br>20 min @ 90°C<br>hexylchloroformate/<br>pyridine derivative | GC-MS   |
| 1511             | Drugs of abuse                          | Detection and identification of illicit drugs including GHB, Rohypnol, Ketamine, and Psilocybin by refocused Solid Phase Microextraction High Performance Liquid Chromatography Mass Spectrometry, (SPME/HPLC/MS).<br><i>Abstracts of Papers American Chemical Society</i> (2002) 223(1-2), ANYL 54<br>Sabucedo, Alberto; Furton, Kenneth G.; Benson, Andrew; Almirall, Jose |                                                                           | HPLC-MS |
| 1021             | allyl alcohol (2-propen-1-ol)           | A fatal human intoxication with the herbicide allyl alcohol (2-propen-1-ol).<br><i>Journal of Analytical Toxicology</i> (2002) 26(1), 55-57<br>Toennes, S. W.; Schmidt, K.; Fandino, A. S.; Kauert, G. F.                                                                                                                                                                    |                                                                           | GC-MS   |
| 1530             | Residual solvents in cocaine            | Gas chromatographic-mass spectrometric analysis of residual solvent trapped into illicit cocaine exhibits using head-space solid-phase microextraction<br><i>Journal of Chromatography B</i> (2002) 772(2), 249-256<br>Chiarotti, Marcello; Marsili, Remo; Moreda-Pineiro, Antonio                                                                                           | headspace                                                                 | GC-MS   |
| <b>Forensics</b> |                                         |                                                                                                                                                                                                                                                                                                                                                                              |                                                                           |         |
| 748              | Review                                  | The use of SPME-GC in forensic analysis<br><i>J. Chromatogr. Sci.</i> (2000), 38(7), 297-306<br>Furton, K., Wang, J., Hsu, Y. Walton, J, Almirall, J.                                                                                                                                                                                                                        |                                                                           |         |
| 500              | Gasoline on skin                        | The detection and analysis of ignitable liquid residues extracted from human skin using SPME-GC<br>Almirall, J., Wang, J., Lothridge, K, Furton, K.                                                                                                                                                                                                                          | 100µm PDMS<br>15 min<br>headspace                                         | GC-FID  |
| 2733             | Gasoline volatiles in varied matrices   | <b>Characterization of SPME-GC for the analysis of gasoline tracers in different microenvironments.</b><br><i>J Air Waste Manag Assoc</i> 57, #3, 355-65 (2007 Mar)<br>Ceballos, Diana; Zielinska, Barbara; Fujita, Eric; Sagebiel, John                                                                                                                                     | 75µm Carboxen<br>10min<br>air samples                                     | GC-FPD  |
| 2385             | Fire debris from surrogate metals       | <b>SPME sampling of fire debris residues in the presence of radionuclide surrogate metals</b><br><i>Journal of Chromatography A</i> 2007-03-23<br>Duff, M., Crump, S., Keisha M.                                                                                                                                                                                             | headspace<br>22°C                                                         | GC-MS   |
| 2630             | Ignitable liquids in fire debris        | <b>Forensic application of GC-differential mobility spectrometry with two-way classification of ignitable liquids from fire debris</b><br><i>Anal. Chem.</i> 79, #17, 6752-6759 (Sep 1 2007)<br>Harrington, Peter B.; Lu, Yao                                                                                                                                                | headspace                                                                 | GC-MS   |

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|------|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|-----------------|
| 85   | Accelerants<br>in fire debris        | A Simple, Inexpensive, Rapid, Sensitive and Solventless<br>Technique for the Analysis of Accelerants in Fire<br>Debris Based on SPME<br><i>J. High Res. Chromatogr. 18: 625-629 (1995)</i><br>Furton, K., Bruna, J., Almirall, J.                                                                                        | 100µm PDMS<br>40°C, 20 min<br>headspace                        | GC-FID          |
| 105  | Gasoline, kerosene<br>in fire debris | Forensic Application of the SPME Method to the Analysis<br>of Gasoline and Kerosene<br>Kaneko, T., Nakada, M.                                                                                                                                                                                                            | 100µm PDMS<br>22°C for 1 hr, or<br>80°C for 5 min<br>headspace | GC-NPD          |
| 2430 | Accelerants<br>Identification        | <b>Multivariate pattern recognition of petroleum-based accelerants by<br/>SPME-GC with flame ionization detection.</b><br><i>Anal. Chim. Acta 589, #2, 247-254 (2007-04-25)</i><br><b>Bodle, E. S.; Hardy, J. K.</b>                                                                                                     | headspace                                                      | GC-FID          |
| 114  | Accelerants<br>in fire debris        | Novel Method for Analysis of Gasoline from Fire Debris Using<br>Headspace Solid Phase Microextraction<br><i>J. Forensic Sci. 41: 12-22 (1996)</i><br>Furton, K., Almirall, J., Bruna, J.                                                                                                                                 | 100µm PDMS<br>40°C, 20 min                                     | GC-FID          |
| 115  | Accelerants<br>in liquid residue     | The Recovery of Accelerants in Aqueous Samples from Fire<br>Debris Using SPME<br><i>Science &amp; Justice 36 (4): 283-287 (1996)</i><br>Almirall, J., Furton, K., Bruna, J.                                                                                                                                              | 100µm PDMS<br>20 min @ 40°C                                    | GC-FID          |
| 143  | Accelerants<br>in fire debris        | Determination of Liquid Accelerants in Arson Suspected Fire<br>Debris Using Headspace SPME<br><i>Anal. Commun. 33: 129 (1996)</i><br>Steffen, A., Pawliszyn, J.                                                                                                                                                          | 100µm PDMS<br>15 min @ 70°C<br><br>headspace                   | GC-FID          |
| 594  | Accelerants<br>in fire debris        | A comprehensive sample preparation scheme for a<br>accelerants in suspect arson cases.<br><i>J-Forensic-Sci. May 1999; 44(3): 504-515</i><br>Ren,-QL; Bertsch,-W                                                                                                                                                         |                                                                | GC, GC-MS       |
| 2269 | TNT in sand                          | <b>Immersion mode SPME ECD/GC and TEEM-GC/MS for analysis of<br/>explosives buried in sand</b><br><i>Proc SPIE Int Soc Opt Eng (2005) 5794 #II, 1272-1280</i><br><b>Baez, B.; Briano, J.; Castro, M.; Correa, S.; De Echevarria, M.<br/>Hernandez-Rivera, S.</b>                                                         | Immersion                                                      | GC-ECD<br>GC/MS |
| 2270 | TNT in sand                          | <b>Transport of explosives II: Use of Headspace-SPME/GC-ECD and<br/>TEEM GC/MS for detection of TNT vapors from sand buried samples</b><br><i>Proc SPIE Int Soc Opt Eng (2005) 5794 #III, 1263-1271</i><br><b>Baez, B.; Briano, J.; Castro, M.; Correa, S.; De Echevarria, M.<br/>Hernandez-Rivera, S.</b>               | Headspace                                                      | GC-ECD<br>GC/MS |
| 2383 | Explosive residue                    | <b>SPME sampling of high explosive residue in the presence<br/>of radionuclides and radionuclide surrogate metals</b><br><i>J Radioanalytical and Nuclear Chemistry -2007-04-13</i><br><b>Duff, M., Crump, S., Robert, R., Beals, D.</b>                                                                                 |                                                                |                 |
| 2675 | PAHs in<br>aquatic worm              | <b>Bioconcentration factor hydrophobicity cutoff: An artificial<br/>phenomenon reconstructed</b><br><i>ENVIRON. SCI. TECHNOL. 41, #21, 7363-7369 (01 NOV 2007)</i><br><b>Jonker, M. T. O.; Van, Der Heijden S. A.</b>                                                                                                    |                                                                |                 |
| 668  | TNT, 2,4-DNT, RDX<br>in soil         | Development of field screening methods for TNT, 2,4-DNT,<br>and RDX in soil.<br><i>Talanta, 39: 419-28 (1992)</i><br>T Jenkins, et al                                                                                                                                                                                    |                                                                |                 |
| 812  | RDX, HMX<br>in soil                  | Detection of the cyclic nitramine explosives hexahydro<br>1,3,5-trinitro-1,3,5-triazine (RDX) and octahydro-1,3,5,7-<br>tetranitro-1,3,5,7-tetrazine (HMX) and their degradation<br>products in soil environments<br><i>J Chromatog A (2001) 909(1), 53-60</i><br>Hawari, J; Beaudet, S; Groom, C.; Halasz, A; Paquet, L | 65µm PDMS/DVB<br>20MIN @55°C<br>PFBHA derivative               | GC-MS<br>LC-MS  |

Trace Analysis of explosives in Seawater Using SPME and

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| 344                                                                    | explosives<br>in salt water                                | GC-Ion Trap Mass Spectrometry<br>Anal. Chem., Vol. 70, No. 14, July 15, 1998, pg. 3015-3020<br>Barshick, S., Griest, W.                                                                                                                                                                  | 65µm Carbowax/DVB<br>60 min<br>immersion<br>stirring                                | GC-MS            |
| <b>Solid-phase microextraction coupled to GC for the determination</b> |                                                            |                                                                                                                                                                                                                                                                                          |                                                                                     |                  |
| 2394                                                                   | 2,3-dimethyl-2,3-dinitrobutane<br>from ammonium<br>nitrate | of 2,3-dimethyl-2,3-dinitrobutane as a marking agent for explosives<br><i>Talanta</i> 72, #4, 1581-1585 (2007-06-15)<br>Li, X. J.; Zeng, Z. R.; Zeng, Y.                                                                                                                                 | headspace<br>30 sec @ 22°C                                                          | GC               |
| 2284                                                                   | Explosives<br>in open areas.                               | Application of a SPME-IMS detection system for explosives detection<br><i>Proc SPIE Int Soc Opt Eng Vol 5778 #2, 667-672 (2005)</i><br>Almirall, Jose R.; Furton, Kenneth G.; Perr, Jeannette M.                                                                                         | headspace                                                                           | GC/IMS           |
| 2285                                                                   | Odors from<br>smokeless<br>powders                         | Discrimination of smokeless powders by headspace SPME-GC-MS<br>and SPME-GC-ECD, and the potential implications upon training<br>canine detection of explosives<br><i>Proc SPIE Int Soc Opt Eng Vol 5778 #2, 638-643 (2005)</i><br>Almirall, Jose R.; Furton, Kenneth G.; Harper, Ross J. | headspace                                                                           | GC-MS<br>GC-ECD  |
| 2370                                                                   | Explosives                                                 | SPME-HPLC: A new approach to the analysis of explosives<br><i>J. HAZARD. MATER. 14, # 3, 691-697 (2007)</i><br>Gaurav; Kaur, V.; Kumar, A.; Malik, A. K.; Rai, P. K.                                                                                                                     | 65µm CW/DVB                                                                         | HPLC             |
| 669                                                                    | Explosives<br>from solids, water                           | Application of SPME to the recovery of explosives and<br>ignitable liquid residues from forensic specimens<br><i>J. Chromatogr A, 885(2000) 419-432</i><br>Furton, K., Almirall, J., Bi, M., Wang, J., Wu, L.                                                                            | 65µm Carbowax/DVB<br>25 min, 25% NaCl<br>immersion<br>stirring                      | GC-ECD<br>HPLC   |
| 592                                                                    | explosives<br>in water                                     | An improved interface for coupling SPME to HPLC<br>applied to the analysis of explosives<br><i>J-High-Resolut-Chromatogr. May 1999; 22(5): 279-282</i><br>Wu, L.; Almirall, J.R.; Furton, K.G.                                                                                           | 50µm Carbowax/TPR                                                                   | HPLC-UV<br>254nm |
| 886                                                                    | Explosives<br>from solids, water                           | Optimization of SPME for the recovery of explosives from<br>aqueous and post-explosion debris followed by gas and<br>liquid chromatographic analysis<br><i>J. Forensic Sci. 45: 845-852 (2000)</i><br>Furton, K., Wu, L., Almirall, J.                                                   | 65µm Carbowax/DVB<br>50µm Carbowax/TPR<br>30 min, 25% NaCl<br>immersion<br>stirring | GC-ECD<br>HPLC   |
| 2804                                                                   | Volatiles from<br>explosives and<br>drugs                  | Analysis of volatile components of drugs and explosives by SPME-<br>ion mobility spectrometry<br><i>Journal of Separation Science</i> 31, #2, 402-412 (FEB 2008)<br>Lai, Hanh; Guerra, Patricia; Joshi, Monica; Almirall, Jose R.                                                        | headspace                                                                           | GC-IMS           |
| 2766                                                                   | VOCs from<br>wax objects                                   | First results on headspace-SPME-GC-MS of volatile organic<br>compounds emitted by wax objects in museums<br><i>J. Chromatogr A, 1187, 239-249 (Apr 11 2008)</i><br>Langlois, J.; Lattuati-Derieux, A.; Regert, M.; Thao, S.                                                              | headspace                                                                           | GC-MS            |
|                                                                        | Acetic and formic acid<br>in museum<br>environment         | Acetic acid and formic acid concentrations in the museum environment<br>measured by SPME-GC/MS<br><i>Atmospheric Environment (2002) 36 (24), 3909-3916</i><br>Ryhl-Svendsen, M.; Glastrup, J.                                                                                            | Polyacrylate                                                                        | GC-MS            |
| 986                                                                    | Explosives in soil                                         | Detection of explosives and their degradation products in soil environments.<br><i>J. Chromatogr. A (2002) 963(1-2), 411-418</i><br>Halasz, A.; Groom, C.; Zhou, E.; Paquet, L.; Beaulieu, C.; Deschamps, S.;<br>Thiboutot, S.; Ampleman, G.; Dubois, C.; Hawari, J.                     |                                                                                     | GC-MS            |
| 989                                                                    | Methylmercury in<br>human hair                             | Determination of methylmercury in human hair by ethylation followed by<br>headspace SPME/GC<br><i>J. Chromatogr. A (2002) 963(1-2), 345-351</i><br>Diez, S.; Bayona, J.M.                                                                                                                |                                                                                     | GC-CVAFS         |

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|------|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----------|
| 990  | Methylmercury in biologicals           | Methylmercury determination in biological samples by derivatization, SPME and GC.<br><i>J.Chromatogr. A (2002) 963(1-2), 313-323</i><br>Rodil, R.; Carro, A.M.; Lorenzo, R. A.; Abuin, M.; Cela, R.                                                                                                                                      | PDMS              | GC-MS    |
| 991  | Ethanol in post-mortem samples.        | Automated headspace SPME and capillary GC analysis of ethanol in post-mortem species.<br><i>Forensic Science International (2002) 128(3), 115-119.</i><br>de Martinis, B.S.; Santos Martin, C.C.                                                                                                                                         | Polyacrylate      | GC       |
| 1003 | L-methadone                            | Fatal mixed intoxication caused by L-methadone and chloral hydrate.<br><i>Archiv fuer Kriminologie (2003) 211 (3-4), 90-97.</i><br>Weinmann, Wolfgang; Goerke, Rolf; Perdekamp, Markus Grosse; Thureau, Kirsten; Vogt, Susanne                                                                                                           |                   | GC-MS    |
| 2756 | Semivolatile pollutants in sediment    | <b>Determination of semi-volatile priority pollutants in landfill leachates and sediments using microwave-assisted headspace SPME</b><br><i>Analytical and Bioanalytical Chemistry 386, #2, 324-331 (2006-09-15)</i><br>Herbert, P.; Silva, A.; Joao, M.; Santos, L.; Alves, A.                                                          | headspace         | GC-MS    |
| 2624 | Hydrophobic compounds from sediment    | <b>Desorption of hydrophobic compounds from laboratory-spiked Sediments measured by tenax absorbent and matrix SPME</b><br><i>Env Sci &amp; Tech 41, #16, 5672-5678 (AUG 15 2007)</i><br>You, Jing; Pehkonen, Sari; Landrum, Peter F.; Lydy, Michael J.                                                                                  |                   | GC       |
| 2595 | Alcohol ethoxylates in marine sediment | <b>Nonlinear sorption of three alcohol ethoxylates to marine sediment:</b><br><b>A combined Langmuir and linear sorption process?</b><br><i>ENVIRON. SCI. TECHNOL.41, #9, 3192-3198 (01 MAY 2007)</i><br>Droge, S. T. J.; Hermens, J. L. M.                                                                                              | 85µm Polyacrylate | GC-MS    |
| 1013 | TNT in sediment                        | Nondestructive, minimal-disturbance, direct-burial solid-phase microextraction fiber technique for measuring TNT in sediment<br><i>Environmental Science and Technology (2003) 37 (8), 1625-1632.</i><br>Conder, Jason M.; La Point, Thomas W.; Lotufo, Guilherme R.; Steevens, Jeffery A.                                               | Polyacrylate      |          |
| 1025 | Drugs of abuse in hair samples.        | Aplication of tandem mass spectrometry combined with gas chromatography and headspace solid-phase dynamic extraction for the determination of drugs of abuse in hair samples.<br><i>Rapid Communications in Mass Spectrometry (2003) 17 (5), 472-478.</i><br>Lachenmeier, Dirk W.; Kroener, Lars; Madea, Burkhard; Musshoff, Frank       | PDMS              | GC-MS-MS |
| 1031 | Fatty acid esters in hair.             | Fatty acid ethyl esters in scalp, pubic, axillary, beard and body hair as markers for alcohol misuse.<br><i>Alcohol and Alcoholism (2003) 38 (2), 163-168.</i><br>Pragst, Fritz; Auwaerter, Volker; Hartwig, Sven                                                                                                                        |                   |          |
| 1033 |                                        | Investigation by solid-phase microextraction and gas chromatography/mass spectrometry of secondary metabolites in lichens deposited on stone monuments.<br><i>Rapid Communications in Mass Spectrometry (2003) 17 (6), 526-531.</i><br>Di Tullio, Alessandra; De Angelis, Francesco; Ceci, Roberta; Quaresima, Raimondo; Reale, Samantha |                   | GC-MS    |
| 1079 | Review article                         | ASTM standards for fire debris analysis: A review.<br><i>Forensic Science International (2003) 132 (1), 63-67.</i><br>Stauffer, Eric; Lentini, John J.                                                                                                                                                                                   |                   |          |
| 1135 | Cannabinoids in hair.                  | Fully automated determination of cannabinoids in hair samples using headspace solid-phase microextraction and gas chromatography-mass spectrometry.<br><i>Journal of Analytical Toxicology (2002) 26 (8), 554-560.</i><br>Musshoff, F.; Junker, H. P.; Lachenmeier, D. W.; Kroener, L.; Madea, B.                                        |                   | GC-MS    |

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|------|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------------|
|      |                                            | Application of tandem mass spectrometry combined with gas chromatography and headspace solid-phase dynamic extraction for the determination of drugs of abuse in hair samples.                                                                                                                                           |                 |                |
| 1242 | Drugs of abuse in hair.                    | <i>Rapid Communications in Mass Spectrometry</i> (2003) 17 (5), 472-478.<br>Lachenmeier, D. W.; Kroener, L.; Musshoff, F.; Madea, B.                                                                                                                                                                                     |                 | GC-TMS         |
| 1273 | Gamma-hydroxybutyric acid                  | Development of a GC/MS method for detection of gamma-hydroxybutyric acid (GHB) and its precursors.<br><i>Abstracts of Papers American Chem Society</i> (2003) 225 (1-2), CHED 209.<br>Helwig, Katie; Dema, Anne C.; Wetmore, Lori A.                                                                                     |                 | GC-MS          |
| 1286 | Thiopental and pentobarbital in hair.      | Detection of thiopental and pentobarbital in head and pubic hair in a case of drug-facilitated sexual assault.<br><i>Forensic Science International</i> (2003) 133 (1-2), 171-174.<br>Ferrara, Santo Davide; Favretto, Donata; Frison, Giampietro; Tedeschi, Luciano                                                     |                 | GC-MS-MS       |
| 2696 | Cannabinoids in hair.                      | <b>Headspace SPME of cannabinoids in human head hair samples.</b><br><b>J. Sep. Sci. 30, #1, 128-134 (2007-01)</b><br><b>Rodrigues de Oliveira, C. D.; Yonamine, M.; de Moraes Moreau, R. L.</b>                                                                                                                         | headspace       | GC-MS          |
| 1287 | Cannabinoids in hair.                      | Automated headspace solid-phase dynamic extraction for the determination of cannabinoids in hair samples.<br><i>Forensic Science International</i> (2003) 133 (1-2), 32-38.<br>Musshoff, Frank; Kroener, Lars; Lachenmeier, Dirk W.; Madea, Burkhard                                                                     |                 | GC-MS          |
| 1293 | Drugs of abuse in saliva                   | Simultaneous detection of some drugs of abuse in saliva samples by SPME technique.<br><i>Forensic Science International</i> (2003) 134 (1), 40-45.<br>Fucci, Nadia; Chiarotti, Marcello; De Giovanni, Nadia                                                                                                              |                 | GC/MS          |
| 1509 | Gamma-hydroxybutyric acid (GHB)            | SPME on-fiber derivatization of gamma-hydroxybutyric acid (GHB) in forensic analysis.<br><i>Abstracts of Papers American Chem Society</i> (2002) 223(1-2), ANYL 134<br>Meyers, Jodi E.; Almirall, Jose R.; Galiana, Gigi                                                                                                 |                 |                |
| 1548 | Methamphetamine                            | SPME/GC-MS characterization of volatiles associated with methamphetamine: Toward the development of a pseudomethamphetamine training material.<br><i>Journal of Forensic Sciences</i> (2002) 46(5), 1014-1024<br>Vu, Doan-Trang T.                                                                                       |                 | GC-MS          |
| 1550 | Gamma-hydroxybutyrate (GHB) in human urine | Determination of gamma-hydroxybutyrate in water and human urine by solid phase microextraction-gas chromatography/quadrupole ion trap spectrometry.<br><i>Journal of Forensic Sciences</i> (2002) 46(3), 688-693<br>Brodbelt, Jennifer; Blair, Sheryl; Hall, Brad; Song, Meansup                                         | 65 um PDMS/DVB  | GC-MS          |
| 1235 | Odor chemicals from explosives             | Identification of canis familiaris active odor signature chemicals in controlled substances and high explosives.<br><i>Abstracts of Papers American Chemical Society</i> (2003) 225 (1-2), PRES 25.<br>Lopez, Claudia; Furton, Kenneth G.; Harper, Ross; Hsu, Ya-Li; Walton, John                                        |                 |                |
| 1328 | Odor chemicals from explosives             | Laboratory and field experiments used to identify Canis lupus var. familiaris active odour signature chemicals from drugs, explosives, and humans.<br><i>Analytical and Bioanalytical Chemistry</i> (2003) 376 (8), 1212-1224.<br>Lorenzo, N.; Wan, T. L.; Harper, R. J.; Hsu, Y. L.; Chow, M.; Rose, S.; Furton, K. G.* | CW/DVB and PDMS | GC-ECD & GC-MS |
| 1556 | TNT isomers from land mines                | Chemical signatures of TNT-filled land mines.<br><i>Talanta</i> 54(3), 2001, 501-514.                                                                                                                                                                                                                                    | Headspace       |                |

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|                                                        | Jenkins, T; Leggett, D; Miyares, P.; Walsh, M.; Ranney, T.; Cragin, J.H.; George, V.                                                                                                                                                                                                                       |                                                      |                                       |
| Odor chemicals from<br>1557 explosives.                | The scientific foundation and efficacy of the use of canines as chemical detectors for explosives.<br><br>Talanta 54(3), 2001, 487-500.<br>Furton, K.G.; Myers, L.J.                                                                                                                                       |                                                      |                                       |
| <b>2683 Leachable organics from hydrocarbon resins</b> | <b>Assessing the aquatic hazard of commercial hydrocarbon resins</b><br><b>ECOTOXICOL. ENVIRON. SAF. 66, #2, 159-168 (2007)</b><br><b>Woods, R. W.; Letinski, D. J.; Febbo, E. J.; Dzamba, C. L.; .</b><br><b>Connelly, M. J.; Parkerton, T. F</b>                                                         |                                                      | <b>GC</b>                             |
| 1897 Terpenes in resins                                | Headspace SPME for screening for the presence of resins in Egyptian archaeological samples.<br><i>J Separation Sci</i> , 27, #3, 235-243<br>Hamm, Sandrine; Bleton, Jean; Tchapla, Alain                                                                                                                   | headspace                                            | GC                                    |
| 1898 Methyl mercury from human hair                    | Improvements in the methylmercury extraction from human hair by headspace SPME followed by GC-cold-vapour atomic fluorescence spectrometry<br><i>J Chromatogr A</i> , 1025, #1, 71-75<br>Montuori, P.; Jover, E; Alzaga, R; Diez, S; Bayona, J.                                                            | headspace<br>ethyl derivative                        | GC-cold vapour<br>atomic spectrometry |
| 1899 TNT in sand                                       | Transport of explosives TNT in soil and its equilibrium vapor<br><i>Proc SPIE Int Soc Opt Eng</i> , 5415, #2, 1389-1399<br>Baez, B; Briano, J; Castro, M.; Correa, S; De Jes, M.; Hernandez-Rivera, Samuel P.; Mina, Nairmen                                                                               | Headspace for 20min<br>immersion in<br>water extract | TEEM-GC/MS<br>GC/ECD                  |
| 1900 Oxidation byproducts of TNT                       | Oxidation of TNT by photo-Fenton process<br><i>Chemosphere</i> , 57, #9, 1107-1114<br>Chen, Jong-Nan; Liou, Ming-Jer; Lu, Ming-Chun                                                                                                                                                                        |                                                      | GC-MS                                 |
| 1901 Ammonium nitrate explosive                        | New developments in SPME. Part 2: analysis of ammonium nitrate-based explosives.<br><i>J Forensic Sci</i> , 49, #2, 215-221<br>Brown, H.; Kirkbride, K.*; Pigou, P. .; Walker, G.                                                                                                                          | Alkylchloroformate<br>derivative                     | GC-MS                                 |
| 1902 Signature odor explosives drugs, and humans       | Laboratory and field experiments used to identify Canis lupus var. familiaris active odor signature chemicals from drugs, explosives, and humans<br><i>Anal. Bioanal. Chem.</i> , 376, #8, 1212-1224<br>Chow, M.; Furton, K.; Harper, R.; Hsu, Ya-Li.; Lorenzo, N.; Rose, S.; Wan, T.                      | 50µm CW/DVB<br>PDMS coatings                         | GC/MS<br>GC/ECD                       |
| <b>2884 TATP degradation products</b>                  | <b>GC-MS analysis of triacetone triperoxide (TATP) degradation products</b><br><b>Rapid Commun, Mass Spectrom 22, #7 950-958 (2008)</b><br><b>Armitt, David; Zimmermann, Peter; Ellis-Steinborner, Simon</b>                                                                                               | <b>headspace</b>                                     | <b>GC/MS</b>                          |
| 1903 TATP in post explosives                           | Improved method for the detection of TATP after explosior<br><i>J Forensic Sci</i> , 49, #5, 935-938<br>Muller, D.; Levy, A.; Shelef, R.; Abramovich-Bar, S.; Sonenfeld, D.; Tamiri, T.                                                                                                                    | 65µm PDMS-DVB<br>headspace                           | GC/MS                                 |
| 1904 GHB in water                                      | Analysis of gamma-hydroxybutyric acid (GHB) in spiked water and beverage samples using SPME on fiber derivatization/gas chromatography-mass spectrometry<br><i>J Forensic Sci</i> , 50, #1, 31-36<br>Meyers, Jodi E.; Almirall, Jose R.                                                                    | derivative on-fiber                                  | GC-MS                                 |
| <b>2767 Organotin in landfill leachate</b>             | <b>Evaluation of a combined fractionation and speciation approach for study of size-based distribution of organotin species on environmental colloids</b><br><b>Anal. Bioanal. Chem. 390, #7, 1805-1813 (April 2008)</b><br><b>Dubascoux, S.; Heroult, J.; Le Hecho, I.; Lespes, G.; Potin-Gautier, M.</b> | <b>headspace</b>                                     | <b>GC-PFPD</b>                        |
| <b>2749 Organotin in soil</b>                          | <b>Influence of the soil matrices on the analytical performance of headspace SPME for organotin analysis by GC-pulsed FPD</b><br><b>J. Chromatogr. A 1132, #1-2, 234-240 (2006-11-03)</b><br><b>Zuliani, T.; Lespes, G.; Milacic, R.; Scancar, J.; Potin-Gautier, M.</b>                                   | <b>100µm PDMS<br/>headspace</b>                      | <b>GC-PFPD</b>                        |
| 1905 Explosives in soil, water,                        | Solid phase microextraction with GC/MS for the trace analysis of explosives<br><i>Proc. 50th ASMS Conf. Mass Spectrom. Allied Top.</i>                                                                                                                                                                     |                                                      | GC-MS<br>GC-ECD                       |

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|      | and swab samples                        | 2002, p669-670<br>Maslanka, D; McDonald, J.; Miller, M.                                                                                                                                                                                                                                          |                                                 |                 |
| 1906 | FAEE from skin samples                  | Wipe-test and patch-test for alcohol misuse based on the concentration ratio of fatty acid ethyl esters and squalene C FAEE / C SQ in skin surface lipids.<br><i>Forensic Sci Intl</i> , 143, #2-3, 77-86<br>Pragst, F.; Auwaerter, V.; Kiessling, B.; Dyes, C.                                  | headspace                                       | GC-MS<br>LC-PDA |
| 1907 | Methyl parathion in biological samples  | Headspace SPME for the GC analysis of methyl-parathion in postmortem human samples: application in a suicide case by intravenous injection.<br><i>Forensic Sci Intl</i> , 143, #2-3, 127-132<br>Tsoukali, H.; Raikos, N.; Theodoridis, G.; Psaroulis, D.                                         | 85µm polyacrylate headspace salt added          | GC-NPD          |
| 1908 | Cocaine in sweat                        | Detection of cocaine and cocaethylene in sweat by SPME-GC-MS<br><i>J. Chromatogr. B</i> , 811, #1, 37-40<br>Follador, M; Moreau, R; Silva, O.; Yonamine, M.                                                                                                                                      | immersed in 0.2M sodium acetate buffer pH 5     | GC-MS           |
| 2750 | Hydroxy metabolites of PAHs             | <b>Determination of hydroxy metabolites of PAHs by fully automated SPME derivatization and gas chromatography-mass spectrometry</b><br><i>J. Chromatogr. A</i> 1173, #1-2, 37-43 (30 Nov 2007)<br>Luan, T.; Fang, S.; Zhong, Y.; Lin, L.; Chan, S. M. N.; Lan, C.; Tam, N.                       | immersion<br>BTSF derivative                    | GC-MS           |
| 1909 | PAHs in gasoline soot                   | identification of gasoline soot in suspect arson cases by using headspace SPME-GC-MS<br><i>Analytical Letters</i> , 236, #7, 1373-1384<br>Wu, Chia-Hao; Chen, Chin-Lien; Huang, Ching-Te; Lee, Maw-Rong; Huang, Chih-Ming                                                                        | 100µm PDMS<br>75µm Carboxen<br>headspace        | GC-MS           |
| 1910 | Propane in biological materials         | Quantification of propane in biological materials by headspace GC<br><i>Forensic Science International</i> , 151, #2-3, 165-170<br>Park, J; Min, Ji-Sook; Heo, S.; Lim, Mi-Ae; Park, S                                                                                                           | headspace                                       | GC-MS           |
| 1911 | Volatile organics from human skin       | The study of fingerprint characteristics of the emanations from human arm skin using the original sampling system by SPME-GC-MS<br><i>J. Chromatogr. B</i> , 822, #1-2, 244-252<br>Cai, Ji-Jin; Li, Gong-Ke; Ruan, Gui-Hua; Zhang, Zhuo-Min                                                      | headspace<br>30min sampling                     | GC-MS           |
| 1912 | Capsaicin from fabrics                  | Extraction of capsaicin in aerosol defense sprays from fabrics<br><i>Talanta</i> , 67, #2, 377-382<br>Almirall, Jose R.; Spicer Jr., Oliver                                                                                                                                                      | headspace                                       | GC              |
| 1913 | Odor chemicals in explosive             | Identification of dominant odor chemicals emanating from explosives for use in developing optimal training aid combinations and mimics for canine detection<br><i>Talanta</i> , 67, #2, 313-327<br>Almirall, Jose R.; Furton, Kenneth G.; Harper, Ross J.                                        | headspace                                       | GC-MS<br>GC-ECD |
| 2235 | Odorous gases from livestock operations | <b>Evaluation of sample recovery of malodorous gases from air sampling bags, SPME, and sampling canisters</b><br><i>Annu. Int. Meet.</i> , (2004) p5547-5562<br>Koziel, J.; Kuhrt, F.; Lloyd, J.; Parker, D.; Spinhirne, J.; Wright, D.                                                          | 75µm Carboxen headspace                         | GC/MS           |
| 2265 | Malodorous gases from livestock         | <b>Evaluation of sample recovery of malodorous livestock gases from air sampling bags, SPME fibers, Tenax TA sorbent tubes, and sampling canisters</b><br><i>J. Air Waste Manage. Assoc.</i> 55, #8, 1147-1157 (2005)<br>Koziel, J.; Kuhrt, F.; Lloyd, J.; Parker, D.; Spinhirne, J.; Wright, D. | 75µm Carboxen headspace                         | GC/MS           |
| 2657 | Volatiles found in cow slurry           | Headspace-SPME preconcentration of phenols, indoles and on-fibre derivatised volatile fatty acids in liquid and gas samples from cow slurries<br><i>J. Sep. Sci.</i> 30, #14, 2293-2304 (September 2007)<br>Arana, G.; Larreta, J.; Vallejo, A.; Bilbao, U.; Alonso, A.; Zuloaga, O.             | DVB/Car 50/30µm headspace<br>MTBSTFA derivative | GC/MS           |
| 2588 | Volatiles found in cow slurry           | Optimisation of the on-fibre derivatisation of volatile fatty acids in the simultaneous determination together with phenols and indoles in cow slurries<br><i>Anal Bioanal Chem</i> 389, #5, 1603-1609 (NOV 2007)<br>Larreta, J.; Usobiaga, A.; Etxebarria, N.; Arana, G.; Zuloaga, O.           | DVB/Car 50/30µm headspace<br>MTBSTFA derivative | GC              |
| 2459 | Volatiles found in cow slurry           | Experimental design to optimise the analysis of organic volatile compounds in cow slurry by headspace SPME-GC-MS<br><i>J. Chromatogr.</i> , A 1136, #1, 1-9 (2006-12-08)                                                                                                                         | 100µm PDMS<br>75µm Carboxen                     | GC/MS           |



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|               |                                        | Larreta, J.; Vallejo, A.; Bilbao, U.; Alonso, A.; Arana, G.; Zuloaga, O.                                                                                                                                                                                                                                                                       | headspace                                                  |                             |
|               |                                        |                                                                                                                                                                                                                                                                                                                                                | Methylation                                                |                             |
| 2477          | Odor from manures                      | Identification of volatile organic compounds in the manures of cow, hog and chicken by SPME-GC-MS<br><i>Se Pu</i> 25, #3, 425-9 (2007 May)<br>Huang, Jun; He, Jin; Zhang, Jibin; Yu, Ziniu                                                                                                                                                     | 65µm PDMS-DVB<br>30 min at 60°C<br>sat.NaCl<br>headspace   | GC-MS<br><br><br>In chinese |
| 2221          | Malodors of livestock operations       | Multidimensional GC-olfactometry for the identification and prioritization of malodors from confined animal feeding operations<br><i>J Ag Food Chem</i> , 53, #22, 8663-8672 (2005)<br>Wright, D.; Eaton, D.; Nielsen, L.; Kuhrt, F.; Koziel, J.,<br>Spinhirne, J.; Parker, D                                                                  |                                                            | GC-MS                       |
| 2316          | Odor from swine facilities             | Effect of ozonation on odor and the concentration of odorous organic compounds in air in a swine housing facility<br><i>Trans. Am. Soc. Agric. Eng.</i> 48 #6, 2297-2302 (2005)<br>Davies, S.H.; Hill, J.D.; Kim-Yang, H.; Von Bernuth, R.D.                                                                                                   | air sampling                                               | GC                          |
| 2144          | Odor from swine facilities             | Analysis of odorous compounds in swine buildings and their relationship to thermal environment, management and categories of pigs<br><i>Livestock Environ. Proc. Seventh Int. Symp</i> 334-340 (2005)<br>Dahl, P.; Johnsen, J.; Maahn, M.; Seggaard, H.; Takai, H.; Tegersen, F.                                                               | Air sample                                                 | GC/MS                       |
| 2759          | Odor from swine manure                 | Simultaneous chemical and sensory characterization of volatile organic compounds and semi-volatile organic compounds emitted from swine manure using SPME and multidimensional GC-MS-olfactometry<br><i>J. Environ. Qual.</i> 37, #2, 521-534 (2008)<br>Cai, L.; Hoff, Steven J.; Jenks, W.; Koziel, Jacek A.; Lo, Yin-Cheung M.; Xin, Hongwei | 85µm Carboxen<br>headspace                                 | GC/MS                       |
| 2161          | Volatiles in swine particulate matter  | Characterization of volatile organic compounds and odorants associated with swine barn particulate matter using SPME-MS-olfactometry<br><i>J. Chromatogr. A</i> , 1102, #1-2, 60-72 (2006)<br>Cai, Lingshuang; Koziel, Jacek A.; Lo, Yin-Cheung; Hoff, Steven J.                                                                               | 75µm Carboxen<br>headspace                                 | GC-MS                       |
| Environmental |                                        |                                                                                                                                                                                                                                                                                                                                                |                                                            |                             |
| 1914          | Auto exhaust                           | Formation and reaction of hydroxycarbonyls from the reaction of OH radicals with 1,3-butadiene and isoprene<br><i>Environ. Sci. Technol.</i> , 39, #11, 4091-4099<br>Arey, Janet; Atkinson, Roger; Baker, Jillian                                                                                                                              | pentafluorobenzyl<br>hydroxyl amine<br>derivatives         | API-MS<br>GC/FID            |
| 1915          | Carboxylic acids in air                | Photochemical sources of organic acids. 1. Reaction of ozone with isoprene, propene, and 2-butenes under dry and humid conditions using SPME<br><i>J Phys Chem A</i> , 109, #24, 5358-5365<br>Orzechowska, Grazyna; Paulson, Suzanne                                                                                                           | headspace                                                  | GC-MS                       |
| 1916          | Byproducts of reactions                | Rate coefficients for the gas-phase reaction of isoprene with NO <sub>3</sub> and NO <sub>2</sub><br><i>Int J Chem Kinet</i> , 37, #2, 57-65<br>Johnson, M.; Langer, S.; Stabel, J.                                                                                                                                                            | headspace                                                  | GC/FID                      |
| 1917          | Hydroxyl-carbonyls in Air              | 1,4-Hydroxycarbonyl products of the OH radical initiated reactions of C5-C8 n-alkanes in the presence of NO<br><i>Environ. Sci. Technol.</i> , 39, #12, 4447-4453<br>Arey, Janet; Aschmann, Sara M.; Atkinson, Roger; Reisen, F                                                                                                                | on-fiber hydroxylamine<br>derivatives                      | GC-MS<br>GC/FID             |
| 1918          | Volatile sulfur from biogas production | Occurrence and abatement of volatile sulfur compounds during biogas production<br><i>J. Air Waste Manage. Assoc.</i> 54, #7, 855-861.<br>Andersson, F.; Ejlertsson, J.; Karlsson, A.; Svensson, B.                                                                                                                                             | headspace                                                  | GC-MS                       |
| 1920          | Sulfur compd industrial effluents      | Headspace SPME followed by GC/PFPD for the analysis of malodorous sulfur compounds liquid industrial effluents<br><i>Anal and Bioanal Chemistry</i> , 378, #1, 190-196<br>Desauziers, V.; Fanlo, Jean-Louis; Lestremat, F.                                                                                                                     | 65µm PDMS-DVB<br>75µm Carboxen<br>5 or 60 min<br>headspace | GC/PFPD                     |
| 1921          | PAHs in air                            | Air/polymer distribution coefficients for PAHs by SPME sampling.<br><i>J Chromatography, A</i> , 1029, #1-2, 263-266<br>Kolar, K.; Ciganeck, M.; Malecha, J.                                                                                                                                                                                   | PDMS coated fibers                                         | GC-MS                       |

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|------|----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|------------------|
| 1922 | Organo-halogenated in fish feed                          | Selective extraction of trace levels of polychlorinated and polybrominated contaminants by supercritical fluid-SPME and determination by GC-MS. Application to aquaculture fish feed and cultured marine species<br><i>Anal. Chem.</i> , 77, #7, 2259-2265<br>Carro, A.M.; Lorenzo, R.A.; Rodil, R.; Torrijos, R. Cela  |                                            | GC/MS/MS         |
| 2389 | Ethylene oxide in air                                    | <b>Round-robin evaluation of a SPME-GC for reliable determination of trace level ethylene oxide in sterilized medical devices</b><br><i>Biomed Chromatogr.</i> 22, #2, 136-48 (-2008 Feb)<br>Harper, T.; Cushinotto, L.; Blaszkowski, N.; Arinaga, J.; Davis, F.; Cummins, C.; Diccio, M.                               |                                            | GC               |
| 1923 | Ethylene oxide in air                                    | Laboratory and field validations of a SPME device for the determination of ethylene oxide.<br><i>J Chromatogr A</i> , 1026, #1-2, 25-30<br>Tsai, S; Tsai, S; Wang, V; Lai, J                                                                                                                                            | 75µm Carboxen HBr on-fiber derivative 25°C | GC               |
| 2187 | Methylmercury in tuna fish                               | <b>Isotope dilution SPME GC/MS for the determination of methylmercury in tuna fish samples</b><br><i>J. Mass Spectrom.</i> 41, #1, 77-83 (2006)<br>Centineo, G.; Garcia A., J.; Gonzalez, E. Sanz-Medel, A.                                                                                                             | headspace 15 min NaEt4B derivatives        | GC-MS            |
| 1924 | Methyl mercury from fish tissue                          | Blank correction considerations for isotope dilution and reverse isotope dilution calibration: Determination of methylmercury in fish tissue<br><i>J of Anall Atomic Spectrometry</i> , 20, #8, 724-729<br>Yang, Lu; Sturgeon, Ralph E.                                                                                 |                                            | GC-ICP-MS        |
| 1925 | PCBs in waste oil                                        | Selective determination of PCBs in waste oils using liquid-liquid partition followed by headspace SPME and GC with atomic emission detection<br><i>J. Chromatogr. A</i> , 1056, #1-2, 263-266<br>Cela Torrijos, R.; Ramil Criado, M.; Rodriguez Pereiro, I.                                                             | 65µm PDMS-DVB headspace                    | GC-AED           |
| 1926 | Degradation byproducts of triclosan                      | Confirmation of the formation of dichlorodibenzo-p-dioxin in the photodegradation of triclosan by photo-SPME<br><i>Anal. Bioanal. Chem.</i> , 381, #6, 1294-1298<br>Cela, R.; GarciaJares, C.; Llompard, M.; Lores, M.; SanchezPrado, L.                                                                                | 100µm PDMS headspace                       | GC-EI/MS         |
| 1927 | Acids from diesel fuel                                   | Degradation and corrosive activities of fungi in a diesel-mild steel-aqueous system<br><i>World J Microbiology &amp; Biotechnology</i> , 21, #2, 135-142<br>Bento, F.; Beech, I.; Gaylarde, C.; Englert, G.; Muller, I.                                                                                                 | headspace @ 30°C                           | GC               |
| 1928 | PCBs in ash                                              | Determination of PCBs in ash using dimethylsulfoxide microwave assisted extraction followed by SPME<br><i>Talanta</i> , 63, #3, 533-540<br>Criado, M.; Pereiro, I. ; Torrijos, R.                                                                                                                                       | 65µm PDMS-DVB headspace stirring           | GC-ECD and GC-MS |
| 2508 | Chemical warfare agents                                  | <b>Solid phase microextraction combined with gas chromatography - A powerful tool for the determination of chemical warfare agents and related review article</b><br><i>CURR. ORG. CHEM.</i> 11, #3, 241-253 (2007)<br>Zygmunt, B.; Zaborowska, A.; Swiat&Istrokowski, J.; Namiesnik, J.                                |                                            |                  |
| 2196 | Chemical warfare agents (TEP, GB and GD) on office media | <b>LC electrospray tandem MS and desorption electrospray ionization tandem MS analysis of chemical warfare agents in office media typically collected during a forensic investigation</b><br><i>J. Chromatogr. A</i> , 1110, #1-2, 86-94 (2006)<br>Chenier, C.L.; D'Agostino, P.A.; Hancock, J.R.; Lepage, C.R. Jackson |                                            | LC-MS            |
| 2165 | Chemical warfare agent surrogate from water              | <b>Closed tube sample introduction for gas chromatography-ion mobility spectrometry analysis of water contaminated with a chemical warfare agent surrogate compound</b><br><i>Anal. Chim. Acta</i> , 556, #2, 455-461 (2006)<br>Erickson, R.; Tripathi, A.; Maswadeh, W.; Snyder, A.; Smith, P.                         | headspace                                  | IMS              |
| 1929 | Chemical warfare agent in air                            | Detection of gas-phase chemical warfare agents using field-portable GC-MS systems: instrument and sampling strategy considerations.<br><i>Trends in Anal Chem</i> , 23, #4, 296-306<br>Smith, P.; Lepage, C.; Koch, D.; Wyatt, H.; Hook, G.; Betsinger, G.; Erickson, R.; Eckenrode, B.                                 | direct air sampling                        | GC-MS            |

Towards smaller and faster GC-MS systems

|      |                                     |                                                                                                                                                                                                                                                                                                                        |                                                                                  |                 |
|------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------|
| 1930 | Chemical in air and water           | for field chemical detection<br><i>J. Chromatogr. A</i> , 1067, #1-2, 285-294<br>Eckenrode, B.; Erickson, R.; Hook, G.; Koch, D.; Leow, S.; Lepage, C. Jackson; Smith, P.; Sng, M.                                                                                                                                     | <10 min sampling                                                                 | GC-MS           |
| 1931 | Chemical warfare agent in soil      | Rapid screening of precursor and degradation products of chemical warfare agents in soil by SPME ion mobility spectrometry (SPME-IMS)<br><i>Anal. Chim. Acta</i> , 545, #1, 13-20<br>Harrington, Peter B.; Rearden, Preshious                                                                                          | 100µm PDMS<br>65µm PDMS-DVB<br><30 min sampling headspace                        | GC-MS           |
| 2680 | Phenols in water                    | Development, validation and application of a method to analyze phenols in water samples by SPME-GC-FID<br><i>J Env Sci and Health</i> 42, #5, 491-498 (2007)<br>Lancas, Fernando M.; Olivares, Igor R. B.; Alves, Priscila M.                                                                                          | 50µm PA<br>40 min @ 70°C<br>sat salt                                             | GC-FID          |
| 2381 | Phenol and nitrophenol in rainwater | SPME-GC-MS for analysis of phenols and nitrophenols in rainwater, as their t-butylidimethylsilyl derivatives<br><i>Analytical and Bioanalytical Chemistry</i> 38, # 7; Conference 10. 2527-2535 (2007-04-15 )<br>Jaber, F., Schummer, C., Mirabel, P., Millet, M., Chami, J.                                           | 50µm PA<br>40 min @ 22°C<br>t-butylidimethylsilyl derivatives<br>75 g NaCl, pH 3 | GC-MS           |
| 2745 | Chlorophenol in wine                | Assessment of the matrix effect on the headspace (HS-SPME) analysis of chlorophenols in wines.<br><i>J. Sep. Sci.</i> 30, #5, 722-730 (2007-03)<br>Insa, S.; Besalu, E.; Salvado, V.; Antico, E.                                                                                                                       | headspace                                                                        | GC-ECD<br>GC-MS |
| 2858 | Organics from environmental samples | Recent trends in the use of organized molecular systems combined with chromatographic techniques in environmental analysis<br><i>Anal. Bioanal. Chem.</i> 391, #3, 725-733 (June 2008)<br>Ferrera, Zoraida Sosa; Moreno, Daura Vega; Padron, M. Esther Torres; Rodriguez, Jose Juan; Santana; Santana, Cristina Mahugo | Review article                                                                   |                 |
| 2799 | Phenols in natural water            | Implementation of SPME with micellar desorption method for priority phenolic compound determination in natural waters<br><i>J. Chrom Sci.</i> , 46, #4, 325-331 (APR 2008)<br>Padron, M. ; Santana, C.; Ferrera, Z. Sosa; Rodriguez, J.                                                                                |                                                                                  |                 |
| 2438 | Chlorophenol in water               | Development of a SPME method with micellar desorption for the determination of chlorophenols in water samples: Comparison with conventional SPME method<br><i>J. Chromatogr., A</i> 1140, #1-2, 13-20 (2007-01-26)<br>Mahugo Santana, C.; Torres Padron, M.; Sosa Ferrera, Z.; Santana Rodriguez, J.                   |                                                                                  | HPLC-DAD.       |
| 2396 | Chlorophenol in water               | Monitoring chlorophenols in industrial effluents by SPME-GC-MS<br><i>Int. J. Environ. Anal. Chem.</i> 87, #3, 159-175 (2007-03-15)<br>Pino, V.; Ayala, J. H.; Gonzalez, V.; Afonso, A. M.                                                                                                                              | 85µm PA<br>50µm CW                                                               | GC-MS           |
| 2374 | Phenol and chlorophenol in water    | Experimental and statistical validation of SPME-GC-MS analysis of r phenol and chlorophenols in raw and treated water<br><i>Chemosphere</i> 68, #3, 501-510 (JUN 2007)<br>Simoes, N.; Cardoso, V.; Ferreira, E.; Benoliel, M.                                                                                          | 85µm PA<br>40 min @ 35°C<br>10% NaCl, pH 4.0                                     | GC-MS           |
| 1932 | Phenols from water                  | Enhanced extraction capacity and chemical noise reduction in SPME<br><i>J Separation Science</i> , 27, #17-18, 1517-1523<br>Moeder, Monika; Schrader, Steffi                                                                                                                                                           | review of fibers                                                                 | GC/MS           |
| 2560 | Nitrous oxide in sediment           | SPME-GC-MS determination of nitrous oxide evolution to measure denitrification in estuarine soils and sediments<br><i>J. Chromatogr. A</i> , 1133, #1-2, 300-304 (2006-11-10)<br>Drescher, S. R.; Brown, S. D.                                                                                                         |                                                                                  | GC-MS           |
| 1933 | Sulfur compounds in sediment        | Identification of sulfur interferences during organotin determination in harbour sediment samples by NaEt <sub>4</sub> B ethylation and GC-pulsed FPD flame photometric detection<br><i>J. Chromatogr. A</i> , 1046, #1-2, 217-224<br>Bravo, M; Gregori, I Lespes, G; Pinochet, H; Potin-Gautier, M                    | NaEt <sub>4</sub> B derivatives                                                  | GC-FPD          |
| 2581 | Flavor volatiles from capers        | Flavour profile of capers ( <i>Capparis spinosa</i> L.) from the Eolian Archipelago by HS-SPME/GC-MS<br><i>Food Chemistry</i> 101, 1272-1278 #3, (2007)<br>Romeo, V; Ziino, M.; Giuffrida, D.; Condurso, C.; Verzera, A.                                                                                               | headspace                                                                        | GC-MS           |
| 2893 | Volatiles in fish muscle            | SPME method for the determination of volatile compounds associated to oxidation of fish muscle<br><i>J. Chromatogr. A</i> , 1192, #1, 9-16 (May 23 2008)                                                                                                                                                               | 75µm Carboxen headspace                                                          | GC-MS           |

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|                                       | Iglesias, Jacobo; Medina, Isabel                                                                                                                                                                                                                                                                            | 30 min at 60 °C<br>saline extraction                        |           |
| 2552 Volatiles in tuna fish           | Characterisation of the volatiles of yellowfin tuna ( <i>Thunnus albacares</i> ) during storage by SPME- GC-MS and their relationship to fish quality parameters<br><i>Intl J Food Sci Tech</i> 42, #10, 1139-1147 (2007)<br>Edirisinghe, R. K. B.; Graham, A. J.; Taylor, S. J.                            | headspace                                                   | GC-MS     |
| 2278 Volatiles in fish oil            | Oxidatively derived volatile compounds in microencapsulated fish oil monitored by SPME<br><i>J Food Science</i> 70 #7, C433-C440 (2005)<br>Jonsdottir, Rosa; Bragadottir, Margaret; Arnarson, Gudmundur Orn                                                                                                 | PDMS/DVB<br>headspace                                       | GC-FID    |
| 1934 Biphenyls in fish oil            | Determination of mono- to octachlorobiphenyls in fish oil using Florisil adsorption followed by headspace SPME-GC with TOF-MS<br><i>J. Chromatogr. Am</i> 1085, #2, 278-284<br>Agustin, M.; Hong, S.; Lee, K.; Park, H.; Ryu, Jae-Ch                                                                        | 65µm PDMS-DVB<br>headspace                                  | GC-TOF-MS |
| 2805 Solvent residue in vegetable oil | The comparison of SPME-GC and static headspace-GC for determination of solvent residues in vegetable oils<br><i>Journal of Separation Science</i> 31,#2, 364-371 (Feb 2008)<br>Ligor, Magdalena; Buszewski, Boguslaw                                                                                        | 85µm CAR/PDMS<br>headspace                                  | GC-FID    |
| 2700 Benzo-a-pyrene in vegetable oil  | Rapid validated method for the analysis of benzo a pyrene in vegetable oils by using SPME-gas chromatography-mass spectrometry.<br><i>J. Chromatogr., A</i> 1176, #1-2, 231-235 (2007)<br>Purcaro, G.; Moret, S.; Conte, L. S.                                                                              | headspace                                                   | GC-MS     |
| 2453 PAHs in vegetable oil            | Determination of PAHs in vegetable oils using SPME-comprehensive two-dimensional GC coupled with time-of-flight MS<br><i>J. Chromatogr., A</i> 1150, #1-2, 173-177 (2007-05-25)<br>Wejnerowska, G.; Karczmarek, A.; Gaca, J                                                                                 | immersed                                                    | GC-TOF-MS |
| 2868 PAHs in aquatic species          | Evaluation of spme conditions for the determination of PAHs in aquatic species using gas chromatography<br><i>Anal. Bioanal. Chem.</i> 391, #4, 1419-1424 (June 2008)<br>Aguinaga, N.; Campillo, N.; Hernandez-Cordoba, M.; Vinas, P.                                                                       | 65µm PDMS-DVB<br>75°C for 60 min<br>headspace               | GC-MS     |
| 2866 PAHs in milk                     | A headspace SPME procedure coupled with for the analysis of volatile polycyclic aromatic hydrocarbons in milk samples<br><i>Anal. Bioanal. Chem.</i> 391, #3, 753-758 (June 2008)<br>Aguinaga, N.; Campillo, N.; Hernandez-Cordoba, M.; Vinas, P.                                                           | 65µm PDMS-DVB<br>75°C for 60 min<br>headspace               | GC-MS     |
| 2448 PAHs in milk                     | Determination of 16 polycyclic aromatic hydrocarbons in milk and related products using SPME-GC-MS<br><i>Anal. Chim. Acta</i> 596, #2, 285-290 (2007-07-23)<br>Aguinaga, N.; Campillo, N.; Hernandez-Cordoba, M. ; Vinas, P.                                                                                | 65µm PDMS-DVB<br>immersed<br>60 min at 55°C                 | GC-MS     |
| 2423 PAHs in smoked meat              | Analysis of polycyclic aromatic hydrocarbons in solid matrixes by solid-phase microextraction coupled to a direct extraction device<br><i>Talanta</i> 71, #2, 751-757 (2007-02-15)<br>Martin, D.; Ruiz, J.                                                                                                  | 100µm PDMS<br>65µm PDMS-DVB<br>25°C for 60 min<br>headspace | GC-MS     |
| 2720 PAHs in sediment                 | Behaviour of polycyclic aromatic hydrocarbons in dissolved, colloidal, and particulate phases in sedimentary cores<br><i>Intl J Env Analyt Chem</i> 87, #3, 211-225 (2007)<br>King, A. J.; Readman, J. W.; Zhou, J. L.                                                                                      |                                                             | GC-MS     |
| 2782 Phenanthrene in soil             | Electronic nose and SPME techniques to monitor phenanthrene biodegradation in soil<br><i>Sens Actuators, B Chem</i> 131, #1, 63-70 (Apr 14 2008)<br>De Cesare, F.; Macagnano, A.; Pantalei, S.; Zampetti, E.                                                                                                | headspace                                                   |           |
| 2650 PAHs in soil                     | Comparison of techniques for estimating PAH bioavailability: uptake in <i>Eisenia fetida</i> , passive samplers and leaching using various solvents and additives.<br><i>Environ Pollut</i> 145, #1, 154-60 (2007 Jan)<br>Bergknut, M.; Sehlin, E.; Lundstedt, S.; Andersson, P.; Haglund, P.; Tysklind, M. |                                                             | GC        |
| 1935 PAHs in soil/seaweed             | SPME and GC-MS for the determination of PAHs in environmental solid matrices.<br><i>Jl of Chromatographic Sci</i> , 42, #6, 329-335<br>Cam, D.; Gagni, S.; Lombardi, N.; Punin, M.                                                                                                                          | 100µm PDMS<br>immersed liquid carrier                       | GC-MS     |

SPME coupled with HPLC using on-line diode-array and

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|------|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|------------------|
| 2266 | Fenitrothion in water              | electrochemical detection for the determination of fenitrothion and its main metabolites in environmental water samples<br><i>J. Chromatogr. A</i> , 1094 #1-2, 70-76 (2005)<br>Barrio,R.; Goicolea, M.; Sampedro, M.; Sanchez-Ortega, A.; Unceta,N. |                                                                 | HPLC             |
| 1936 | Roxarsone in water                 | Sensitive method for the determination of roxarsone using w/ SPME multi-detector gas chromatography<br><i>J Chromatogr A</i> , 1057, #1-2, 177-183<br>Aldstadt III, Joseph H.; Roerdink, Aaron R.                                                    | 65µm PDMS-DVB<br>15min @ 70°C<br>1,3-propanedithiol derivatives | GC-MS<br>GC-PFPD |
| 1937 | Selenium from plants               | Speciation of volatile selenium species in plants using GC-ICP-MS<br><i>Sepu</i> , 22, #1, 16-19<br>Meija, J.; Montes-Bayon, M.; Caruso, J.; Leduc, D.; Terry, N.                                                                                    | headspace                                                       | GC-ICP-MS        |
| 1938 | Sulfur & N2 odorants in biomass    | Analysis of sulfur & nitrogen odorants using SPME and GC-MS<br><i>Water Sci. Technol.</i> , 50, #4, 115-120<br>Chiu, P.C.; Dentel, S.K.; Hepner, S.; Turkmen, M.                                                                                     | headspace                                                       | GC-MS            |
| 2303 | Odorants from FeSO4 solutions.     | Identification of metallic-smelling 1-octen-3-one and 1-nonen-3-one from solutions of ferrous sulfate<br><i>J Ag Food Chem</i> , 53, #21, 8325-8327 (2005)<br>Lubran, Meryl B.; Lawless, Harry T.; Lavin, Edward; Acree, Terry E.                    | headspace<br>(1, 5, and 16 h)<br>22° and 37°C                   | GC               |
| 1939 | Odors from biosolids               | Characterization of odors from limed biosolids treated with nitrate and anthraquinone<br><i>J. Environ. Sci. Health</i> , 40, #1, 139-149<br>Abu-Orf, M; Choi, H.; Kim, H.; McConnell, L.; Peot, C.; Ramirez, M.                                     | headspace                                                       | GC-MS            |
| 2214 | Organics from automobile materials | Contamination of toxic volatile and semi-volatile compounds from automobile materials<br><i>Bul Envn Contamination and Toxicology</i> 76, #2, 301-305 (2006)<br>Zhou, S.; Huang, J. X.; Kinkel, J.; Stark, W.                                        |                                                                 |                  |
| 1940 | Organics in stack emissions        | Sampling and analysis of volatile organic pollutants emitted by an industrial stack<br><i>Anal. Chim. Acta</i> , 524, #1-2, 51-62<br>Campo, L.; Domeno, C.; Martinez-Garcia, Fca.; Nerin, C.                                                         | 85µm polyacrylate headspace                                     | GC-MS            |
| 1941 | Volatile organics in dust          | Quantitative determination of volatile organic compounds in indoor dust using gas chromatography-UV spectrometry<br><i>Environ. Int.</i> , 31, #8, 1141-1148<br>Bornehag, C; Lagesson, V; Nilsson, A; Sundell, J; Tagesson, C                        | headspace                                                       | GC-UV            |
| 1942 | Volatiles in concrete              | Analysis of volatile components in concrete by SPME-GC-Mass Spectrometry<br><i>Zhipu Xuebao</i> , 25, #4, 225-228<br>Liao, K.                                                                                                                        | 50/30µm DVB/CAR<br>65°C, headspace                              | GC-MS            |
| 1943 | Volatiles in concrete              | Identification of volatile components in yunyan and yanmo concrete by SPME -GC-MS<br><i>Zhipu Xuebao</i> , 25, #1, 32-37<br>Zhu, S. M.; Li, J.; Lin, P.                                                                                              | headspace                                                       | GC-MS            |
| 1944 | Chlorophenols from landfills       | Chlorophenols in leachates originating from different landfills and aerobic composting plants<br><i>J. Hazard. Mater.</i> , 124, #1-3, 107-112<br>Ozkaya, Bestamin                                                                                   | headspace                                                       | GC-FID           |
| 2694 | Organics from particulate          | GC analysis of organic marker compounds in fine particulate matter using solid-phase microextraction<br><i>J Air Waste Manag Assoc.</i> 57, #1, 53-58 (2007 Jan.)<br>Lin, Lin; Lee, Milton L; Eatough, Delbert J                                     | 75µm Carboxen<br>30min headspace                                | GC-MS            |
| 1945 | Organics from particulate          | Qualitative analysis of organics in atmospheric particulates by headspace SPME-GC/MS<br><i>Atmos. Environ.</i> , 38, #40, 6917-6925<br>Khanal, O.; Shooter, D.                                                                                       | 100µm PDMS<br>10min headspace                                   | GC-MS            |
| 2653 | Pesticides from soil               | Current trends in SPME techniques for the determination of pesticides in food and environment<br><i>J Biochem Biophysical Methods</i> 70, #2, 117-131 (MAR 10 2007)<br>Pico, Yolanda; Fernandez, Monica; Ruiz, Maria Jose; Font, Guillermina         | Review                                                          |                  |
| 1946 | Pesticides from soil               | Determination of pesticides and their degradation products IN soil: Critical review and comparison of methods<br><i>TrAC Trends Anal. Chem.</i> , 23, #10-11, 772-789<br>Andreu, Vicente; Pico, Yolanda                                              | Review<br>headspace SPME                                        | GC-MS<br>LC-MS   |

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| 2844  | Organics in water                          | Coupled in-tube and on-fibre SPME for cleanup and preconcentration of organic micropollutants from aqueous samples and analysis by GC-MS<br><i>Anal. Chim. Acta</i> 618, #1, 61-69 (Jun 16 2008)<br>Gupta, Manju; Jain, Archana; Pillai, Aradhana K.K.V.; Verma, K.                                                    | DVB/Cab (30/50 µm)                          | GC-MS             |
| 2339  | Organics in water                          | Target and nontarget screening of organic micropollutants in water by SPMEs combined with GC-TOF-MS<br><i>Anal Chem Vol.</i> 79, # 24 9494-504 (2007 Dec 15)<br>Hernandez, F.; Portoloes, Tania; Pitarch, Elena; Loopez, F.                                                                                            |                                             | GC-TOF-MS         |
| 2846  | PAHs in water                              | SPME followed by HPLC with fluorimetric and UV detection for the determination of polycyclic aromatic hydrocarbons in water<br><i>Analytical Letters</i> 41, #1, 119-136 (2008)<br>Ricardo Lucio-Gutierrez, J.; de la Luz Salazar-Cavazos, Maria; Waksman de Torres, Noemi H.; Castro-Rios, Rocio                      | 65µm PDMS/DVB<br>60 min @ 70°C<br>immersion | LC-UV             |
| 2397  | PAHs in water                              | Determination of PAHs in aqueous samples by microwave assisted headspace SPME-GC-FID<br><i>Talanta</i> 72, #4, 1269-1274 (2007-06-15)<br>Wei, M. -C.; Jen, J. -F.                                                                                                                                                      | 65µm PDMS/DVB<br>30 min @ 20°C              | GC-FID            |
| 2345  | PAHs in water                              | SPME-GC-MS analysis of PAHs Towards the European Union water directive 2006/0129 EC<br><i>J Chromatogr A</i> 1176, #1-2, 48-56 (2007 Dec 28)<br>Fernaandez-Gonzalez, V; Concha-Graona, E; Muniategui-Lorenzo, S; Loopez-Mahoa, P; Prada-Rodriguez, D                                                                   | 65µm PDMS/DVB<br>immersion                  | GC-MS<br>GC-MS-MS |
| 2543  | PAHs in earthworms                         | Predicting PAH bioaccumulation and toxicity in earthworms exposed to manufactured gas plant soils with solid-phase microextraction<br><i>Env Science &amp; Tech</i> 41, #21, 7472-7478 (NOV 1 2007)<br>Jonker, T. O.; van der Heijden, S.; Kreitinger, J.; Hawthorne, S.                                               |                                             |                   |
| 2596  | Organics from soil                         | Characterization of an urban landfill soil by using physicochemical . analysis and solid phase microextraction (SPME)-GC/MS<br><i>Env. Monitoring Assessment</i> 127, #1-3, 337-351 (APR 2007)<br>Banar, Mufide; Ozkan, Aysun; Vardar, Cigdem                                                                          | 65µm PDMS/DVB<br>headspace<br>15 min @ 50°C | GC-MS             |
| 1947  | Organics from soil                         | SPME to predict bioavailability and accumulation of organic micropollutants in terrestrial organisms after exposure to a field-contaminated soil<br><i>Environ. Sci. Technol.</i> , 38, #18, 4842-4848<br>Barendregt, A; Fleuren, R; Hermens, J.; Jager, T; Sinnige, T.; Van Der Wal, Leon; Van Gestel, Cornelis A. M. | 30µm PDMS<br>headspace<br>10 days exposure  | GC-MS             |
| 1948  | PAHs in micelles                           | SPME coupled to GC-MS for determining PAH-micelle micelle partition coefficients<br><i>Anal. Chem.</i> , 76, #15, 4572-4578<br>Alfonso, Ana M.; Ayala, Juan H.; Gonzalez, V; Pino, V.                                                                                                                                  | 85µm polyacrylate<br>100µm PDMS             | GC-MS             |
| 1949  | Odors from pig sheds                       | Implementation of new methods to characterise atmospheres in piggeries<br><i>Int. J. Environ. Anal. Chem.</i> , 84, #9, 647-659<br>Begnaud, F.; Berdague, Jean-Louis; Lebest, J.; Murat, C.; Peres, C.                                                                                                                 | headspace                                   | GC-MS             |
| 1950  | Organics in water                          | In-tube solid-phase microextraction and online coupling with high-resolution GC.<br><i>LC-GC Europe</i> , 17, #3, 144-151<br>Wang, H. W.; Liu, W. M.; Guan, Y. F.                                                                                                                                                      | 5 M X 0.53mm ID<br>1.2µm PDMS               | GC                |
| 1951  | Odor from swine facilities                 | Characterization of volatile organic compounds on airborne dust in a swine finishing barn<br><i>Trans. Am. Soc. Agric. Eng.</i> , 47, #4, 1231-1238<br>Jeon, I.J.; Maghirang, R.G.; Razote, E.B.; Seitz, L.M                                                                                                           | 75µm Carboxen<br>100µm PDMS<br>headspace    | GC                |
| Water |                                            |                                                                                                                                                                                                                                                                                                                        |                                             |                   |
| 778   | Volatile organics in environmental samples | Solid Phase Microextraction of volatile organic compounds in environmental applications<br><i>Am Laboratory</i> (2001)33(4), 18-20<br>Van Longenhove, H; Dewulf, J.                                                                                                                                                    | 100µm PDMS<br>85µm Polyacrylate<br>15 min.  | GC                |
| 858   | Organic pollutants in environment          | SPME - a convenient tool for the determination of organic pollutants in environmental matrices<br><i>Crit. Rev. Anal. Chem</i> (2001) 31(1) 1-18                                                                                                                                                                       |                                             |                   |

|      |                                          |                                                                                                                                                                                                                                                                                                                                                          |                                      |        |
|------|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|--------|
| 2670 | Toluene from air                         | Characterisation of absorptive sampling with SPME fibres in the EUPHORE photoreactor<br><i>Talanta</i> 72, #5, 1757-1766 (JUL 31 2007)<br>Alvarez E., Gomez                                                                                                                                                                                              |                                      | GC     |
| 2601 | Carbonyl product photo-oxidation BTEX    | Experimental confirmation of the dicarbonyl route in the photo-oxidation of benzen and toluene<br><i>Env Sci Tech</i> 41, #24, 8362-8369 (DEC 15 2007)<br>Alvarez, E. Gomez; Viidanoja, J.; Munoz, A.; Wirtz, K.; Hjorth, J.                                                                                                                             | PFBHA derivatives                    |        |
| 2717 | Volatile emissions industrial gaseous    | Rapid analysis of tile industry gaseous emissions by ion mobility spectrometry and comparison with SPME-GC-MS<br><i>J. Environ. Monit.</i> 8, #12, 1219-1226 (2006-11-28)<br>Pozzi, R.; Bocchini, P.; Pinelli, F.; Galletti, G. C.                                                                                                                       |                                      | GC-MS  |
| 2710 | Semivolatile chlorinated organics in air | Comparative application of SPME fibre assemblies and semi-permeable membrane devices as passive air samplers for semi-volatile chlorinated organic compounds. A case study on the landfill "Grube Antonie" in Bitterfeld, Germany<br><i>Environmental Pollution</i> 144; # 2; 414-422 (2006-11-15)<br>Paschke, A.; Vrana, B.; Popp, P.; Schueuermann, G. | 65µM CW/DVB<br>passive air sample    | GC     |
| 2602 | Toluene from air samples                 | Modelling of toluene SPME for indoor air sampling.<br><i>Anal Bioanal Chem</i> 388, #1, 147-56 (2007 May)<br>Mocho, Pierre; Larroque, Virginie; Desauziers, Valoerie                                                                                                                                                                                     | 75µm Carboxen                        | GC     |
| 1    | BTEX compounds, PCBs, solvents in water  | The Application of Chemically Modified Fused Silica Fibers in the Extraction of Organics from Water Matrix Samples and Their Rapid Transfer to Capillary Columns<br>Water Pollution Research J. Canada 24: 179 (1989)<br>Belardi, R., Pawliszyn, J.                                                                                                      | uncoated fiber<br>1 min              | GC-FID |
| 2678 | VOCs in water                            | Development of a simple, accurate SPME-based method for assay of VOCs in column breakthrough experiments<br><i>CHEMOSPHERE</i> 66, #1, 18-29 (2006)<br>Salaices, Avila M. A.; Breiter, R.; Mott, H.                                                                                                                                                      | headspace<br>5 min                   | GC     |
| 2682 | Review article                           | Multiple solid-phase microextraction: Theory and applications.<br><i>Trends Anal. Chem</i> 26, #3, 206-214 (2007-03)<br>Tena, M. T.; Carillo, J. D.                                                                                                                                                                                                      |                                      |        |
| 2685 | Review article                           | Developments in multiple headspace extraction<br><i>J. Biochem. Biophys. Methods</i> 70, #2, 229-233 (10 MAR 2007)<br>Hakkarainen, M.                                                                                                                                                                                                                    |                                      |        |
| 2789 | Review article                           | Sorbent- and liquid-phase microextraction techniques and membrane-assisted extraction in combination with GC analysis: A review<br><i>Anal. Chim. Acta</i> 614, #1, 27-37 (Apr 28 2008)<br>Hyotylainen, Tuulia; Riekkola, Marja-Liisa                                                                                                                    |                                      |        |
| 3    | VOCs in water                            | Solid Phase Microextraction for the Direct Analysis of Water: Theory and Practice<br>LC-GC 10: 656-661 (1992)<br>Arthur, C., Potter, D., Buchholz, K., Motlagh, S., Pawliszyn, J.                                                                                                                                                                        | 100µm PDMS<br>2-5 min<br>salt added  | GC-FID |
| 4    | VOCs, PCBs, solvents in water            | Practical and Theoretical Aspects of Solid Phase Microextraction for the Direct Analysis of Groundwater<br>Proceedings 15th Annual EPA Conference-Analysis of Pollutants in Environment, Norfolk, VA, May 1992<br>Arthur, C., Buchholtz, K., Motlagh, S., Killam, L., Pawliszyn, J.                                                                      | 100µm PDMS<br>5-14 min<br>salt added | GC-FID |
| 6    | BTEX, gasoline in water                  | Analysis of Substituted Benzene Compounds in Groundwater Using SPME<br><i>J. Env. Sci. Technol.</i> 26: 979-983 (1992)<br>Arthur, C., Potter, D., Lim, M., Motlagh, S.,                                                                                                                                                                                  | 56µm PDMS<br>2-6 min<br>stirring     | GC-FID |

|      |                                       |                                                                                                                                                                                                                                                                                                 |                                                                                                |               |
|------|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|---------------|
| 2616 | BTEX compounds in water               | Determination of benzene, toluene, ethylbenzene, xylenes in water at sub-ng l(-1) levels by SPME coupled to cryo-trap GC-MS<br><i>Chemosphere</i> 69, #9, 1381-1387 (NOV 2007)<br>Lee, Maw-Rong; Chang, Chia-Min; Dou, Jianpeng                                                                 | 75µm Carboxen<br>15 min @ 25°C<br>sat. salt                                                    | GC-MS         |
| 7    | BTEX compounds in water               | Dynamics of Organic Compounds Extraction from Water Using Liquid-Coated Fused Silica Fibers<br><i>Anal. Chem.</i> 64: 1187-1199 (1992)<br>Louch, D., Motlagh, S., Pawliszyn, J.                                                                                                                 | 56µm PDMS<br>2-6 min<br>stirring                                                               | GC-FID        |
| 10   | BTEX compounds in water               | Detection of Substituted Benzenes in Water at the pg/mL Level Using Solid Phase Microextraction and GC-Ion Trap Mass Spectrometer<br><i>J. Chromatogr.</i> 625: 247-255 (1992)<br>Potter, D., Pawliszyn, J.                                                                                     | 100µm PDMS<br>30 min<br>stirring                                                               | GC-FID        |
| 11   | Organics in water                     | Environmental Analysis of Organic Compounds in Water Using Solid Phase Microextraction<br><i>J. High Res. Chromatogr.</i> 15: 741-744 (1992)<br>Arthur, C., Pratt, K., Belardi, R., Motlagh, S., Pawliszyn, J.                                                                                  | 100µm PDMS<br>14 min<br>stirring                                                               | GC-MS         |
| 14   | Phenols in water                      | Determination of Phenols by SPME and GC Analysis<br><i>J. Environ. Sci. Technol.</i> 27 (13): 2844-2848 (1993)<br>Buchholz, K., Pawliszyn, J.                                                                                                                                                   | 85µm polyacrylate<br>60 min<br>stirring<br>salt added, pH 2                                    | GC-FID, -MS   |
| 230  | Phenols in water                      | Determination of Phenolic Compounds in Waste Water by Solid-Phase Microextractor<br><i>Fresenius' J. Anal. Chem.</i> 357: 326-332 (1997)<br>Moeder, M., Schrader, S., Franck, U., Popp, P.                                                                                                      |                                                                                                | GC-MS         |
| 670  | Phenols in water                      | Sorption of phenols to dissolved organic matter investigated by SPME<br><i>Sci. Total Environ.</i> (2000), 253(1-3), 63-74<br>Ohlenbusch, G., Kumke, M., Frimmel, F.                                                                                                                            |                                                                                                |               |
| 922  | Phenolic compounds in water           | SPME coupled to liquid chromatography for the analysis of phenolic compounds in water<br><i>J. Chromatogr. A</i> (2001) 923(1-2), p45-52<br>Toledo, E., Prat, M., Alpendurada, M.                                                                                                               | 50µm CW/TPR<br>65µm DVB/PDMS<br>30min immersed<br>salt added, pH 2                             | HPLC          |
| 951  | Chlorinated phenolics in water        | Application of SPME in pre-concentration of chlorinated phenolic compounds from cellulose bleaching effluents<br><i>J. Sep. Sci</i> (2001), 24(4), 309-312<br>Dos Santos, L.; Vale, M.; De Araujo, M.<br>Bertrand C.; Caramao, E.; Oliveira, E.                                                 |                                                                                                |               |
| 15   | VOCs, phenols, semivolatiles in water | Recent Advances in Solid-Phase Microextraction (SPME) of Environmental Samples<br>Proceedings Water Quality Technology Conference<br>Miami, FL, Nov. 1993<br>Arthur, C., Pratt, K., Belardi, R., Motlagh, S., Pawliszyn, J.                                                                     | 100µm PDMS<br>5 min (volatiles)<br>10 min (semivolatiles)<br>headspace<br>stirring, salt added | GC-MS         |
| 671  | 4-Quinolones in water                 | Influence of pH and other modifying factors on the distribution behaviors of 4-Quinolones to Solid phase and humic acids studied by "negligible-depletion" SPME-HPLC<br><i>Environ Sci Technol.</i> 2000, 34, 4989-4994<br>Lutzhof, H. Vaes, W., Freidig, A., Halling-Sorrensen, B. Hermens, J. | CW/TPR<br>10min.<br>pH 3-5.5<br>stirred                                                        | HPLC<br>260NM |
| 2644 | Semivolatiles varied matrices         | Determining chemical activity of (semi)volatile compounds by headspace solid-phase microextraction<br><i>Anal. Chem.</i> 79, #7, 2869-2876 (Apr 1 2007)<br>Burken, J.; Karlson, U.; Legind, C.; Mayer, P.; Reichenberg, F                                                                       | headspace<br>30 min                                                                            | GC            |

Analysis of semi-volatile organic compounds in aqueous samples by



|      |                                                    |                                                                                                                                                                                                                                                                           |                                                        |        |
|------|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------|
| 2454 | Semivolatiles<br>in waste water                    | microwave-assisted headspace SPME Coupled with GC-ECD<br><i>J. Chromatogr., A 1140, #1-2, 35-43 (2007-01-26)</i><br>Huang, Y. P.; Yang, Y. C.; Shu, Y. Y.                                                                                                                 | headspace<br>30 min @ 70°C                             | GC-ECD |
| 501  | 24 Semivolatiles<br>in waste water                 | Development of SPME-GC method for the determination of organic compounds in waste water<br><i>Acta Hydrochim. Hydrobiol.</i> 1999, 27(4), 1913-199<br>Grote, C., Belau, E., Levsen, K., Wunsch, G.                                                                        |                                                        | GC     |
| 938  | Organics<br>in water                               | An improved automatic analyzer for organic compounds in water based on headspace (SPME) coupled to GC<br><i>Field Anal. Chem. Technol (2001) 5(1-2), 37-49</i><br>Belau, E.; Grote, C.; Spiekermann, M.; Levsen, K.                                                       |                                                        | GC     |
| 565  | Semivolatiles<br>in fish, water                    | Polyacrylate-Coated SPME fibers as a tool to simulate body residues and target concentrations of complex organic mixtures for estimation of baseline toxicity<br><i>Environ. Sci. Technol.</i> 2000, 34, 324-331<br>Verbruggen, E., Vaes, W., Parkerton, T., Hermens, J.  | 85µm polyacrylate<br>5-150 min                         | GC-MS  |
| 785  | Halogenated<br>hydrocarbons<br>in water            | Impact of a lignite seam on contaminated groundwater in the aquifer system of the Bitterfeld region<br><i>Water Air Soil Pollut (2000) 125(1-4), 157-170</i><br>Christoph, G; Dermietzel, J.                                                                              |                                                        |        |
| 19   | Chlorohydrocarbons<br>in water                     | Determination of Volatile Chlorinated Hydrocarbons in Air and Water with Solid-Phase Microextraction<br>Analyst(Cambridge,UK) 118: 1501-5, Dec. 1993<br>Chai, M., Arthur, C., Pratt, K., Pawliszyn, J., Belardi, R.                                                       | 100µm PDMS<br>20 min (immersion)<br>10 min (headspace) | GC-ECD |
| 436  | Chlorohydrocarbons<br>in water                     | Analysis of Volatile Halogenated Hydrocarbons in Water by SPME and GC-MS<br><i>Chem. Listy</i> (1998), 92(9), 633-642<br>Janda, V., Viden, I.                                                                                                                             | 100µm PDMS<br>20 min<br>stirred                        | GC-MS  |
| 2645 | Aromatic<br>hydrocarbons in<br>ice crystals        | Laboratory studies on the uptake of aromatic hydrocarbons by ice crystals during vapor depositional crystal growth<br><i>Atmos. Environ.</i> 41, #29, 6156-6166 (Sept 2007)<br>Bormann, S.; Fries, E.; Haunold, W.; Jaeschke, W.; Mitra, S.; Schmidt, M.; Starokozhev, E. | headspace                                              | GC     |
| 20   | PAHs, PCBs<br>in water                             | Rapid Determination of Polyaromatic Hydrocarbons and Polychlorinated Biphenyls in Water Using Solid-Phase Microextraction and GC/MS<br><i>J. Environ. Sci. Technol.</i> 28(2): 298-305 (1994)<br>Potter, D., Pawliszyn, J.                                                | 15µm PDMS<br>10 min<br>stirring                        | GC-MS  |
| 900  | Aromatic compounds<br>in water                     | SPME of aromatic hydrocarbons from water samples<br><i>Chemija</i> (2000) 11(4) 206-210<br>Seduikiene, I.; Vickackaite, V.; Kazlauskas, R.                                                                                                                                |                                                        |        |
| 672  | PAHs<br>in water                                   | Quantitative analysis of PAHs in water by SPME-HPLC<br><i>Huanjing Huaxue (2000) 19(4), 382-384</i><br>Li, Y., Zhang, X., Xu, R., Cai, W., Wang, G., Song, Y.                                                                                                             |                                                        | HPLC   |
| 2831 | Dissolved<br>organic carbon<br><br>in rivers       | Allochthonous DOC in floodplain rivers: Identifying sources using SPME with GC.<br><i>Aquatic Sciences</i> 69m #4, 472-483 (2007)<br><br>Zander, Alek; Bishop, Andrea G.; Prenzler, Paul D.; Ryder, Darren S.                                                             |                                                        |        |
| 2740 | Chlorinated<br>volatils in water<br>and wastewater | Determination of chlorinated volatile organic compounds in water and municipal wastewater using headspace-SPME-GC<br><i>J. Chromatogr. A, 1132, #(1-2), 310-314 (2006-11-03)</i><br>Antoniou, V.; Koukouraki, E. E.; Diamadopoulos, E.                                    | headspace                                              | GC-MS  |
| 2482 | Volatiles and                                      | Analysis of volatile and semivolatile organic compounds in municipal wastewater using headspace SPME-GC                                                                                                                                                                   | headspace                                              | GC-MS  |

|      |                                        |                                                                                                                                                                                                                                                                                                                                     |                                                       |        |
|------|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|--------|
|      | semivolatiles from wastewater          | <i>Water Environment Research</i> 79, #8, 921-930 (AUG 2007)<br>Antoniou, Chrysoula V.; Koukouraki, Elisavet E.; Diamadopoulos, Evan                                                                                                                                                                                                |                                                       |        |
| 2540 | VOCs in oil sludge                     | Leaching of vocs from cement-based stabilized/solidified refinery oily sludge using solid phase microextraction<br><i>Env Tech</i> 28, #10, 1173-1185 (OCT 2007)<br>Karamalidis, A. K.; Voudrias, E. A.                                                                                                                             | headspace                                             | GC-FID |
| 22   | VOCs, BTEX, PAHs in wastewater, sludge | Analysis of Organic Compounds in Environmental Samples Using Headspace Solid Phase Microextraction<br><i>J. High Res. Chromatogr.</i> 16(12): 689-692 (1993)<br>Zhang, A., Pawliszyn, J.                                                                                                                                            | 100µm PDMS stirring, varied time saturated salt       | GC-MS  |
| 673  | Jet fuels in ground water              | Source identification of underground fuel spills by SPME/High Resolution GC/genetic algorithms<br><i>Anal. Chem.</i> (2000), 72(2), 423-433<br>Lavine, B., Ritter, J., Moores, A., Wilson, M., Faruque, A., Mayfield, H.                                                                                                            |                                                       | GC     |
| 2824 | Organic chemicals in sludge            | Relative efficacy of intrinsic and extant parameters for modeling biodegradation of synthetic organic compounds in activated sludge: Steady-state systems<br><i>Water Environ. Res.</i> 75(2), 98-104 (2000)<br>Bowyer, R.; Grady Jr., C.; Magbanua Jr., B.; Rodieck, Allison G.; Sanders II, R.; Smets, B.; Sowers, W.; Stolze, S. | headspace                                             | GC-FID |
| 674  | Organic chemicals in waste water       | Quantification of synthetic organic chemicals in biological treatment process effluent using SPME-GC<br><i>Water Environ. Res.</i> (2000), 72(1), 98-104<br>Magbanua, B., Mitchell, D., Gehniger, S., Bowyer, R., Grady, C., Leslie, J.                                                                                             | 85µm polyacrylate                                     | GC-FID |
| 675  | Musk fragrances in water               | Optimization of SPME for the GC-MS determination of synthetic musk fragrances in water samples<br><i>J. Chromatogr. A</i> , (2000) 903(1-2), 203-210<br>Winkler, M., Headley, J., Peru, K.                                                                                                                                          | 65µm PDMS/DVB<br>45 min @ 30°C<br>headspace agitation | GC-MS  |
| 502  | Polycyclic musk in surface water       | Occurrence and distribution of organic compounds in the aquatic system in Berlin, Germany. Part 3, Determination of synthetic musks in Berlin surface water applying SPME and GC-MS<br><i>Acta Hydrochim Hydrobiol</i> (1999), 27(3), 150-156<br>Heberer, T., Gramer, S., Stan, H.                                                  |                                                       | GC-MS  |
| 787  | Polyolefins in soil                    | Ultrasonication and microwave assisted extraction of degradation products from degradable polyolefin blends aged in soil<br><i>J. Appl. Polym. Sci</i> (2001) 79(6), 1101-1112<br>Contat-Rodrigo, L.; Haider, N.; Karlsson, S.; Ribes-Greus, A                                                                                      |                                                       | GC-MS  |
| 2854 | Fluorene from water samples            | Kinetics of fluorene biodegradation by a mixed culture<br>Proc. Second IASTED Int. Conf. Advanced Technol. Environ. Field pp84-87 (2007)<br>Brito, A.G.; Gomes, R.C.B.; Nogueira, R.; Oliveira, J.M.; Peixoto, J.                                                                                                                   |                                                       | GC-FID |
| 2775 | Pyrene in soil                         | SPME as a tool to predict the bioavailability and toxicity of pyrene to the springtail, <i>Folsomia candida</i> , under various soil conditions<br><i>Environl Scie &amp; Tech</i> , 42(4), 1332-1336 (2008)<br><br>Styrishave, B.; Mortensen, M.; Krogh, P.; Andersen, Ole; Jensen, J.                                             |                                                       |        |
| 940  | Pyrene on humic material               | Sorption of pyrene to dissolved humic substances and related model polymers. 1. Structure-property correlation<br><i>Environl Scie &amp; Tech</i> (2001), 35(12), 2536-2542<br>Kopinke, F.; Georgi, A.; Mackenzie, K.                                                                                                               |                                                       |        |
| 2586 | PAHs in water                          | Influence of sorption to dissolved humic substances on transformation reactions of hydrophobic organic compounds in water.<br>I. Chlorination of PAHs                                                                                                                                                                               |                                                       |        |

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|-----|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|--------------|
| 676 | PAHs<br>in water/soil              | SPME and headspace SPME for the determination of high molecular-weight PAHs in water and soil samples<br><i>J. Chromatogr. Sci., (2000) 38(12) 528-534</i><br>Doong, R., Chang, S., Yuh-Chang                                                           | 100µm PDMS<br>85µm polyacrylate<br>20-60 min @60°C                              | GC-FID       |
| 677 | PAHs<br>in water/soil              | Determination of Distribution Coefficients of priority PAHs using SPME<br><i>Anal. Chem. 2000, 72(15), 3647-3652</i><br>Doong, R., Chang, S.,                                                                                                           | 100µm PDMS<br>85µm polyacrylate<br>20-60min.                                    |              |
| 678 | PAHs<br>in water/soil              | SPME FOR determining the Distribution of 16 USEPA PAHs in water<br><i>J. Chromatogr. A 2000, 879(2), 177-188</i><br>Doong, R., Chang, S., Sun., Y.                                                                                                      | 100µm PDMS<br>85µm polyacrylate<br>20-60 min                                    | GC-MS        |
| 585 | PAHs in<br>water/humic material    | Interaction between natural organic matter (NOM) and (PAH) comparison of fluorescence quenching and SPME.<br>Fresenius'-J-Anal-Chem. Jun 1999; 364(4): 313-319<br>Doll,-TE; Frimmel,-FH; Kumke,-MU; Ohlenbusch,-G                                       | 7µm PDMS<br>20 min                                                              | GC-MS        |
| 25  | PAHs, semivolatiles<br>in water    | Solid Phase Microextraction -- A Solventless Sample Preparation Method for Organic Compounds in Water<br>American Environmental Lab April 1994, p 43-45<br>Shirey, R., Mani, V., Savrock, J.                                                            | 7µm PDMS (PAHs)<br>polyacrylate (semivol)<br>15 min, stirring<br>saturated salt | GC-FID, -ECD |
| 679 | Volatiles<br>in water              | Optimization of Extraction Conditions for Low-Molecular-Weight analytes using SPME<br><i>J. Chrom. Sci., Vol. 38, March 2000, 109-116</i><br>Shirey, R.                                                                                                 | six different fibers<br>15 min headspace<br>sat. salt, pH2,7,11                 | GC-MS        |
| 680 | Semivolatiles<br>in water          | Optimization of Extraction Conditions and Fiber Selection for Semivolatile Analytes using SPME<br><i>J. Chrom. Sci., Vol. 38, July 2000, 279-288</i><br>Shirey, R.                                                                                      | seven different fibers<br>30 min, immersed<br>sat. salt, pH2,7,11               | GC-MS        |
| 440 | PAHs in<br>water                   | Solvent-Free Method for the Determination of PAHs in Wastewater by SPME-HPLC with Photodiode-Array Detector<br><i>J. Chromatogr. A (1998), 823(1+2), 211-218</i><br>Negrao, M., Alpenduradu, M.                                                         | 100µm PDMS<br>45°C, 30 min<br>stirring                                          | HPLC-PAD     |
| 26  | BTEX compounds<br>in water         | Analysis of BTEX in Water by Commercially Available SPME and CLOT Column Gas Chromatography<br><i>J. Chromatogr. 677: 201-205 (1994)</i><br>Sama, L., Webster, G., Friesen-Fisher, M., Ranjai, R.                                                       | 100µm PDMS<br>35 min<br>stirring                                                | GC-FID       |
| 30  | Nitrobenzenes<br>in water          | Determination of the Semi-Volatile Compounds Nitrobenzene, Isophorone, 2,4-Dinitrotoluene and 2,6-Dinitrotoluene in Water Using SPME with Polydimethylsiloxane-Coated Fiber<br><i>J. Chromatogr. A Vol 678(2): 313 (1994)</i><br>Horng, J., Huang, S.   | 100µm PDMS<br>15 min<br>stirring<br>saturated salt                              | GC-FID       |
|     |                                    | Rapid Analysis of Environmental Samples Using SPME                                                                                                                                                                                                      |                                                                                 |              |
| 31  | VOCs, chloropesticides<br>in water | Narrow Bore Capillary Columns<br><i>J High Res. Chromatogr. 18(8): 495-499 (1995)</i><br>Shirey, R.                                                                                                                                                     | 100µm PDMS<br>15 min<br>stirring<br>saturated salt                              | GC-MS        |
| 47  | BTEX compounds<br>in water         | Determination of BTEX Compounds in Water by Solid-Phase Microextraction and Raman Spectroscopy<br><i>Anal. Chem. 67(3): 600-605 (1995)</i><br>Wittkamp, B., Tilotta, D.                                                                                 | 100µm PDMS                                                                      | GC-FID       |
| 681 | Volatiles                          | A new method for the rapid determination of volatile substances: the SPME-direct method Part 1: Apparatus and working conditions<br><i>Sens, Actuators, B. (2001) B72 (2) 184-187</i><br>Bene, A., Fornage, A., Luisier, J., Pichler, P., Villettaz, J. |                                                                                 |              |

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|------|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|--------------------------------|
| 830  | Methyl, ethylmercury chlorides in water        | Direct hydride derivatization of methyl- and ethylmercury chlorides in aqueous solution with KBH <sub>4</sub><br><i>J Environ Sci (China) (2000) 12(3) 275-278</i><br>Jiang Gui-bin; He Bin                                                                                     |                                                                                                             | GC-MS                          |
| 2582 | Methylmercury derivatives in biological matrix | <b>Methylmercury determination in biota by SPME matrix effect evaluation</b><br><i>J Chromatogr A 1174, #1-2, 2-6 (2007 Dec 7)</i><br>Carrasco, Luis; Doe, Sergi; Bayona, Josep M                                                                                               | headspace<br>NaBETr derivative                                                                              | GC-Py-AFS                      |
| 48   | Methylmercury derivatives in water and fish    | Determination of Methylmercury in Fish and River Water Samples Using in situ Sodium Tetraethylborate<br>Derivatization Followed by SPME and GC-MS<br><i>J. Chromatogr. 696: 113-122 (1995)</i><br>Cai, Y., Bayona, J.                                                           | 100µm PDMS<br>10 min<br>stirring<br>headspace                                                               | GC-MS                          |
| 407  | Organomercury in water and soil                | SPME and GC-MIP-AED for the Speciation Analysis of Organomercury Compounds<br><i>J. High Resol. Chromatogr. 1999, 22 (3) 181-182</i><br>Mothes, S., Wennrich, R.                                                                                                                | 100µm PDMS<br>25°C<br>50 min (immersion)<br>20 min (headspace)                                              | GC-MIP-AED                     |
| 18   | Bismuth III in water                           | Solid Phase Microextraction of Metal Ions<br><i>Microchim. Acta 112: 41-6 (1993)</i><br>Otu, E., Pawliszyn, J.                                                                                                                                                                  | bare, or 100µm PDMS<br>60 min<br>immersion                                                                  | UV / VIS<br>460nm              |
| 682  | Dimethylarsinic acid arsonic acid              | Speciation of dimethylarsinic acid and monomethylarsonic acid by SPME-GC-ion trap MS<br><i>J. Chromatogr. A 2000, 873(1), 129-135</i><br>Mester, Z., Pawliszyn, J.                                                                                                              | 100µm PDMS<br>40min @ 20°C                                                                                  | GC-MS                          |
| 96   | Organo Hg, Sn, Pb in water                     | Sensitive, Simultaneous Determination of Organomercury Lead, and Tin Compounds with Headspace SPME<br>Capillary GC Combined with Inductively Coupled Plasma MS<br><i>Anal. Chem. 69: 1604-1611 (1997)</i><br>Moens, L., DeSmaele, T., Dams, R., VanDen Broeck, P., Sandra, P.   | thioglycol methylate deriv.<br>100µm PDMS<br>10 min<br>headspace<br>stirring<br>pH 5.3<br>NaBETr derivative | ICP-MS                         |
| 873  | Tin & lead in water                            | SPME-GC-glow discharge-optical emission detection for tin and lead speciation<br><i>J Anal At Spectrom (2001) 16(4), 376-381</i><br>Orellana-Velado, N.G.; Pereiro, R.; Sanz-Medel, A                                                                                           |                                                                                                             | GC-OES                         |
| 796  | Organo Sn in water                             | Speciation of organotin in environmental samples by SPME-GC: comparison of four specific detectors:<br><i>J. Anal. At. Spectrom (2001) 16(3), 263-269</i><br>Aguerre, S; Lespes, G; Desauziers, V; Potin-Gautier, M                                                             | NaBETr derivative                                                                                           | FPD, PFPD<br>MIP-AES<br>ICP-MS |
| 2764 | Organotin and organomercury in sediments       | <b>Optimisation of the headspace-SPME for organomercury and organotin compound determination in sediment and biota</b><br><i>J. Sep. Sci. 31, #4, 768-774 (March 2008)</i><br>de Diego, A.; Delgado, A.; Madariaga, Juan M.; Prieto, Ailette; Usobiaga, Aresatz; Zuloaga, Olatz | 30 µm PDMS<br>Headspace<br>3-24 min@ 20-90°C<br>NaBETr derivative                                           | MIP-AES                        |
| 2244 | Organotin in marine sediments                  | <b>Organotin speciation in Bizerte lagoon (Tunisia)</b><br><i>Science of the Total Environment 349, #1-3, 211-222 (2005)</i><br>Mzoughi, N.; Lespes, G.; Bravo, M.; Dachraoui, M.; Potin-Gautier, M.                                                                            | headspace<br>NaEt4B<br>derivatives                                                                          | GC-PFPD                        |
| 153  | Organo Sn, Pb in water                         | Preconcentration and Determination of Sn- and Pb-Organic Species in Environmental Samples by SPME and GC-AED<br>Fresenius' <i>J. Anal. Chem. 354: 587-91 (1996)</i><br>Tutschiku, S., Mothes, S., Wennrich, R.                                                                  |                                                                                                             | GC-AED                         |
| 215  | Organotin in water                             | Determination of Organotin Compounds in Water Samples by Solid-Phase Microextraction (SPME) and GC-MS<br><i>Ann. Chim. (Rome) 87: 497-504 (1997)</i><br>Guidotti, M., Vitali, M.                                                                                                |                                                                                                             | GC-MS                          |
| 152  | Methyltin in water                             | Rapid Determination of Methyltin Compounds in Aqueous Samples Using SPME and Capillary GC Followed by in situ Derivatization with Sodium Tetraethylborate<br><i>J. High Res. Chromatogr. 18: 767 (1995)</i><br>Morcillo, Y., Cai, Y., Bayona, J.                                | 100µm PDMS<br>29°C, 2-35 min<br>headspace<br>stirring                                                       | GC-FPD                         |

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|------|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|----------|
| 161  | Lead derivatives<br>in water               | Determination of Tetraethyllead and Inorganic Lead in Water<br>by SPME-GC<br>Anal. Chem. 68: 3008 (1996)<br>Gorecki, T., Pawliszyn, J.                                                                                                                                                                                        | NaBEtr derivative<br><br>100µm PDMS<br>10 min<br>headspace         | GC-MS    |
| 683  | Lead derivatives<br>in water               | Determination of Tetraethyllead by SPME-thermal desorption<br>quartz furnace atomic absorption spectrometry<br><i>J. Anal. At. Spectrom.</i> 2000, 15(16), 705-709<br>Sandra Fraguairo, M, AlavapMoreno, F., Isela, B.                                                                                                        | 10 min, headspace                                                  | AA       |
| 23   | Organotin compounds<br>in water            | Rapid Determination of Butyl, Phenyl and Cyclohexyl Tin<br><br>Compounds in Aqueous Samples Using SPME and<br>Capillary Gas Chromatography Following in situ Derivatization<br>with Sodium Tetraethylborate<br>CID-CSIC Jordi Girona, 18-26, E-8034, Barcelona, Spain<br>Morcillo, Y., Cai, Y., Porte, C., Bayona, J.         | 100µm PDMS<br>30 min<br>immersion<br>stirring<br>NaBEt4 derivative | GC-FPD   |
| 503  | Organo-tin, -lead,<br>-mercury<br>in water | Determination of organometallic compounds in surface<br>water and sediment samples with SPME-CGC-ICPMS<br><i>Mikrochim. Acta</i> (1999), 130(4), 241-251<br>De Smaele, T., Moens, L., Sandra, P., Dams, R.                                                                                                                    | 100µm PDMS<br>10 min<br>headspace                                  | GC-ICPMS |
| 235  | Rare earth elements                        | Separation of Cerium from Other Rare-Earth Elements with<br>Application to Samarium-Neodymium and Lanthanum-<br>Cerium Chronometry<br><i>Nucl. Instrum. Methods Phys.Res.Sect.B</i> 117: 201-208 (1996)<br>Rehkaemper, M., Gaertner, M., Galer, S., Goldstein, S.                                                             |                                                                    |          |
| 2742 | Selenite and<br>organoselenium             | <b>Comparison of two derivatizing agents for the simultaneous.<br/>determination of selenite and organoselenium species<br/>by GC and atomic emission .</b><br><i>J. Chromatogr. A</i> 1165, #1-2, 191-199 (Sep 21 2007)<br>Campillo, N.; Penalver, R.; Hernandez-Cordoba, M.; Perez-Sirvent, C.;<br>Martinez-Sanchez, M. -J. | immersed vs<br>headspace (20min)<br>piazselenol<br>derivative      | GC-MS    |
| 580  | Selenite, selenate<br>in water             | Selective determination of selenite and selenate using<br>SPME and GC-MS<br><i>J-High-Resolut-Chromatogr.</i> Jul 1999; 22(7): 414-416<br>Guidotti,-M; Ravaoli,-G; Vitali,-M                                                                                                                                                  | 35 min, agitation<br>piazselenol derivative<br>immersed            | GC-MS    |
| 2752 | Nitroaromatics<br>in water                 | <b>Compound-specific nitrogen and carbon isotope analysis of<br/>nitroaromatic compounds in aqueous samples using SPME-GC/IRMS</b><br><i>ANAL. CHEM.</i> 79, #6, 2386-2393 (15 MAR 2007)<br>Berg, M.; Bolotin, J.; Hofstetter, T. B.                                                                                          |                                                                    | GC/IRMS  |
| 2640 | Nitroaromatics<br>in water                 | <b>Analysis of nitroaromatic compounds in complex samples using SPME<br/>and isotope dilution quantification GC-electron negative ionisation MS</b><br><i>J. Chromatogr. A</i> 1164, #1-2, 65-73 (Sep 14 2007)<br>van Bavel, B.; Gustavsson, L.; Jonsson, S                                                                   |                                                                    | GC-MS    |
| 49   | Nitroaromatics<br>in water                 | Enrichment of Nitroaromatic Compounds from Water<br>Samples by SPME<br><i>GIT Spex Chromatogr.</i> 14: 85-87 (1995)<br>Schaefer, B., Engewald, W.                                                                                                                                                                             |                                                                    |          |
| 809  | Nitroarenes                                | Analysis of nitroarenes by SPME/GC-Ion trap MS<br><i>Chromatography (2000)</i> 21(2),123-124<br>Kataoka, Hiroyuki; Lord, Heather L.; Pawliszyn, Janusz                                                                                                                                                                        |                                                                    | GC-MS    |
| 160  | Hetero aromatics<br>in water               | Trace Analysis of Hetero Aromatic Compounds in<br>Water by SPME<br><i>J. High Res. Chromatogr.</i> 19(11): 627-632 (1996)<br>Johansen, S., Pawliszyn, J.                                                                                                                                                                      | 85µm polyacrylate<br>60-200 min<br>stirring<br>pH 8, salt added    | GC-MS    |
|      |                                            | Determination of Benzene Derivatives in Water by SPME                                                                                                                                                                                                                                                                         |                                                                    |          |

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|------|-------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------|
| 218  | BTEX<br>in water                                                  | Anal. Chim. Acta 343: 101-108 (1997)<br>Huang, S., Cheng, C., Sung, Y.                                                                                                                                                                                                                                                                  |                                                                     |                   |
| 50   | Nitrophenols<br>in water                                          | Enrichment of Nitrophenols from Water by Means of SPME<br>Fresenius' J. Anal. Chem. 352(5): 535-6 (1995)<br>Schafer, B., Engewald, W.                                                                                                                                                                                                   | 100µm PDMS<br>5 min<br>stirring<br>pH <2, saturated salt            | GC-NPD            |
| 504  | 2,4-dinitrophenol<br>in water                                     | Determination of 2,4-dinitrophenol by SPME couple GC-MS<br>Sepu (1999), 17(2), 131-133<br>Lu, X., Zhao, X., Ye, F., Xu, G.                                                                                                                                                                                                              | 85µm polyacrylate<br>30 min, immersed<br>pH2, satr. salt<br>Chinese | GC-MS             |
| 51   | Fuel hydrocarbons<br>in water                                     | Quantitative Analysis of Fuel-Related Hydrocarbons in<br>Surface Water and Wastewater Samples by SPME<br>Anal. Chem. 68(1): 144-155 (1996)<br>Langenfeld, J., Hawthorne, S., Miller, D.                                                                                                                                                 | 100µm PDMS<br>45 min<br>stirring                                    | GC-FID            |
| 2887 | phenols, .<br>phosphates,<br>phthalates, PAHs<br>in surface water | <b>Measurement of drinking water contaminants by SPME initially<br/>quantified in source water samples by the USGS</b><br><i>Environ. Sci. Technol.</i> 42, #8, 2976-2981 (Apr 15 2008)<br>Buckley, Brian; Lippincott, R.; Murphy, E.; Stiles, R.; Yang, III<br><br><b>Critical comparison of automated purge and trap and SPME for</b> | <b>70 µm CW/DVB<br/>65 µmPDMS/DVB</b>                               | <b>GC-MS</b>      |
| 2435 | VOCs<br>in water                                                  | <b>routine determination of volatile organic compounds in drinking<br/>waters by GC-MS</b><br><i>Talanta</i> 74, #5, 1455-1462 (Feb 15 2008)<br>Lara-Gonzalo, A.; Sanchez-Uria, J.; Sanz-Medel, A.; Segovia-Garcia, E.                                                                                                                  |                                                                     | <b>GC-MS</b>      |
| 684  | VOCs<br>in water                                                  | Determination of volatile organic compounds (VOCs) in<br>drinking water using SPME<br><i>Anal. Sci. Technol.</i> (2000) 13(3), 277-281<br>Park, G., Lee, S.                                                                                                                                                                             | 100µm PDMS                                                          | GC-MS             |
| 832  | VOCs<br>in water                                                  | Chemical and microbiological characterization of drinking<br>water after filtration with a domestic-size charcoal column<br>and ultraviolet sterilization<br><i>Urban Water</i> (2000) 2(1), 13-20<br>Serpieri, N.; Moneti, G.; Pieraccini, G.; Donati, R.;<br>Mariottini, E.; Dolara, P                                                | 100µm PDMS<br>10min.<br>headspace<br>NaCl added                     | GC-MS             |
| 82   | VOCs<br>in water                                                  | An Evaluation of Solid Phase Microextraction for Analysis<br>of Volatile Organic Compounds in Drinking Water<br>J. High Res. Chromatogr. 18: 617-624 (1995)<br>Nilsson, T., Ogaard-Madison, J., Montanrilla, L., Larsen, B.,<br>Facchetti, S., Pelusioj, F.                                                                             | 100µm PDMS<br>20-80°C, 60 min<br>headspace<br>stirring              | GC-MS             |
| 685  | MTBE<br>in surface water                                          | Determination of MTBE in surface water by use of SPME<br><i>Environ. Sci. Technol.</i> (2000), 34(7), 1359-1364<br>Achten, C., Puettmann, W.                                                                                                                                                                                            | Carboxen/DVB/PDMS<br>69 min<br>25% NaCl, stirred                    | GC-MS             |
| 935  | MTBE<br>in surface water                                          | Sensitive methods for measuring methyl tert-butyl-ether<br>in water<br><i>Umwelt-Technol. Aktuell</i> (2000) 12(1), 22-25<br>Achten, C., Puettmann, W.                                                                                                                                                                                  | Carboxen/DVB/PDMS<br>69 min<br>25% NaCl, stirred                    | GC-MS             |
| 686  | MTBE, Ethanol, other<br>oxygenates in water                       | Trace Analysis of Ethanol, MTBE, and related Oxygenate<br>Compounds in Water using SPME and GC-MS<br><i>Anal. Chem.</i> 2000, 72, 4654-4658<br>Cassada, D., Zhang, Y., Snow, D., Spalding, R.                                                                                                                                           | Carboxen/DVB/PDMS<br>25 min immersed<br>stirred<br>Sat. salt,       | GC-MS             |
| 910  | MTBE, TBE, BTEX<br>in water                                       | High levels of monoaromatic compounds limit the use of<br>SPME of MTBE and Tert butyl alcohol<br><i>Environ Sci Technol</i> , 2001, 35 (15) 3190-3192<br>Black, L., Fine, D.<br><br>Analysis of Water Samples for Trace Levels of Oxygenated                                                                                            | 75µm Carboxen/PDMS<br>65µm DVB/PDMS<br>1-25min.<br>saturated salt   | Ion trap<br>GC-MS |

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| 354  | MTBE, EBE, BTEX<br>in water              | and Aromatic Compounds Using Headspace SPME and Comprehensive Two-Dimensional Gas Chromatography<br>J. Microcolumn Separations, 10 (7), 597-604 (1998)<br>Gaines, R., Ledford, E., Stuart, J.                                                                                                                 | 75µm Carboxen/PDMS<br>40°C, 10 min<br>headspace<br>saturated salt | GC-FID |
| 952  | MTBE<br>in water                         | Measurement of Henry's law constant for MTBE using SPME<br><i>Environ. Toxicol. Chem</i> (2001), 20(8), 1625-1629<br>Bierwagen, B.G.; Keller, A.A.                                                                                                                                                            | 15°-40°C<br>headspace                                             |        |
| 581  | Tetrachloroethene<br>in water            | Role of humic acids in the titanium oxide-photocatalysed degradation of tetrachloroethene in water.<br>Water-Res. Jun 1999; 33(8): 1827-1836<br>Selli,-E; Baglio,-D; Montanarella,-L; Bidoglio,-G                                                                                                             | 100µm PDMS                                                        | GC-MS  |
| 2331 | Trihalomethanes<br>in water              | <b>Using SPME with GC to assess trihalomethane content in water</b><br><i>Abstracts of Papers Am Chem Society (2004) 227 Part1, U456</i><br>Rizzuti, Anthony M.; Rogers, Lisa N.                                                                                                                              |                                                                   | GC     |
| 2829 | Volatiles in<br>in drinking water        | <b>Simultaneous analysis of 23 priority volatile compounds in water by SPME-GC-MS and estimation of the method's uncertainty</b><br><i>Int. J. Environ. Anal. Chem.</i> 88, #3, 151-164 (March 2008)<br>Alpendurada, M.; Carvalho, J.; Goncalves, C.; Guimaraes, A.                                           | 75µm Carboxen<br>headspace<br>15min @ 20°C                        | GC-MS  |
| 2215 | Trihalomethane<br>in drinking water      | <b>Determination of trihalomethanes in drinking water of towns in the State of Minas Gerais, Brazil using headspace (HS)/SPME high resolution GC-ECD</b><br><i>Ciencia Eng.) 11 #2, 57-62 (2002)</i><br>Duarte, M.; Parreira, F; Rabelo De Carvalho, C.                                                       | headspace                                                         | GC-ECD |
| 175  | Trihalomethanes<br>in water              | Detection and Quantification of Trihalomethanes in Drinking Water from Alexandria, Egypt<br><i>Contam. Toxicol.</i> 56: 397-404 (1996)<br>Hassan, A., Benfenati, E., Fanelli, R.                                                                                                                              |                                                                   |        |
| 687  | Dichlorobenzene<br>in water              | Analysis of dichlorobenzene in water by SPME<br><i>J. Chin. Chem. Soc</i> (2000) 47(2) 415-420<br>Liu, Y., Ho, W.                                                                                                                                                                                             | 100um PDMS<br>30 min                                              | GC-ECD |
| 813  | Chloroform<br>in water                   | Analysis of chloroform in drinking water by headspace solid-phase microextraction and GC<br><i>Fenxi Shiyanshi</i> (2000), 19(5), 65-67<br>Liu, Z. L.; Wang, C. H.; Wang, X                                                                                                                                   | 85µm Polyacrylate<br>45°C<br>headspace                            | GC-FID |
| 858  | Chloroform<br><br>from Kraft pulp bleach | Chloroform formation during kraft pulp bleaching with chlorine and chlorinated compounds -determination of chloroform amounts by solid phase microextraction<br><i>Kami Pa Gikyoshi</i> (2000) 54(11) 1555-1563<br>Oi, Hiroshi; Masuzawa, Kiyoshi<br><br>Application of Solid Phase Microextraction (SPME) in | (Japanese)                                                        |        |
| 83   | Benzene, halobenzene<br>in water         | Combination with GC/FID: The Determination of Benzene and Halogenated Benzenes in Pure and Octanol-Saturated Water<br><i>Chem-Anal (Warsaw)</i> 40: 897-904 (1995)<br>Popp, P., Paschke, A., Schroeter, U., Oppermann, G.                                                                                     |                                                                   | GC-FID |
| 688  | Benzene derivatives<br>in surface water  | Matrix effect for several derivatives of benzene in water by SPME<br><i>Chromatographia</i> 2000, 51(suppl.) S328-S330<br>Javorszky, E., Molnar, E., Torkos, K. Borossay, J                                                                                                                                   |                                                                   |        |
| 86   | Organics<br>in water                     | Comparison of On-line SPE-HPLC and SPME-GC for the Analysis of Microcontaminants in Water<br><i>Chromatographia</i> 41: 462-470 (1995)<br>Rivasseau, C., Caude, M.                                                                                                                                            |                                                                   | HPLC   |
| 217  | Haloethers<br>in water                   | Determination of Haloethers in Water by SPME<br><i>J. Chromatogr. A</i> 769: 239-246 (1997)<br>Huang, S., Ting, C., Lin, C.<br><br>Anaerobic biotransformation of trichlorofluoroethene in                                                                                                                    | 100µm PDMS<br>40 min, immersion<br>saturated salt                 | GC-FID |

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| 586 | Trichlorofluoroethers in water        | groundwater microcosms. Environ-Sci-Technol. 15 Jun 1999; 33(12): 2040-2045<br>Vancheeswaran, -S; Hyman, -MR; Semprini, -L                                                                                                                               | 100µm PDMS headspace salt, agitation                     | GC-MS       |
| 90  | Aromatics in water                    | Determination of Volatile Organic Compounds in Water by Solid Phase Micro-Extraction and Infrared Spectroscopy Environ. Sci. Technol. 30: 1212-1219 (1996)<br>Heglund, D., Tilotta, D.                                                                   | parafilm, 30 min                                         | GC-FID      |
| 926 |                                       | Poly(dimethylsiloxane) films as sorbent for SPME couple infrared spectroscopy<br><i>J. Chromatogr. A</i> (1998), 829(1-2) 377-384<br>Merschman, S., Lubbad, S., Tilotta, D.                                                                              | PDMS                                                     | IR          |
| 942 | Volatile organics in water            | Development of headspace SPME/attenuated total reflection infrared chemical sensing method for the determination of volatile organic compounds in aqueous solutions<br><i>Analytica Chimica Acta</i> (2001), 436(1), 31-40<br>Yang, Jyisy; Tsai, Shu-Sha | headspace                                                | IR          |
| 505 | Hydroxyaromatics in water             | Determination of hydroxyaromatic compounds in water by SPME coupled to HPLC<br><i>J. Chromatogr. A.</i> (1999), 835(1+2), 127-135<br>Wu, Y., Huang, S.                                                                                                   | PDMS/DVB or CW-TPR                                       | HPLC 280nm  |
| 229 | 71 organics in gaseous mixture        | Calibration of a Commercial Solid-Phase Microextraction Device for Measuring Headspace Concentrations of Organic Volatiles<br><i>Anal. Chem.</i> 69: 364-372 (1997)<br>Bartlett, R.                                                                      | 100µm PDMS 25°C, 30 min headspace                        | GC-FID      |
| 155 | VOCs in water                         | Sampling Volatile Organic Compounds Using a Modified Solid Phase Microextraction Device<br><i>J High Res. Chromatogr.</i> 19(3): 155-60 (1996)<br>Zhang, Z., Pawlczyn, J.                                                                                | 100µm PDMS 10 min headspace stirring, saturated salt     | GC-MS       |
| 205 | Volatiles in water                    | Solid Phase Microextraction of Volatile Compounds Using Carboxen-Polydimethylsiloxane Fibers<br><i>Chromatographia</i> 46: 419-424 (1997)<br>Popp, P., Paschke, A.                                                                                       | 75µm Carboxen/PDMS 30 min headspace stirring             | GC-FID, ECD |
| 240 | Volatiles in water                    | Application of Solid-Phase Microextraction to the Analysis of Volatile Organic Compounds in Water<br><i>J. Chromatogr. A</i> 742: 181-189 (1996)<br>Santos, F., Galceran, M., Fraisse, D.                                                                | 100µm PDMS, 85µm polyacrylate 12 min stirring            | GC-FID      |
| 689 | BTEX in water                         | Static headspace, SOME and headspace SPME for BTEX determination in aqueous samples by GC<br><i>Anal. Chim. Acta.</i> 2000, 415(1-2), 9-20<br>Menendez, J., Sanchez, M., Uria, J., Martinez, E., Medel, A.                                               | 100µm PDMS                                               | GC-FID      |
| 506 | BTEX in water                         | In-tube SPME-GC of volatile compounds in aqueous solution<br><i>Analyst</i> (Cambridge, UK), 1999, 124(5), 651-655<br>Tan, B, Marriott, P., Morrison, P., Lee, H.                                                                                        | 1 meter capillary                                        | GC-FID      |
| 117 | Solvents, C2-C4 acids in water        | Carbon Isotope Analysis of Semivolatile Organic Compounds in Aqueous Media Using SPME and Isotope Ratio Monitoring GC/MS<br><i>Anal. Chem.</i> 69: 944-950 (1997)<br>Dias, R., Freeman, K.                                                               | polyacrylate, Carbowax, cyclodextrin 10-30 min stirring  | GC-MS       |
| 225 | Organochlorine semivolatiles in water | Application of Solid-Phase Microextraction to the Headspace GC Analysis of Semivolatile Organochlorine Contaminants in Aqueous Matrices<br><i>J. Chromatogr. A</i> 757: 173-182 (1997)<br>Page, B., Lacroix, G.                                          | 100µm PDMS 87°C, 45 min headspace & immersion salt added | GC-ELCD     |
| 507 | Polar organics in water               | Analysis of organochlorine compounds in water by SPME/GC<br><i>Fenxi Huaxue</i> , 1999, 27(7), 768-772<br>Zhang, D, Zhou, Z., Tang, Y., Wu, C., Zhen, W. Xu, Y.                                                                                          | 100µm PDMS 70°C, headspace                               | GC-ECD      |



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|      |                                       |                                                                                                                                                                                                                                                                | Chinese                                                                |                   |
| 151  | BTEX<br>in water                      | Protocol for the Analysis of High Concentrations of Benzene, Toluene, Ethylbenzene, and Xylene Isomers in Water Using Automated SPME-GC-FID<br><i>Environ. Sci. Technol.</i> 30: 1521 (1996)<br>Thomas, S., Ranjan, S., Webster, G., Sarna, L.                 | 100µm PDMS<br>5 min<br>immersion                                       | GC-FID            |
| 154  | Organics<br>in water                  | Solid Phase Microextraction Coupled to GC: A New Method for the Analysis of Organics in Water<br><i>J. Chromatogr. A</i> 733: 143 (1996)<br>Eisert, R., Levson, K.                                                                                             | various fibers<br>and conditions                                       | GC-MS, AED        |
| 909  | Endocrine<br>disruptors<br>in water   | Column silylation method for determining endocrine disruptors from environmental water samples by SPME<br><i>Talanta</i> 2001, 54(6) 1039-1047<br>Helaleh, M., Fujii, S., Korenaga, T.                                                                         |                                                                        |                   |
| 767  | Ibuprofen, NBBS<br>in water           | Elimination of Ibuprofen and NBBS in municipal purification plant analyzed by SPME<br><i>Schiffenr</i> (1999), 95, 1-148<br>Huppert, N.                                                                                                                        |                                                                        |                   |
| 162  | Surfactants<br>in water               | SPME Coupled with HPLC for Determination of Alkylphenol Ethoxylate Surfactants in Water<br><i>Anal. Chem.</i> 68: 1521-9 (1996)<br>Boyd-Boland, A., Pawliszyn, J.                                                                                              | (in german)<br><br>Carbowax/TPR 100<br>50 min<br>immersion<br>stirring | HPLC<br>UV, 220nm |
| 897  | Surfactant<br>in water                | Identification of alkyl dimethylbenzylammonium surfactants in water samples by SPME followed by ion trap<br>LC/MS and LC/MS/MS<br><i>Environ. Sci. Technol</i> 92001) 35(12) 2583-2588<br>Ferrer, Imma; Furlong, Edward                                        |                                                                        | LC/MS             |
| 690  | Surfactant<br>in water                | Identification and characterization of Fenton oxidation products of surfactants by EMS and SPME-GC-MS<br>Fatty alcohol polyethoxy sulfates.<br><i>Rapid Commun, Mass Spectrom</i> 2000, 14(10), 834-839<br>Cuzzola, A., Raffaelli, A., Saba, A., Salvadori, P. |                                                                        |                   |
| 928  | Surfactant<br>in water                | Assessment of polycrystalline graphites as sorbents for SPME of nonionic surfactants<br><i>J. Chromatogr. A</i> (2000) 888(1-2) 35-41<br>Aranda, R., Kruus, P., Burk, R.                                                                                       |                                                                        |                   |
| 508  | Diethylphthalate<br>in water          | Trace determination of diethylphthalate in aqueous media by SPME-HPLC<br><i>J. Chromatogr. A</i> 841(1999) 177-185<br>Kelly, M., Larroque, M.                                                                                                                  | 60µm DVB/PDMS<br>15 min immersed<br>NaCl                               | HPLC<br>UV, 226nm |
| 804  | Phthalic diesters<br>in water         | Determination of phthalic diesters in water by solid-phase microextraction-capillary gas chromatography<br><i>Sepu</i> (2000) 18(6), 568-570<br>Liu, Z. L.; Xiao, C. H.; Wu, C. Y.; Han, H. M.                                                                 | 100µm PDMS<br><br>headspace<br>(in Chinese)                            |                   |
| 2721 | Diethylhexyl<br>phthalate in<br>water | <b>Determination of diethylhexyl phthalate in water by SPME-HPLC</b><br><i>Talanta</i> 69, #5, 1095-1099 (2006-07-15)<br>Kayali, N.; Tamayo, F. G.; Polo-Diez, L. M.                                                                                           |                                                                        | HPLC              |
| 2449 | Phthalates esters<br>in bottled water | <b>Determination of phthalates and adipate in bottled water by headspace SPME and gas chromatography/mass spectrometry</b><br><i>Journal of Chromatography A</i> 1178, #1-2, 231-238 (2008)<br>Xu-Liang Cao                                                    | 65µm DVB/PDMS<br>headspace<br>10 and 30% NaCl                          | GC-MS             |
| 588  | Phthalates esters<br>in water         | In-tube SPME-LC analysis of phthalate esters in water samples<br><i>Chromatography. Jun</i> 1999; 20(2): 124-125<br>Saito,-Y; Nakao,-Y; Jinno,-K                                                                                                               | 40m x 0.25mm capillary                                                 | HPLC              |

|      |                                           |                                                                                                                                                                                                                                                                              |                                                                                 |           |
|------|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------|
| 782  | Butylphthalates<br>in water               | Fiber-in-tube solid-phase microextraction: a fibrous rigid-rod heterocyclic polymer as the extraction medium<br><i>Fresenius' J AnalChem (2000) 368(7), 641-643</i><br>Saito, Y.; Nakao, Y.; Imaizumi, M.; Takeichi, T.; Kiso, Y.; Jinno, K                                  | 20min.                                                                          | HPLC      |
| 2335 | Phthalates esters<br>in wastewater        | <b>Distribution coefficients of phthalates between absorption fiber and water and its using in quantitative analysis</b><br><i>Anal. Chim. Acta 560 #1-2, 110-117 (2006)</i><br>Garbowska, Katarzyna; Isidorov, Valery A.; Kotowska, Urszula                                 | 85µm polyacrylate<br>100µm PDMS<br>immersed                                     | GC-FID    |
| 691  | Phthalates esters<br>in water             | Determination of phthalate esters in water samples by SPME and GC with mass spectrometric detection<br><i>J. Chromatogr. A (2000), 872 (1&amp;2), 191-201</i><br>Penalver, A., Pocurull, E., Borrull, F., Marce, R.                                                          | 85µm polyacrylate<br>90min @ 45°C<br>NaCl added                                 | GC-MS     |
| 801  | Phthalates esters<br>in water             | Methods for routine analysis of phthalates in food and the environment<br><i>Deutsche Lebensmittel-Rundschau (2000) 96(11), 411-417</i><br>Baerwinkel, D.; Haufe, J.; Kroh, L. W                                                                                             |                                                                                 | GC-FID/MS |
| 178  | 4-Nonylphenol<br>in sea water             | Determination of 4-Nonylphenol. Part 2: Orthogonal Array Design as a Chemometric Method for the SPME of 4-Nonylphenol in Water<br><i>J. Microcolumn Sep. 8 (2): 131-136 (1996)</i><br>Chee, K., Wong, M., Lee, H.                                                            | 100µm PDMS<br>30 min<br>immersion<br>stirring                                   | GC-FID    |
| 219  | BTEX<br>in water                          | Direct Solid Phase Microextraction for the Determination of BTEX in Water and Waste Water<br><i>J. High Res. Chromatogr. 19: 472-474 (1996)</i><br>Valor, I., Cortada, C., Molto, J.                                                                                         | 100µm PDMS<br>10 min<br>stirring                                                | GC-FID    |
| 208  | BTEX compounds<br>in water                | A New Porous-Layer Activated-Charcoal-Coated Fused Silica Fibre: Application for Determination of BTEX Compounds in Water Samples Using Headspace SPME and Capillary Gas Chromatography<br><i>Chromatographia 45: 183-189 (1997)</i><br>Djozan, D., Assadi, Y.               | 100µm charcoal coated<br>fiber / PDMS<br>25°C, 15 min<br>stirring<br>salt added | GC-FID    |
| 169  | Chlorinated<br>1,3-butadienes<br>in water | Analysis of Chlorinated 1,3-Butadienes by SPME and GC-MS<br><i>J. Chromatogr. A 737: 85-91 (1996)</i><br>Fattore, E., Benfenati, E., Fanelli, R.                                                                                                                             | 100µm PDMS<br>30 min<br>immersion                                               | GC-MS     |
| 692  | Styrene<br>in water                       | SPME method for the quantitative analysis of styrene in water<br><i>J. Chromatogr.Sci. (2000), 38(7), 315-318</i><br>Silva, F., DeCarvalho, C., Cardeal, Z.                                                                                                                  | 85µm polyacrylate<br>10mn @ 55°C<br>headspace                                   | GC-FID    |
| 2837 | Furan in the<br>atmospher                 | <b>Primary product distribution from the Cl-atom initiated atmospheric degradation of furan: Environmental implications</b><br><i>Atmospheric Environment 41, #31, 8796-8810 (DEC 2007)</i><br><br>Villanueva, F; Barnes, I.; Monedero, E.; Salgado, S; Gomez, M; Martin, P. | air sample                                                                      | GC-MS     |
| 776  | Dioxin, Furans<br>in water                | Determination of dioxins and furans in water sample by HRGC/HRMS and pretreatment using SPME<br><i>Organohalogen Compd (2000) 45, 68-71</i><br>Eom, S; Ahn, So; Kim, M; Shin, J                                                                                              |                                                                                 | GC-MS     |
| 2367 | Review                                    | <b>Trends in solventless sample preparation techniques for environmental analysis</b><br><i>J. BIOCHEM. BIOPHYS. METHODS 70, # 2, 275-288 (10 MAR 2007)</i><br>Wardencki, W.; Cury&Istrok;o, J.; Namiesnik, J.                                                               | Review article                                                                  |           |
| 170  | Semivolatiles<br>in water                 | Trends in Extraction of Semivolatile Compounds from Water for Environmental Analysis<br><i>Anal. Commun. 33 (9): 15H-17H</i><br>Poole, S., Poole, C.                                                                                                                         |                                                                                 |           |

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| 509  | Semivolatiles<br>in water                                 | Studies of the composition of distillates from leachate by<br>GC-MS coupled to SPME<br>Rapid Commun. Mass Spectrom (1999), 13(10), 966-970<br>Saba, A., Pucci, S., Raffaeckki, A., Salvadori, P.                                                                                                                 | pH 4 or 10<br>headspace/immersed              | GC-ms         |
| 2607 | Monocarboxylic<br>acids from<br>carbonaceous<br>chondrite | <b>Structure and isotopic ratios of aliphatic side chains in the insoluble<br/>organic matter of the Murchison carbonaceous chondrite</b><br><i>Earth Planet. Sci. Lett. (Netherlands)</i> 259, #3-4, 517-25 (2007)<br>Yongsong Huang; Alexandre, M.R.; Yi Wang                                                  |                                               | GC            |
| 807  | Petroleum<br>hydrocarbons<br>in water                     | Application of SPME chromatography with mass<br>spectrometry to the analysis of gasoline content in water<br><i>Huaxue Fence (2000)</i> 36(10) 465-466<br>Chen, X. D.; Zhou, H                                                                                                                                   |                                               |               |
| 216  | Petroleum<br>hydrocarbons<br>in water                     | Water Analysis by Solid-Phase Microextraction Based on<br>Physical Chemical Properties of the Coating<br>Anal. Chem. 69(11): 1992-1998 (1997)<br>Saraullo, A., Martos, P., Pawliszyn, J.                                                                                                                         | 100µm PDMS<br>30 min<br>headspace<br>stirring | GC-FID        |
| 272  | BTEX                                                      | Application Methods of SPME for the Classification of BTEX<br>GIT Labor-Fachz. 41 (12): 1191-1195 (1997)<br>Van der Heide, M., Petry, P.                                                                                                                                                                         |                                               |               |
| 273  |                                                           | SPME as a Method for Preparing Environmental Samples<br>Pol. J. Environ. Stud. 6 (5): 5-12 (1997)<br>Ligor, M., Buszewski, B.                                                                                                                                                                                    |                                               |               |
| 274  |                                                           | SPME in Pretreatment of Environmental Samples<br><i>Huaxue Jinzhan</i> 10 (1): 74-84(1998)<br>Jia, J., He, Y., Huang, J.                                                                                                                                                                                         |                                               |               |
| 275  | Aqueous samples                                           | Direct SPME of Complex Aqueous Samples with Hollow<br>Fiber Membrane Protection<br>Anal. Commun. 33 (7): 219-221(1996)<br>Zhang, Z., Poerschmann, J., Pawliszyn, J.                                                                                                                                              |                                               |               |
| 2838 | Organics from<br>humic material                           | <b>The degradation of humic substance using continuous<br/>photocatalysis systems</b><br><i>Sep. Sci. Technol.</i> 43, #1, 93-112 (January 2008)<br><br>Areerachakul, N.; Duangduen, C.; Kandasamy, J.; Vigneswaran, S.                                                                                          |                                               | GC            |
| 2618 | Organics from<br>humic material                           | <b>Partitioning of selected environmental pollutants into organic matter<br/>as determined by solid-phase microextraction</b><br><i>Chemosphere</i> 66, #8, 1580-1589 (2007-01)<br>Prosen, H.; Fingler, S.; Zupancic-Kralj, L.; Drevenkar, V.                                                                    |                                               | GC            |
| 2801 | PCBs in sediment                                          | <b>Bioavailability of PCBs from field-collected sediments: Application<br/>of Tenax extraction and matrix-SPME techniques</b><br><i>Chemosphere</i> 71, #2, 337-344 (MAR 2008)<br>Trimble, Tricia A.; You, Jing; Lydy, Michael J.                                                                                |                                               | GC            |
| 2631 | PCBs in sediment                                          | <b>Availability of polychlorinated biphenyls in field-contaminated sediment</b><br><i>Env Tox Chem</i> 26, #9, 1940-1948 (SEP 2007)<br>You, Jing; Landrum, Peter E.; Trimble, Tricia A.; Lydy, Michael J.                                                                                                        |                                               | GC            |
| 693  | Alkanes, PCBs, PAHs<br>in humic material                  | Sorption of very hydrophobic organic compounds onto<br>PDMS and dissolve humic organic matter. 1. Adsorption or<br>partitioning of VHOC on PDMS coated SPME fibers-<br>never-ending story<br><i>Environ Sci Technol</i> 2000, 34, 3824-3830<br>Poerschmann, J., Gorecki, T., Kopinke, G.                         | 7µm, 30µm PDMS<br>20 min<br>stirring          | GC-MS<br>SIMS |
| 844  | Hydrophobic organics<br>in humic material                 | Sorption of hydrophobic organic compounds on nonpolar<br><br>SPME fibres and dissolved humic organic matter long dash<br>Part III: Application of the solubility parameter concept to<br>interpret sorption on SPME fibre coatings<br><i>J Microcolumn Separations</i> (2000) 12(12), 603-612<br>Poerschmann, J. | PDMS, polyacrylate                            | GC-MS         |

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| 923  |                                         | Use of SPME for measuring oil-water partition coefficients and correlation with HPLC methods for lipophilicity<br>J. Chromatogr A (1999) 864(2) 183-189<br>Pollein, P., Roberts, D.                                                                                 |                                                                     | HPLC   |
| 276  | Phenols, PAHs in wastewater             | SPME for Determining Distribution of Chemicals in Aqueous Matrixes<br>Anal. Chem. 69 (4): 597-600 (1997)<br>Zhang, A., Kopinke, G., Pawliszyn, J.                                                                                                                   | 100µm PDMS<br>10 sec<br>stirring                                    | GC-MS  |
| 277  | Chlorinated organics in water           | Water Solubility and Octanol/Water-Partitioning of Hydrophobic Chlorinate Organic Substances Determined by Using SPME/GC<br>Fresenius' J. Anal. Chem. 360 (1): 52-57 (1998)<br>Paschke, A., Popp, P.                                                                |                                                                     |        |
| 278  | Phenols in water                        | Determination of Phenols by Solid-Phase Microextraction<br>J. Chromatogr. A 767 (1+2): 171-175 (1997)<br>Bartak, P., Cap, L.                                                                                                                                        | 85µm polyacrylate<br>25°C, 60 min<br>headspace<br>pH 1, salt added  | GC-FID |
| 439  | Chlorophenols in water                  | Determination of Chlorophenols Using SPME and GC/MS<br>Ann. Chim. (Rome) (1998), 88(9-10), 629-635<br>Guidotti, M., Ravaioli, G.                                                                                                                                    |                                                                     | GC-MS  |
| 2617 | Organics in drinking water              | <b>Determination of volatile organic compounds pollution sources in Malaysian drinking water using multivariate analysis</b><br><i>Environ. Monit. Assess.</i> <b>124</b> , #1-3, 39-50 (January 2007)<br>Abdullah, Pauzi; Soh, Shiau-Chian                         | 100µm PDMS                                                          | GC-MS  |
| 2152 | Organics in drinking water              | <b>Evaluation of SPME as an alternative to the official method for the analysis of organic micro-pollutants in drinking water</b><br><i>J. Chromatogr. A</i> , <b>1101</b> , #1-2, 46-52 (2006)<br>Guillot, Sophie; Kelly, Mary T.; Fenet, Helene; Larroque, Michel | 65µm PDMS/DVB<br>30 min @ 60°C                                      | GC-MS  |
| 777  | Organics in drinking water              | Solid phase extraction techniques for drinking water abstraction monitoring and investigation of pollution incidents<br><i>J Water Supply Res and Tech</i> (2000) 49(2), 103-109<br>Gardner, M.; Comber, S. ; Rogers, H.                                            |                                                                     | GC-MS  |
| 944  | Organics in water                       | Determination of water contaminants at trace levels using large volume sampling techniques: Comparison of LVPTVI, LVOCI, and SPME.<br><i>American Laboratory</i> (2001) 33(11), 45-47<br>Trisciani, A.; Munari, F.; Anelli, L.; Castanho, J.                        |                                                                     |        |
| 279  | VOCs in water                           | Pollution of Ground and Drinking Water with Volatile Organic Compounds, SPME and GC/MS Analysis<br>Toxicol. Environ. Chem. 55 (1-4): 73-81 (1996)<br>Hassan, A., Benfenati, E., Facchini, G., Fanelli, R.                                                           |                                                                     | GC-MS  |
| 280  | Trihalomethanes in water                | Determination of Trihalomethanes in Drinking Water by SPME-GC with Electron-Capture Detection<br>Toxicol. Environ. Chem. 60(1-14): 39-45 (1997)<br>Chen, M., Mao, I., Hsu, C.                                                                                       |                                                                     | GC-ECD |
| 281  | Chloroacetic acid esters in water       | Determination of Chlorinated Acetic Acids in Drinking Water by in situ Derivatization and Solid Phase Microextraction<br>Int. J. Environ. Anal. Chem. 66 (3): 215-224(1997)<br>Aikawa, B., Burk, R.                                                                 | 30µm PDMS<br>1 min<br>headspace<br>stirring<br>methanolic HCl added | GC-ECD |
| 510  | Sulfur compounds in water, N2 & propane | Studies on the application of SPME for analysis of volatile organic sulfur compounds in gaseous and liquid samples<br>Chem. Anal. (Warsaw), 1999, 44(3A), 485-493<br>Wardencki, W., Namiesnik, J.                                                                   |                                                                     | FPD-GC |

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| 339  | Geosmin, 2-MIB<br>in water          | Rapid Analysis of Geosmin and 2-Methylisoborneol in Water<br>Using SPME Procedures<br>Water Research Vol. 32, No. 7, 2140-2146 (1998)<br>Lloyd, S., Lea, J., Zimba, P., Grimm, C.                                                                                                          | 100µm PDMS<br>40°C, 30 min<br>headspace, stirring<br>salt added                                            | GC-MS              |
| 362  | 2-MIB, geosmin<br>in catfish        | Analysis of 2-Methylisoborneol and Geosmin in Catfish<br>by Microwave Distillation-SPME<br>J. Agri. Food Chem., 47, No. 1, pg. 164-169, 1999<br>Lloyd, S., Grimm, C.                                                                                                                       | 100µm PDMS<br>40°C, 30 min<br>headspace, stirring<br>salt added                                            | GC-MS              |
| 446  | MIB & geosmin<br>in water           | Determination of Geosmin and 2-Methylisoborneol in Water<br>Using SPME and GC-Chemical Ionization/Electron Impact<br>Ionization Ion Trap MS<br>Analyst (Cambridge, U.K.) (1998), 123 (10), 2155-2160<br>McCallum, R., Pendleton, P., Scumann, R., Trinh, M.                                | 80µm<br>Carboxen/DVB/PDMS<br>60°C, 30 min<br>headspace<br>stirring<br>salt added                           | GC-MS              |
| 2778 | Ozone in air                        | <b>Passive sampling of ambient ozone by SPME with on-fiber derivatization</b><br><i>Analytica Chimica Acta: 610, #2, 149-155 (MAR 10 2008)</i><br>Lee, I-Su; Tsai, Shih-Wei                                                                                                                | 65µm DVB/PDMS<br>PFBHA & DPE<br>derivatives @ 25°C                                                         | GC-ECD             |
| 2375 | Odor compounds<br>in water          | <b>Tacoma controls tastes and odours with ozone</b><br><i>Water Science and Technology 55, # 5, 137-144 ( 2007)</i><br>Carlson, M.; Chen, T.; McMeen, C.; Suffet, I. H.; Zhang, M                                                                                                          |                                                                                                            |                    |
| 511  | 34 Odor compounds<br>in water       | Headspace SPME for the determination of trace levels of<br>taste and odor compounds in water samples<br>Analyst (Cambridge, UK) 1999, 123(4), 459-466<br>Bao, M., Mascini, M., Griffini, O., Burrini, D., Santianni, D.,<br>Barbieri, K.                                                   | 65µm DVB/PDMS<br>40 min @ 20°C<br>NaCl, stirring<br>immersion/headspace                                    | GC-Ion trap<br>MS  |
| 282  | Chemical warfare<br>compounds       | On-Site Sample Work-Up Procedures to Isolate Chemical<br>Warfare-Related Compounds, Using SPE & SPME Technology<br>Analytical Chemistry Associated with the Destruction of<br>Chemical Weapons NATO ASI Ser., Ser. 1 13: 65-76 (1997)<br>Alcaraz, A., Hulse, S., Whipple, R., Andresen, B. |                                                                                                            |                    |
| 2349 | Nerve agents                        | <b>Synthetic methods applied to the detection of chemical<br/>warfare nerve agents</b><br><i>CURR. ORG. CHEM. 11, #3, 255-265</i><br>Giordano, B. C.; Collins, G. E                                                                                                                        | Review article                                                                                             |                    |
| 116  | Nerve agents<br>in water            | Determination of Chemical Warfare Agents in Natural<br>Water Samples by SPME<br>Anal. Chem. 69: 1866-1872 (1997)<br>Lakso, H., Ng, W.                                                                                                                                                      | 65µm PDMS/DVB<br>30 min<br>headspace<br>saturated salt                                                     | GC-FID<br>GC-MS    |
| 762  | Lewisite oxide<br>in soil           | Determination of Lewisite oxide in soil using SPME<br>followed by GC w/FPD or Mass spectrometric detection<br><i>J. Chromatogr-A, 909 (2001) 13-28</i><br>Tomkin, B., Segal, G., Ho, C.                                                                                                    | 100µm PDMS<br>20min.<br>agitated<br><br>1,3-propanedithiol deriv.                                          | GC-FPD/or<br>GC-MS |
| 560  | Chemical warfare<br>agents in water | In-situ derivatisation of degradation products of chemical<br>warfare agents in water by SPME and GC-MS analysis<br><i>J. Chromatogr-A, Feb 1999, 832(1+2), 173-182</i><br>Sng, M., Ng, W.                                                                                                 | 65µm Carboxen/PDMS<br>20°C,<br>N-methyl-N-(tert-butyl<br>dimethylsilyl) trifluoro-<br>acetamide derivative | GC-MS              |
| 283  | Volatiles<br>in wastewater          | Rapid Determination of Volatile Organic Compounds in<br>Environmentally Hazardous Wastewaters, Using SPME<br>Anal. Chem. 358 (7-8): 833-837 (1997)<br>James, K., Stack, M.                                                                                                                 |                                                                                                            |                    |
|      |                                     | Trace salt Signatures from World War II                                                                                                                                                                                                                                                    |                                                                                                            |                    |

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| 284  | TNT, DNT salt<br>in seawater/<br>sediment | Unexploded Undersea Ordinance<br>Environ. Sci. Technol. 32 (9): 1354-1358 (1998)<br>Darrach, M., Chutjian, A., Plett, G.                                                                                                                                               | 65µm PDMS/DVB<br>15 min<br>pH 8<br>agitation                              | directly<br>into MS |
| 285  | Aromatic amines<br>in water               | Determination of Aromatic Amines by SPME-GC-MS<br>in Water Samples<br>J. Chromatogr. A 791(1+2): 221-230 (1997)<br>Muller, L., Fattore, E., Benfenati, E.                                                                                                              | 65µm Carbowax/DVB<br>30 min<br>stirring<br>pH 7.6, salt added             | GC-MS               |
| 578  | Aromatic amines<br>in water               | SPME coupled with HPLC for the determination of<br>aromatic amines.<br>Anal-Chem. 15 Jan 1999; 71(2): 310-318<br>Wu,-Y-C; Huang,-S-D                                                                                                                                   | 65µm PDMS/DVB, CW-<br>TPR                                                 | HPLC-UV<br>280nm    |
| 286  | Volatiles<br>in water                     | Inter-Laboratory Studies for the Validation of SPME for<br>the Quantitative Analysis of Volatile Organic Compounds<br>Compounds in Aqueous Samples<br>Anal. Chim. Acta 356 (2-3): 113-123 (1997)<br>Nilsson, T., Ferrari, R., Facchetti, S.                            | 100µm PDMS<br>30 min<br>headspace &<br>immersion<br>stirring              | GC-ECD              |
| 597  | Volatiles (BTEX)<br>in water              | Solid-phase micro-extraction of volatiles from water<br>using open cap vials<br>Chromatographia. May 1999; 49(9-10): 513-519<br>Matisova,-E; Sedlakova,-J; Simon,-P; Welsch,-T                                                                                         | 100µm PDMS<br>5 min. @ 25C<br>stirred                                     | GC-FID              |
| 287  | VOCs, pesticides<br>in water and air      | Capabilities for the Direct Determination of Triphenyl-<br>and Triethylarsine in Water by SPME Followed by GC-A<br>Amer. Environ. Lab, 9 (10): cover, 5-6 (1997)<br>Mothes, S., Wennrich, R.                                                                           | Carboxen/PDMS,<br>100µm PDMS<br>various conditions                        | GC-MS               |
| 374  | Organoarsenicals<br>in water and soil     | Determination of Organoarsenicals in the Environment by<br>SPME-GC-MS<br>J. Chromatogr. A 807 (1998) 253-263<br>Szostek, B., Aldstadt, J.                                                                                                                              | 100µm PDMS<br>10 min<br>immersion<br>methyl thioglycolate<br>(derivative) | GC-MS               |
| 879  | Organoarsenicals<br>in water              | SPME method for GC w/MS and pulsed Flame photometric<br>detection: studies of organoarsenical speciation<br>J. Chromatogr. A 918(2001) 169-175<br>Killelea, D., Aldstadt, J.                                                                                           | 100µm PDMS<br>10 min<br>immersion<br>methyl thioglycolate<br>(derivative) | GC-MS<br>GC- PFPD   |
| 790  | Organoarsenicals<br>in water              | Speciation of organoarsenic compounds by poly(pyrrole)-<br>coated capillary in-tube SPME coupled with HPLC-EI-MS<br>Analytica Chimica Acta (2000) 424(2), 211-222<br>Wu, J. C.; Mester, Z.; Pawliszyn, J.                                                              | Polypyrrol capillary                                                      | LC-EI-MS            |
| 815  | Metal hydrides<br>in water                | Sampling and determination of metal hydrides by SPME<br>thermal desorption inductively coupled plasma MS<br>J. Analytical Atomic Spectrometry (2000) 15(11) 1461-1465<br><br>Mester, Z.; Sturgeon, R. E.; Lam, J. W                                                    | Carboxen/PDMS,<br><br>Sodium Borohydride/HCl                              | ICP-MS              |
| 2894 | Disinfection<br>byproducts<br>in water    | <b>Emerging technologies for identification of disinfection byproducts:</b><br><b>GC/FT-ICR MS characterization of solvent artifacts</b><br><b>Environ Sci&amp; Tech 41, #15, 5419-5425 (AUG 1 2007)</b><br><b>Heffner, C.; Silwal, I.; Peckenham, J.; Solouki, T.</b> |                                                                           | <b>GC/FT-ICR MS</b> |
| 288  | Iodinated volatiles<br>in water           | SPME with Temperature-Programmed Desorption for the<br>Analysis of Iodinated Disinfection Byproducts<br>Anal. Chem. 70 (3): 638-644 (1998)<br>Frazey, P., Barkley, R., Siever, R.                                                                                      | 85µm polyacrylate<br>15 min<br>immersion<br>stirring                      | GC-ECD              |
|      |                                           | Determination of Chloroethers in Aqueous Samples,                                                                                                                                                                                                                      |                                                                           |                     |

|      |                                       |                                                                                                                                                                                                                                                                                                            |                                                                                 |                      |
|------|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|----------------------|
| 289  | Chloroethers<br>in water              | Using SPME<br>Acta Hydrochim. Hydrobio. 25 (6): 329-334 (1997)<br>Wennrich, L., Engewald, W., Popp, P.                                                                                                                                                                                                     |                                                                                 | GC-FID or MS         |
| 513  | Chloroethers<br>in water              | GC trace analysis of haloethers in water: Comparison of<br>different extraction techniques<br>Int. J. Environ. Anal. Chem (1999), 73(1), 31-41<br>Wennrich, L., Engewald, W., Popp, P.                                                                                                                     |                                                                                 | GC-FID or MS         |
| 514  | Aliphatic aldehydes<br>in water/oil   | Influence of extraction parameters and medium on efficiency<br>of SPME sampling in analysis of aliphatic aldehydes<br>J. Chromatogr., A 1999, 845(1+2), 337-347<br>Keszler, A., Heberger, K.                                                                                                               | 100µm PDMS<br>30 min @ 40°C<br>immersed/headspace                               | GC-MSD               |
| 515  | Glycerol ethers<br>in water           | Improved extraction of glycerol ethers from water by SPME<br>by Carboxen-PDMS coated fiber<br>Chromatographia, 1999, 50 (3/4), 155-159<br>Bensoam, J., Ciolella, A., Durjardin, R.                                                                                                                         | 75µm Carboxen/PDMS<br>25°C, sat. NaCl<br>immersed                               | GC-FID               |
| 516  | Amines/alcohols<br>in water           | Evaluation of SPME for the analysis of hydrophilic<br>compounds<br>J. Exposure Anal. Environ. Epidemiol. 1999, 9(3) 181-191<br>Shoemaker, J. Munch, J., Behmer, T.                                                                                                                                         | 75µm Carboxen/PDMS                                                              |                      |
| 517  | Polar volatiles<br>in water           | SPME of volatile polar compounds in water<br>J. High Resolut. Chromatogr. (1999), 22(2), 109-115<br>Matisova, E., Sedlakova, J., Slezackova, M., Welsch, T.                                                                                                                                                | 85µm polyacrylate<br>50°C<br>headspace                                          | GC-MS                |
| 290  | VOCs, pesticides<br>in water and air  | On-Site Sampling for Volatiles and Pesticides, Using SPME<br>Amer. Environ. Lab. 10 (2): 21-22 (1998)<br>Shirey, R., Mani, V., Mindrup, R.                                                                                                                                                                 | 100µm PDMS,<br>75µm Carboxen/PDMS<br>2-3 min, headspace<br>stirring, salt added | GC-MS                |
| 291  | Petroleum<br>hydrocarbons<br>in water | Solvent-Free and Rapid Determination of Petroleum<br>Hydrocarbons in Water by SPME<br>UFZ-Ber. Optimierung Umweltverträglich<br>Analyseverfahren für Mineraloelkohlenwasserstoff<br>IM Boden 12: 14-17 (1997)<br>Christall, B.                                                                             |                                                                                 |                      |
|      |                                       | Partition Infrared Method for Total Gasoline Range Organics                                                                                                                                                                                                                                                |                                                                                 |                      |
| 367  | C3-C16 hydrocarbons<br>in water       | in Water Based on SPME<br>Environ. Sci. Technol. 1999, 33, 814-819<br>Stahl, D., Tilotta, D.                                                                                                                                                                                                               | 130µm Teflon film<br>30 min<br>immersion                                        | IR 4000-2690<br>cm-1 |
| 518  | MMT in<br>water                       | Determination of methylcyclopentadienylmanganese<br>tricarbonyl (MMT) in aqueous samples by SPME-GC-AED<br>Analyst (Cambridge, UK), (1999), 124(1), 71-73<br>Yang, F., Chau, Y.                                                                                                                            | 100µm PDMS<br>15 min @ 20°C<br>headspace                                        | GC-AED               |
| 2665 | MMT in<br>water                       | <b>SPME combined with GC-AED for the determination of cyclopentadienyl-<br/>manganese tricarbonyl and (methylcyclopentadienyl)manganese<br/>tricarbonyl in soils and seawaters</b><br><i>J. Chromatogr. A 1173, #1-2, 139-145 (Nov 30 2007)</i><br>Campillo, N.; Hernandez-Cordoba, Manuel; Penalver, Rosa | headspace                                                                       | GC-AED               |
| 849  | MMT in<br>water                       | Determination of methylcyclopentadienylmanganese<br>tricarbonyl by SPME-direct thermal desorption-quartz<br>furnace atomic absorption spectrometry<br><i>Spectrochim. Acta, Part B (2001) 56B(2) 215-222</i><br>Fragueiro, M. S.; Alava-Moreno, F.; Lavilla, I.; Bendicho, C                               |                                                                                 | GC-AED               |
| 2706 | Organochlorine<br>pesticides in       | <b>Uncertainty associated to the analysis of organochlorine pesticides in<br/>water by SPME-GC-ECD-Evaluation using two different approaches</b><br><i>Analytica Chimica Acta; Vol. 573-574, 202-208 (2006-07-28)</i>                                                                                      | headspace                                                                       | GC-ECD               |

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| water                                                 | Ratola, Nuno                                                                                                                                                                                                                                                                                               |                                                           |               |
| 2852 Review article                                   | Analytical methods for PCBs and organochlorine pesticides in environmental monitoring and surveillance: A critical appraisal<br><i>Anal. Bioanal. Chem.</i> 386, #4, 769-789 (October 2006)<br>Muir, Derek; Sverko, Ed                                                                                     |                                                           |               |
| 2409 Pesticides, PCBs from water                      | Simultaneous analysis of PCBs and organochlorine pesticides in water by headspace SPME with GC-MS<br><i>J. Chromatogr., A</i> 1138, #1-2, 231-243 (2007-01-05)<br>Derouiche, A.; Driss, M. R.; Morizur, J. -P.; Taphanel, M. -H.                                                                           | 100µm PDMS headspace                                      | GC-ECD        |
| 519 VOCs, BTEX, pesticides, PCBs from water           | Efficiency of direct SPME from water: Comparison of different fiber types including a new C8-coating<br><i>Chromatographia</i> , 1999, 49(11/12), 686-690<br>Popp, P., Paschke, A.                                                                                                                         | variety of fibers                                         |               |
| 904 pesticides in water                               | Analysis of fire ant pesticides in water by SPME and GC-MS and LC-MS<br><i>Analytica Chimica Acta</i> 2001, 436(1) 11-20<br>Reyzer, M., Brodbelt, J.                                                                                                                                                       |                                                           | GC-MS & LC-MS |
| 2413 Pesticides in water                              | Optimisation and validation of a SPME method for simultaneous determination of different types of pesticides in water by GC-MS<br><i>J. Chromatogr., A</i> 1141, #2, 165-173 (2007-02-09)<br>Beceiro-Gonzalez, E. ; Concha-Grana, E.; Guimares, A.; Goncalves, C.; Muniategui-Lorenzo, S.; Alpendurada, M. | 60µm PDMS/DVB 45 min @ 60°C                               | GC-MS         |
| 770 Chlorine, nitrogen phosphorus pesticides in water | Multiresidual method for determination of chlorine, nitrogen, and phosphorus containing pesticides in surface and drinking water by SPME and GC/ECD/NPD<br><i>Boll. Chim. Ig., Parte Sci. (2000)</i> 51(S3), 99-103<br>de Luca, Giuseppe; Mura, Michele                                                    | (in Italian)                                              | GC/ECD/NPD    |
| 512 Iodinated THMs in drinking water                  | SPME for the determination of iodinated trihalomethanes in drinking water<br><i>J. Chromatogr., A</i> (1999), 841(2), 197-206<br>Cancho, B., Ventura, G., Galceran, M.                                                                                                                                     | 65µm CW/DVB/PDMS 10 min @ 20°C<br>NaCl used               | GC-ECD        |
| 292 Iodinated organics in water                       | Solid Phase Microextraction and Analysis of Iodinated Organic Compounds<br>Avail. UMI, Order No. DA9812871 from:<br>Diss. Abstr. Int., B 58 (10): 5364 (1998)<br>Frazey, P.                                                                                                                                | 85µm polyacrylate                                         | GC-ECD        |
| 288 Iodinated volatiles in water                      | SPME with Temperature-Programmed Desorption for the Analysis of Iodinated Disinfection Byproducts<br><i>Anal. Chem.</i> 70 (3): 638-644 (1998)<br>Frazey, P., Barkley, R., Siever, R.                                                                                                                      | 85µm polyacrylate 15 min immersion stirring               | GC-ECD        |
| 694 Cyanogen chloride in water                        | Simultaneous determination of cyanogen chloride and cyanogen bromide in treated water at sub-ug/L levels by a new SPME-GC-ECD method<br><i>J. Chromatogr. A</i> 897(2000) 307-315<br>Cancho, B., Ventura, F., Galceran, M.                                                                                 | Carboxen/DVB/PDMS 15 min, headspace 2-3pH, 25% salt added | GC-ECD        |
| 695 Acetic acid in water                              | Determination of acetic acid in aqueous samples, by water-phase derivatization, SPME, and GC<br><i>J. Chromatogr. A., (2000), 874(2), 225-234</i><br>Wittmann, G., Van Langenhove, H., Dewulf, J.                                                                                                          | 85µm Polyacrylate headspace<br>benzenal bromide derv.     | GC-FID        |
| 411 Chloroacetic acids in water                       | Determination of Chlorinated Acetic Acids in Drinking Water by in-situ Derivatization-SPME<br><i>Interri J. Environ. Anal. Chem.</i> 66: 215-224 (1997)<br>Aikawa, B., Burk, R.                                                                                                                            |                                                           |               |
| 520 Haloacetic acids in water                         | SPME coupled with GC-ion trap mass spectrometry for the analysis of haloacetic acids in water<br><i>J. Chromatogr., A</i> 1999, 859(2), 159-172<br>Sarridon, M., Santos, F., Galceran, M.                                                                                                                  |                                                           | GC-Iontrap MS |



|      |                                             |                                                                                                                                                                                                                                                                                                                                                               |                                                                                                 |                          |
|------|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|--------------------------|
| 696  | Haloacetic acids<br>in water                | In situ derivatization/SPME for the determination of<br>haloacetic acids in water<br><i>Anal. Chem.</i> 2000 Oct. 15, 72(20), 4865-4873<br>Sarrion, M. Santos, F., Galceran, M.                                                                                                                                                                               | Carboxen/PDMS<br><br>headspace<br>dimethyl sulfate deriv.                                       | GC-ITMS                  |
| 353  | Chlorobenzenes<br>in water                  | Using SPME to Determine Partition Coefficients to Humic Acids<br>and Bioavailable Concentrations of Hydrophobic Chemicals<br><i>Environ.Sci Technol.</i> 1998, 32, 3430-3435<br>Ramos, E., Meijer, S., Vaes, W., Verhaar, H., Hermens, J.                                                                                                                     | 7µm PDMS<br>20 min<br>immersion<br>pH 7                                                         | GC-FID                   |
| 576  | Chlorobenzenes<br>in water                  | SPME-capillary GC determination of chlorobenzene<br>compounds in water<br><i>Lihua-Jiannan,-Huaxue-Fence.</i> Mar 1999; 35(3): 103-105<br>Yang,-HB                                                                                                                                                                                                            | 100µm PDMS<br>5 min, agitated<br>0.5gm NaOH<br>immersed                                         | GC-ECD                   |
| 697  | Chlorinated<br>benzenes in<br>water         | Trace analysis of ten chlorinated benzenes in water<br>by headspace SPME<br><i>J. Chromatogr. A</i> (2000) 874(1), 149-154<br>He, Y., Wang, Y., Lee, H.                                                                                                                                                                                                       | 100µm PDMS<br>headspace<br>salt, agitated                                                       | GC-MS                    |
| 698  | Fungicides<br>in water                      | Determination of fungicides in natural waters using SPME and<br>GC coupled with ECD and MS detection<br><i>J. Chromatogr. A.</i> , 893 (2000), 143-156<br>Lambropoulou, D., Konstantinou, I., Albanis, T.                                                                                                                                                     | 100µm PDMS<br>30 min, agitated<br>20% NaCl, pH 4<br>immersed                                    | GC-MS                    |
| 2527 | Chlorothalonil<br>in water                  | <b>New cloud vapor zone (CVZ) coupled headspace SPME technique</b><br><i>Anal Bioanal Chem</i> 388, #2, 377-83 (2007 May)<br>Huang, Yi-Ching; Su, Yi-Song; Muniraj, Sarangapani; Zhang, W.; Jen, J.                                                                                                                                                           | <b>100µm PDMS</b><br><b>5°C</b><br><b>headspace</b>                                             |                          |
| 699  | Chlorothalonil<br>in water                  | Determination of aqueous chlorothalonil with SPME-GC<br><i>J. Chromatogr. A.</i> , 896 (2000) 105-110<br>Chen, S., Su, Y., Jen, J.                                                                                                                                                                                                                            | 100µm PDMS<br>40 min,                                                                           | GC-ECD                   |
| 800  | Alachlor<br>in water                        | Optimization of alachlor solid-phase micro-extraction from<br>water samples using experimental design.<br><i>J. Chromatogr. A</i> (2000) 896(1-2), 373-379<br>Gonzalez-Barreiro, C.; Lores, M.; Casais, M. C.; Cela, R.                                                                                                                                       | 60µm PDMS/DVB<br>120min @ 25°C<br>stirred                                                       | HPLC                     |
| 2786 | Pyrethroids in<br>soil                      | <b>Simultaneous determination of traces of pyrethroids, organochlorines<br/>and other main plant protection agents in agricultural soils<br/>by headspace SPME-GC-MS</b><br><i>J. Chromatogr. A.</i> , 1188, #2, 154-163 (Apr 25 2008)<br><br>Cela, R.; Dagnac, Thierry; Fernandez-Alvarez, M.; Garcia-Jares, C.;<br>Lamas, J.; Llompert, Maria; Lores, Marta | <b>85µm polyacrylate</b><br><b>headspace</b><br><b>100 °C</b>                                   | <b>GC-µECD</b>           |
| 2787 | Pyrethroids in<br>groundwater               | <b>Application of SPME for determination of pyrethroids in groundwater</b><br><br>using LC with post-column photochemically induced<br>fluorimetry derivatization and fluorescence detection<br><i>J. Chromatogr. A.</i> , 1188, #2, 61-68 (Apr 25 2008)<br>Galera, M. Martinez; Mughari, Ahmed R.; Vazquez, P. Parrilla                                      | <b>60µm PDMS/DVB</b><br><b>fluorimetry</b><br><b>derivatization</b>                             | <b>LC fluorescencene</b> |
| 2403 | Chloroacetanilide<br>herbicides in<br>water | <b>Analysis of chloroacetanilide herbicides in water samples by SPME-GC-MS</b><br><i>Anal. Chim. Acta</i> 591, #1, 87-96 (2007-05-15)<br>Xu, X. Q.; Yang, H. H.; Wang, L.; Han, B.; Wang, X. R.; Lee, F. S.-C                                                                                                                                                 |                                                                                                 | <b>GC-MS</b>             |
| 293  | Acidic herbicides<br>in water               | Gas-Phase Post-Derivatization Following SPME for<br>Determining Acidic Herbicides in Water<br><i>Anal. Chem.</i> 70 (9): 1963-1968 (1998)<br>Lee, M., Lee, R., Lin, Y., Chen, C., Hwang, B.                                                                                                                                                                   | 85µm polyacrylate<br>50 min<br>immersion, stirring<br>pH 1, salt added<br>diazomethane (deriv.) | GC-MS                    |
| 905  | Acidic herbicides<br>in water               | Derivatisation/SPME followed by GC-MS for the analysis<br>of phenoxy acid herbicides in aqueous samples<br><i>J. Chromatogr. A</i> (1998), 826(2), 211-216                                                                                                                                                                                                    |                                                                                                 | GC-MS                    |

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| 898 | Acidic herbicides<br>in water                | Automated on-line in-tube SPME followed by LC/electrospray ionization mass spectrometry for the determination of chlorinated phenoxy acid herbicides in environmental waters<br><i>Analyst (Cambridge, U. K.) 2001 , 126(5) 602-608</i><br>Takino, Masahiko; Daishima, Shigeki; Nakahara, Taketoshi |                                                                 | LC-MS                        |
| 763 | Profoxydim<br>in water                       | Application of on-site SPME in aquatic dissipation studies of profoxydim in rice<br><i>J. Chromatogr A, 909 (2001) 29-36</i><br>Eisert, R, Jackson, S., Krotzky, A.                                                                                                                                 | 50µm Carbowax-TPR<br>30min.<br>salt added<br>immersed           | HPLC-UV                      |
| 521 | Fungicides<br>in water                       | SPME of the antifouling Irgarol 1051 and fungicides dichlofluanid and 4-chloro-3-methylphenol in water samples<br><i>J. Chromatogr. A, (1999), 839(1+2), 253-260</i><br>Penalver, A., Pocurull, E., Borrull, F., Marce, R.                                                                          | 85µm polyacrylate<br>1 hr. @ 60°C<br>immersion, salt added      | GC-MS                        |
| 568 | T2 mycotoxin<br>in water                     | Determination of trichothecene (T2 mycotoxin) in aqueous sample with solid-phase microextraction technique followed by GC-FID<br><i>J-High-Resolut-Chromatogr. Jul 1999; 22(7): 424-426</i><br>Lee,-PK; Kee,-SYK; Ng,-W; Gopalakrishnakone,-P                                                       | 85µm polyacrylate<br>75 min, immersed<br>satur. salt<br>stirred | GC-FID                       |
| 294 | PAHs<br>in water                             | SPME of PAHs from Aqueous Samples, Using Fibers Coated with HPLC Chemically Bonded Silica Stationary Phases<br><i>Anal. Chem. 69 (24): 5001-5005 (1997)</i><br>Liu, Y., Lee, M., Hageman, K., Yang, Y, Hawthorne, S.                                                                                | 100µm silica/epoxy<br>60°C, 30 min<br>headspace                 | GC-FID, -MS                  |
| 295 | PAHs                                         | Separation and Determination of Polycyclic Aromatic Hydrocarbons by SPME/Cyclodextrin-Modified Capillary Electrophoresis<br><i>Anal. Chem. 69 (9): 1726-1731 (1997)</i><br>Nguye, A., Luong, J.                                                                                                     |                                                                 |                              |
| 700 | PAHs<br>in water                             | Monitoring of PAH in water using headspace SPME and capillary GC<br><i>Microchem J. (1999), 63(2), 276-284</i><br>Djozan, D., Assadi, Y.                                                                                                                                                            |                                                                 |                              |
| 701 | PAHs<br>in water                             | SPME for determining the distribution of sixteen USEPA polycyclic aromatic hydrocarbons in water samples<br><i>J. Chromatogr. A. (2000) 879, 177</i><br>Doong, R., Chang, S., Sun, Y.                                                                                                               |                                                                 |                              |
| 296 | Aromatics<br>in water                        | Determination of Aromatic Compounds in Water by SPME and Ultraviolet Absorption Spectroscopy<br><i>Anal. Chem. 69 (1): 1197-1203 (1997)</i><br>Wittkamp, B., Hawthorne, S., Tilotta, D.                                                                                                             | PDMS chip<br>30-50 min<br>immersion                             | UV spectroscopy<br>220-300nm |
| 344 | RDX, TNT metabolites<br>in salt water        | Trace Analysis of salt in Seawater Using SPME and GC-Ion Trap Mass Spectrometry<br><i>Anal. Chem., Vol. 70, No. 14, July 15, 1998, pg. 3015-3020</i><br>Barshick, S., Griest, W.                                                                                                                    | Carbowax/DVB<br>10 min<br>immersion<br>stirring                 | GC-MS                        |
| 297 | Phthalates, surfactants<br>in water          | Characterization of Water-Soluble Components of Slurries Using SPME Coupled to LC-MS<br><i>J. Microcolumn Sep. 10 (2): 225-234 (1998)</i><br>Moder, M., Popp, P., Pawliszyn, J.                                                                                                                     | 65µm Carbowax/TPR<br>1-15 hr.<br>pH 2, satur. salt              | LC-MS                        |
| 598 | Organophosphorus<br>compounds<br>in leachate | Comparative studies of the leachate of an industrial landfill by GC-MS,LC-nuclear magnetic resonance and LC-MS<br><i>J-Chromatogr,-A. 29 Jan 1999; 831(2): 243-256</i><br>Benfenati,-E; Pierucci,-P; Fanelli,-R; Preiss,-A<br>Godejohann,-M; Astratov,-M; Levsen,-K; Barcelo,-D                     |                                                                 | GC-MS                        |
| 702 | Fatty acids<br>in waste water                | Development of a headspace SPME procedure for the determination of free volatile fatty acids in waste water<br><i>J Chromatogr. A,(2000) 873(1), 107-115</i><br>Abalos, M., Bayona, J., Pawliszyn, J.                                                                                               | 85µm Carboxen/PDMS<br>headspace<br>stirring                     | GC-FID, MS                   |

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| 703  | Fatty acids<br>in water                       | Application of GC coupled to chemical ionisation MS following headspace SPME for the determination of free volatile fatty acids in aqueous samples.<br><i>J. Chromatogr. A</i> 891 (2000) 387-294<br>Abalos, M., Bayona, J.                                                                                    | 85µm Carboxen/PDMS<br>20 min headspace<br>3.75 g NaCl, pH 1.5 | GC-CI-MS   |
| 593  | Fatty acids<br>in waste water                 | Analysis of volatile fatty acids in waste water collected from a pig farm by a SPME method.<br><i>Chemosphere</i> . Feb 1999; 38(4): 823-834<br>Yo,-S-P                                                                                                                                                        | 65µm Carbowax/DVB<br>20 min<br>immersion<br>stirred           | GC-MS      |
| 913  | Aromatic acids/bases<br>in water              | SPME with pH adjustment for the determination of aromatic acids and bases in water<br><i>J. Chromatogr. A</i> (1998) 829(1-2) 223-233<br>van Doorn, H., Grabanski, C., Miller, D., Hawthorne, S.                                                                                                               |                                                               |            |
| 704  | Volatile,<br>semivolatiles<br>in water & soil | Solid Phase microextraction: a promising technique for sample preparation in environmental analysis<br><i>J. Chromatogr. A</i> 889 (2000) 3-14<br>Alpendurada, M.                                                                                                                                              | review article                                                |            |
| 2529 | Antibiotics in<br>wastewater                  | <b>SPME of macrolide, trimethoprim, and sulfonamide antibiotics in wastewaters</b><br><i>J Chromatogr. A</i> 1169, #1-2, 53-62 (OCT 26 2007)<br>McClure, Evelyn L.; Wong, Charles S.                                                                                                                           |                                                               | HPLC-MS-MS |
| 2296 | Antibiotics in<br>wastewater                  | <b>Simultaneous extraction and analysis of 11 tetracycline and sulfonamide antibiotics in influent and effluent domestic wastewater by SPME and LC electrospray ionization tandem mass spectrometry</b><br><i>J. Chromatogr. A</i> , (2006) 1097, #1-2, 40-53<br>Carlson, Kenneth; Cha, Jongmun; Yang, Shinwoo |                                                               | LC-MS      |
| 972  | Alkyl sulfides in water                       | Determination of volatile alkyl sulfides in wastewater.<br><i>J.Chromatogr. A</i> (2002) 963(1-2), 249-257<br>Abalos, M.; Prieto, X.; Bayona, J.M.                                                                                                                                                             | PDMS/carboxen                                                 | GC-MS      |
| 975  | MTBE in water                                 | Determination of MTBE in water by GC-FID<br><i>J.Chromatogr. A</i> (2002) 963(1-2), 259-264<br>Dron, J.; Garcia, R.; Millan, E.                                                                                                                                                                                | 65 um PDMS/DVB                                                | GC-FID     |
| 2238 | review of trends                              | <b>Current perspectives in analyte extraction strategies for tin and arsenic speciation</b><br><i>J Chromatogr. A</i> 1153, #1-2, 114-29 (2007 Jun 15)<br>Dietz, C.; Sanz, Jon; Sanz, Estrella; Muoz-Olivas, Rian; Coamara, C.                                                                                 |                                                               |            |
| 976  | Butyltin in water                             | Rapid determination of butyltin species in water samples by multicapillary GC<br><i>J.Chromatogr. A</i> (2002) 963(1-2), 195-203.<br>Carpinterio Botana, J.; Rodriguez Pereiro, I.; Cela Torrijos, R.                                                                                                          |                                                               | GC-AED     |
| 978  | BHT in bottled water                          | Determination of butylated hydroxytoluene in bottled drinking water.<br><i>J.Chromatogr. A</i> (2002) 963(1-2), 179-183<br>Tombesi, N.B.; Freije, H.                                                                                                                                                           |                                                               | GC-MS      |
| 2641 | Nonylphenols in<br>water                      | <b>Analysis or nonylphenol in water samples by automatic SPME-GC</b><br><i>Zhongshan Daxue Xuebao</i> 46, #5, 45-48 (Sept 2007)<br>Chen, Ling; Deng, Qin-Ying; Liu, Lan; Zhou, Hai-Yun                                                                                                                         | 65µm DVB/PDMS<br>20 min.                                      | GC         |
| 979  | Nonylphenols in<br>water                      | Determination of short ethoxy chain nonylphenols and their brominated analogs in raw and treated water.<br><i>J.Chromatogr. A</i> (2002) 963(1-2), 159-167<br>Diaz, A.; Ventura, F.; Galceran, M.T.                                                                                                            | DVB/carboxen/PDMS                                             | GC-MS      |
| 980  | Phenolic pollutants in<br>water               | Method for the analysis of thirty phenolic pollutants in water samples.<br><i>J.Chromatogr. A</i> (2002) 963(1-2), 137-148<br>Llompert, M.; Lourido, M; Landin, P.; Garcia-Jares, C.; Cela, R.                                                                                                                 | 75 um carboxen/PDMS                                           | GC-MS      |

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| 981  | Carbofuran in water               | Comparison of SPE and SPME for carbofuran in water.<br><i>J.Chromatogr. A (2002) 963(1-2), 117-123</i><br>Lopez-Blanco, M.C.; Cancho-Grande, B.; Simal-Gandara, J.                                                                                                                        |                                 | HPLC   |
| 983  | Sulfur in gaseous matrices        | Quantification of volatile sulfur compounds in complex gaseous matrices by SPME<br><i>J.Chromatogr. A (2002) 963(1-2), 57-64</i><br>Nielsen, S.T.; Jonnson, S.                                                                                                                            | 75 µm carboxen/PDMS             | GC-MS  |
| 993  | Musk compounds in water.          | Optimization of SPME method for synthetic musk compounds in water.<br><i>J.Chromatogr. A (2002) 963(1-2), 277-285</i><br>Garcia-Jares, C.; Llompарт, M.; Polo, M.; Salgado, C.; Macias, S.; Cela, R.                                                                                      | Various                         | GC     |
| 1001 | VOC's in water/soil               | Determination of volatile organic compounds (VOC) in water and soil using solid phase microextraction.<br><i>Chemia Analityczna (2002) 47 (4), 507-530.</i><br>Wypych, J.; Manko, T                                                                                                       | PDMS                            | GC-MS  |
| 1005 | Nonylphenols in water             | Determination of estrogenic short ethoxy chain nonylphenols and metabolites in river and treated water by SPE (solid phase extraction) and SPME (solid phase microextraction)<br><i>Water Sc. Technol. Water Supply (2003) 3 (1-2), 329-334.</i><br>Diaz, A.; Galceran, M.T.; Ventura, F. |                                 |        |
| 1015 | MTBE in water                     | Determination of MTBE in a recreational harbor using solid-phase microextraction<br><i>Chemosphere (2003) 51 (8), 805-810.</i><br>Ganske, Jane A.; Green, David B.; Zuccarello, Joseph L.                                                                                                 |                                 | GC-MS  |
| 1023 | Nonylphenol in water              | ethinylestradiol in wastewater using solid-phase microextraction and gas<br><i>J.Chromatogr. A (2003) 988(1), 41-51.</i><br>Braun, P.; Engewald, W.; Kusch, P.; Moeder, M.; Popp, P.; St. Schrader                                                                                        | Various                         | GC-MS  |
| 1026 | MTBE, TAME and TBA in water.      | Improved analysis of MTBE, TAME, and TBA in petroleum fuel-contaminated groundwater by SPME using deuterated internal standards with GC-MS<br><i>Environmental Science &amp; Technology (2003) 37 (7), 1392-1397.</i><br>Dewsbury, Paul; Lerner, David N.; Thornton, Steven F.            | PDMS-carboxen                   | GC-MS  |
| 1029 | Antifouling agents in water       | Headspace solid phase microextraction for the analysis of the new antifouling agents Irgarol 1051 and Sea Nine 211 in natural waters.<br><i>Analytica Chimica Acta (2002) 468 (1), 171-180.</i><br>Lambropoulou, D. A.; Sakkas, V. A.; Albanis, T. A.*                                    | 65 µm PDMS-DVB                  | GC-MS  |
| 1041 | Hydrocarbons in water             | Characterization and source identification of hydrocarbons in water samples using multiple analytical techniques.<br><i>Journal of Chromatography, A (2002) 971 (1-2), 173-184.</i><br>Wang, Z. D.; Li, K.; Fingas, M.; Sigouin, L.; Menard, L.                                           |                                 | GC-MS  |
| 1042 | Aromatic amines and PAH in water. | Characteristics of poly(methylphenylvinylsiloxane) fibre probe for solid-phase microextraction<br><i>Fenxi Shiyanshi (2002) 21 (5), 75-78.</i><br>Zeng, Z. R.; Wang, Y. L.; Yang, M.; Tian, S. Z.                                                                                         | poly(methylphenylvinylsiloxane) | GC     |
| 1043 | Methamidophos in water.           | Determination of methamidophos residues in water by SPME-CGC-MS.<br><i>Fenxi Shiyanshi (2002) 21 (5), 28-30</i><br>Li, Q.; Liu, H. L.; Wang, J. L.; Chen, H.                                                                                                                              | 100 µm PDMS                     | GC-MS  |
| 1049 | MTBE in water                     | Identification of MTBE in water by SPME and GC-MS.<br><i>American Laboratory (2002) 34 (21), 34.</i><br>Guidotti, M.; Blasi, G.; Lucarelli, E.; Onorati, B.; Ravaioli, G.; Stella, D.                                                                                                     | 75 µm Carboxen/PDMS             | GC-MS  |
| 1058 | Chlorophenols in water.           | Determination of chlorophenols in waste water using direct solid-phase microextraction-GC<br><i>Fenxi Kexue Xuebao (2002) 18 (5), 421-423.</i>                                                                                                                                            | 85 µm polyacrylate              | GC-ECD |

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|                                               | Zhang, H. Y.; Zhang, J.; Huang, X. H.                                                                                                                                                                                                                                                                                                                            | 260°C, 5 minutes                                          |        |
| 1059 Phenols in water                         | Determination of phenols in water by solid-phase microextraction-gas chromatography-mass spectrometry.<br><i>Fenxi Huaxue</i> (2002) 30 (10), 1240-1242.<br>Zhao, R. S.; Liu, R. M.*; Cui, Q. X                                                                                                                                                                  |                                                           | GC-MS  |
| 1069 PAHs from drinking water.                | Coating of solid-phase microextraction fibers with chemically bonded silica particles: selective extraction of polycyclic aromatic hydrocarbons from drinking water samples.<br><i>Journal of Chromatographic Science</i> (2002) 40 (9), 489-494.<br>Rodrigues, R.; Lacerda, C. A.; Lancas, F. M.*                                                               | Various                                                   |        |
| 1093 Cedrol in sea water                      | Determination of cedrol in sea water by SPME-GC-MS and its content variations in red tide sea water.<br><i>Fenxi Ceshi Xuebao</i> (2002) 21 (6), 5-8.<br>Zhao, M. Q.; Li, G. K.; Chen, H.; Zhang, Z. X.                                                                                                                                                          | Various                                                   | GC-MS  |
| 1095 Aromatic compounds in aqueous solutions. | Infra-red reflection-absorption method for the detection of aromatic compounds in aqueous solutions with limited sample volumes.<br><i>Analytical Sciences</i> (2002) 18 (11), 1247-1252.<br>Yang, J.; Chen, P. Y.*                                                                                                                                              |                                                           |        |
| 1100 n-alkanes from aqueous samples           | Analysis of n-alkanes at sub microgram per liter level after direct solid phase microextraction from aqueous samples.<br><i>Analytical Sciences</i> (2002) 18 (11), 1221-1226.<br>Farajzadeh, M.; Hatami, M.                                                                                                                                                     |                                                           | GC-FID |
| 1103 Organic acids in water                   | Gas-phase analysis of trimethylamine, propionic and butyric acid, and sulfur compounds using solid-phase microextraction<br><i>Analytical Chemistry</i> (2002) 74(5), 1054-1060<br>Kim, H.; Nochetto, C.; McConnell, L. L.                                                                                                                                       |                                                           |        |
| 1110 Phthalate esters from water.             | Hollow-fibre liquid-phase microextraction of phthalate esters from water<br><i>Journal of Chromatography A</i> (2003) 999 (1-2), 145-153.<br>Kalogerakis, Nicolas; Psillakis, Eleftheria                                                                                                                                                                         |                                                           |        |
| 1111 Haloanisoles in water.                   | Simultaneous determination of "earthy-musty" odorous haloanisoles and their corresponding halophenols in water samples using solid-phase microextraction coupled to gas chromatography with electron-capture detection<br><i>Journal of Chromatography A</i> (2003) 999 (1-2), 135-144.<br>Bruchet, Auguste; Dugay, Jose; Hennion, Marie-Claire; Malleret, Laure |                                                           | GC-ECD |
| 2194 Alkylbenzenes in detergents              | <b>Factorial design optimization of SPME conditons for (GC-MS) analysis of linear alkylbenzenes (LABs) in detergents</b><br><i>Anal. Chim. Acta</i> 562. #2, 152-157 (2006)<br>Bruns, Roy E.; De Carvalho, Lilian R. Franco; Pentead, Jose C.                                                                                                                    | headspace                                                 | GC-MS  |
| 1116 Alkylbenzenesulfonate s                  | Determination of linear alkylbenzenesulfonates in aqueous matrices by ion-pair solid-phase microextraction-in-port derivatization-gas chromatography-mass spectrometry<br><i>Journal of Chromatography A</i> (2003) 999 (1-2), 51-60.<br>Alzaga, Roberto; Bayona, Josep Maria; Ortiz, Laura; Pena, Araceli                                                       |                                                           | GC     |
| 1122 Chlorophenols in water                   | Improved determination of chlorophenols in water by solid-phase microextraction followed by benzylation and gas chromatography with electron capture detection.<br><i>Chromatographia</i> (2002) 55(9-10), 595-600<br>Bianchi, F.; Careri, M.; Mucchino, C.; Musci, M.                                                                                           | 65um DVB/PDMS, pentafluorobenzoyl chloride derivatization | GC-ECD |

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| MultiSimplex optimization of the solid-phase microextraction-gas chromatography-mass spectrometric determination of polycyclic aromatic hydrocarbons, polychlorinated biphenyls and phthalates from water samples. |                                                                                                                                                                                                                                                                                                                                                             |                    |        |  |
| PAH, PCB and<br>1151 phthalates in water.                                                                                                                                                                          | <i>Journal of Chromatography, A</i> (2002) 978 (1-2), 165-175.<br>Cortazar, E.; Zuloaga, O. *; Sanz, J.; Raposo, J. C.; Etxebarria, N.; Fernandez, L. A.                                                                                                                                                                                                    | PDMS               | GC-MS  |  |
| 1153 Endosulfan in water.                                                                                                                                                                                          | Optimization of solid-phase extraction and solid-phase microextraction for the determination of small alpha - and small beta -endosulfan in water by gas chromatography-electron-capture detection.<br><i>Journal of Chromatography, A</i> (2002) 976 (1-2), 293-299.<br>Lopez-Blanco, M. C.; Rebores-Rodriguez, B.; Cancho-Grande, B.; Simal-Gandara, J. * |                    | GC-ECD |  |
| 1154 PAH's in water                                                                                                                                                                                                | Application of the novel benzo-15-crown-5 sol-gel coating for solid-phase microextraction in rapid determination of trace PAHs in water at non-equilibrium situations.<br><i>Fenxi Kexue Xuebao</i> (2003) 19 (2), 109-112.<br>Wang, D. H.; Xing, J.; Wu, C. Y.*                                                                                            |                    | GC     |  |
| 1155 Phthalate esters                                                                                                                                                                                              | Application of time-resolved luminescence methodology to the determination of phthalate esters.<br><i>Analytical Letters</i> (2003) 36 (5), 1017-1027.<br>Casas-Hernandez, A. M.; Aguilar-Caballeros, M. P.; Gomez-Hens, A. *                                                                                                                               |                    |        |  |
| 2549 Butyltin in<br>sediments                                                                                                                                                                                      | <b>Headspace SPME-GC-ion trap tandem mass spectrometry method for butyltin analysis in sediments: Optimization and validation</b><br><i>Microchemical Journal</i> 87, #2, 147-153 (DEC 2007)<br>Carvalho, P.; Pinto, L.; Basto, A.; Vasconcelos, A..                                                                                                        | headspace          | GC-MS  |  |
| 1164 Butyltin                                                                                                                                                                                                      | SPME-GCMS for speciation of butyltin compounds in marine environment<br><i>Journal De Physique. IV : JP</i> (2003) 107 (II), 1313-1316.<br>Mahapatra, S.; Puranik, V.D.; Sadasivan, S.; Tripathi, R.M.                                                                                                                                                      | PDMS               | GC-MS  |  |
| VOC, SVOC in<br>1071 aqueous solutions.                                                                                                                                                                            | Fibre introduction mass spectrometry: fully direct coupling of solid-phase microextraction with mass spectrometry.<br><i>Analytical Chemistry</i> (2002) 74 (21), 5688-5692.<br>Meurer, E. C.; Tomazela, D. M.; Silva, R. C.; Augusto, F.; Eberlin, M. N.*                                                                                                  | PDMS               | FIMS   |  |
| 1072                                                                                                                                                                                                               | Extractions with superheated water.<br><i>Journal of Chromatography, A</i> (2002) 975 (1), 31-46.<br>Smith, R. M.                                                                                                                                                                                                                                           |                    |        |  |
| 1112 Organotin                                                                                                                                                                                                     | Rapid determination of organotin compounds by headspace solid-phase microextraction<br><i>Journal of Chromatography A</i> (2003) 999 (1-2), 123-134.<br>Le Gac, Marjorie; Lespes, Gaetane; Potin-Gautier, Martine                                                                                                                                           |                    | GC     |  |
| 1228 BTEX                                                                                                                                                                                                          | Determination of siloxane-water partition coefficients by capillary extraction-high-resolution gas chromatography. Study of aromatic solvents.<br><i>Journal of Chromatography, A</i> (2003) 985 (1-2), 39-45.<br>Nardi, L.                                                                                                                                 |                    |        |  |
| 1167 Glycol ethers                                                                                                                                                                                                 | Optimization of the headspace solid-phase microextraction for determination of glycol ethers by orthogonal array designs.<br><i>Journal of Chromatography, A</i> (2002) 977(1), 11-15<br>Huang, C. T.; Su, Y. Y.; Hsieh, Y. Z.                                                                                                                              | 75µm Carboxen PDMS | GC-FID |  |
| Oestrogenic short<br>1168 ethoxy chain<br>nonylphenols in water                                                                                                                                                    | Simultaneous determination of oestrogenic short ethoxy chain nonylphenols and their acidic metabolites in water by an in-sample derivatization/solid-phase microextraction method.<br><i>Analytical Chemistry</i> (2002) 75(15), 3869-3876<br>Diaz, A.; Ventura, F.; Galceran, M. T.                                                                        |                    |        |  |

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|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|------------|
|                                      | Comparison of the performance of analytical methods based on solid-phase extraction and on solid-phase microextraction for the determination of antifouling booster biocides in natural waters.                                                                                                                                       |                     |            |
| 1182 Biocides in water               | <i>Chromatographia</i> (2002) 56 (11-12), 745-751.<br>Konstantinou, I. K.; Hela, D. G.; Lambropoulou, D. A.; Sakkas, V. A.; Albanis, T. A.*                                                                                                                                                                                           |                     | GC-MS      |
| 1184 Phthalates in water             | Solid-phase microextraction of phthalates from water.<br><i>Journal of Chromatography A</i> (2001) 938(1-2), 93-101<br>Luks-Betlej, K.; Janoszka, B.; Paschke, H.; Popp, P.                                                                                                                                                           | 70µm Carbowax/DVB   |            |
| 1188 Mercury in sea water.           | Speciation of mercury compounds by gas chromatography with atomic emission detection. Simultaneous optimization of a headspace solid-phase microextraction and derivatization procedure by use of chemometric techniques.<br><i>Chromatographia</i> (2002) 56 (11-12), 733-738.<br>Carro, A. M.; Neira, I.; Rodil, R.; Lorenzo, R. A. | PDMS                | GC-MIP AES |
| 1189 Endosulfan in aqueous samples.  | Optimization and application of SPME for the gas chromatographic determination of endosulfan and its major metabolites in the ng L-1 range in aqueous solutions.<br><i>Analytical and Bioanalytical Chemistry</i> (2003) 376 (1), 61-68.<br>Frimmel, F. H.; Deger, A. B.; Gremm, T. J.; Mendez, L.                                    | PDMS                | GC-ECD     |
| 1206 MTBE in water                   | Methyl tert-butyl ether (MTBE) in urban and rural precipitation in Germany.<br><i>Atmospheric Environment</i> (2001) 35(36), 6337-6345<br>Achten, Christine; Kolb, Axel; Puettmann, Wilhelm                                                                                                                                           | 75µm Carboxen PDMS  | GC-MS      |
| 1213 VOC's in groundwater.           | Monitoring and evolution of the pollution by volatile organic compounds (VOCs) in the groundwaters of the Najerilla River Basin (Spain)<br><i>International Journal of Environmental Analytical Chemistry</i> (2003) 83 (6), 495-506.<br>Fernandez-Torroba, Miguel A.; Ortiz, Gustavo; Pons, Begona; Tena, Maria Teresa               | 75 µm Carboxen/PDMS | GC-FID     |
| 1221 BTEX                            | In-tube solid-phase microextraction sampler for long-term storage.<br><i>Journal of Chromatography, A</i> (2003) 985 (1-2), 93-98.<br>Nardi, L.                                                                                                                                                                                       |                     |            |
| 1222 PAHs                            | Determination of polycyclic aromatic hydrocarbons in water by capillary solid-phase microextraction coupled with high-performance liquid-chromatography.<br><i>Fenxi Huaxue</i> (2003) 31 (2), 171-174.<br>Chen, S.; Hahn, J. H.; Quan, X.; Lim, K. S.; Yang, F. L.                                                                   |                     | HPLC       |
| 1223 Phthalates in water             | Solid-phase microextraction coupled with high performance liquid chromatography-UV detection for the determination of di- n -propyl-phthalate, di- iso -butyl-phthalate, and di-cyclohexyl-phthalate in environmental water samples.<br><i>Analytical Letters</i> (2003) 36 (2), 389-404.<br>Cai, Y. Q.; Jiang, G. B.*; Liu, J. F.    |                     | HPLC       |
| 1234 Organotin                       | Validation, using a chemometric approach, of gas chromatography-inductively coupled plasma-atomic emission spectrometry (GC-ICP-AES) for organotin determination.<br><i>Analytical and Bioanalytical Chemistry</i> (2003) 376 (1-2), 226-235.<br>Lespes, Gaetane; Aguerre, Sandrine; Pecheyran, Christophe                            |                     | GC-ICP-AES |
| 1241 Chlorinated paraffins in water. | Solid-phase microextraction for the analysis of short-chain chlorinated paraffins in water samples.<br><i>Journal of Chromatography, A</i> (2003) 984 (1), 1-8.<br>Castells, P.; Santos, F. J.; Galceran, M. T.*                                                                                                                      | Various.            | GC-ECD     |
| 1256 Dioxin in water                 | Rapid determination of 2,3,7,8-tetrachlorodibenzo- p -dioxin in water samples by using solid-phase microextraction followed by gas chromatography with tandem mass spectrometry.<br><i>Journal of AOAC International</i> (2003) 86 (1), 44-49.<br>Landin, P.; Llompарт, M.; Lourido, M.; Garcia-Jares, C.; Carro, N.; Cela, R.        | Various             | GC-TMS     |

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|------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------|
| 1258 | Beta-endosulfan                         | Application of single-drop microextraction and comparison with solid-phase microextraction and solid-phase extraction for the determination of small alpha - and small beta -endosulfan in water samples by gas chromatography-electron-capture detection.<br><i>Journal of Chromatography, A (2003) 984 (2), 245-252.</i>                   |                        | GC-ECD    |
|      |                                         | Lopez-Blanco, M. C.; Blanco-Cid, S.; Cancho-Grande, B.; Simal-Gandara, J. *                                                                                                                                                                                                                                                                  |                        |           |
| 1260 | PCBs in water.                          | Analysis of polychlorinated biphenyls in aqueous samples by microwave-assisted headspace solid-phase microextraction<br><i>Journal of Chromatography, A (2003) 1008 (1), 1-12.</i><br>Huang, Yaping; Shu, Youn Yuen; Tardif, Mylaine; Wang, Shu Shing                                                                                        | Headspace              | GC-FID    |
| 1263 | PCBs in water                           | Determination of PCBs in the Housatonic River, MA by SPME and GC-ECD.<br><i>Abstracts of Papers American Chemical Society (2003) 225 (1-2), CHED 317.</i><br>Wells, James; Schaumlöffel, John C.                                                                                                                                             |                        |           |
| 1264 | n-alkanes in water                      | A new selective SPME fiber for some n-alkanes and its use for headspace sampling of aqueous samples<br><i>Journal of Separation Science (2002) 26 (9-10), 802-808.</i><br>Farajzadeh, Mir Ali; Hatami, Mehdi                                                                                                                                 | Cellulose acetate, PVC |           |
| 1265 | PAHs from water                         | Extraction of polycyclic aromatic hydrocarbons and organochloride compounds from water: A comparison between solid-phase microextraction and stir bar sorptive extraction<br><i>Journal of Separation Science (2002) 26 (9-10), 961-967.</i><br>Bauer, Coretta; Hauser, Barbara; Keil, Petra; Popp, Peter; Wennrich, Luise                   |                        | GC-MS     |
| 1267 | Solvents from varnishes.                | Experimental design applied to the determination of several contaminants in Duero River by solid-phase microextraction.<br><i>Analytica Chimica Acta (2003) 477 (2), 257-267.</i><br>Salafranca, J.; Domeno, C.; Fernandez, C.; Nerin, C. *                                                                                                  | Various                | GC-MS     |
| 1278 | VOCs in groundwater.                    | Development and validation of a solid-phase microextraction method for the analysis of volatile organic compounds in groundwater samples.<br><i>Chromatographia (2003) 41 (6), 301-304.</i><br>Alonso, A.; Fernandez-Torroba, M. A.; Tena, M. T.; Pons, B. *                                                                                 | Various                | GC        |
| 1298 | Trace organic compounds in waste water. | Development of an SPME-GC-MS method for trace organic compounds in waste water from a petrochemical refinery.<br><i>Sepu (2003) 21 (1), 76-80.</i><br>Xiao, K.; Wang, Y.; Lu, X.; Kong, H. W.; Yao, Q. H.; Xu, G. W.*                                                                                                                        |                        | GC-MS     |
| 1300 | Triazines in water.                     | Optimization of a solid-phase microextraction procedure for the determination of triazines in water with gas chromatography-mass spectrometry detection.<br><i>Journal of Chromatography, A (2003) 1007 (1-2), 127-135.</i><br>Frias, S.; Rodriguez, M. A.*; Conde, J. E.; Perez-Trujillo, J. P.                                             | Various                | GC-MS     |
| 1322 | Aldehydes in water                      | Analysis of aldehydes in water by solid-phase microextraction with on-fiber derivatization<br><i>Journal of Chromatography, A (2003) 1015 (1-2), 143-150.</i><br>Chang, Chun-Ming; Tsai, Shih-Wei                                                                                                                                            | PDMS/DVB               | GC-MS     |
| 1335 | Phenol species in water.                | Determination of iodinated phenol species at parts-per-trillion concentration levels in different water samples by solid-phase microextraction/offline GC-ICP-MS<br><i>Journal of Analytical Atomic Spectrometry (2003) 18 (9), 1119-1124.</i><br>Caruso, Joseph A.; De Wuilloud, Jorgelina C.A.; Vonderheide, Anne P.; Wuilloud, Rodolfo G. | Various                | GC-ICP-MS |
| 1340 | PAH's in water.                         | Solid-phase microextraction to monitor the sonochemical degradation of polycyclic aromatic hydrocarbons in water.<br><i>Journal of Environmental Monitoring (2003) 5 (1), 135-140.</i>                                                                                                                                                       |                        | GC-MS     |



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| 1351 | Phenols from water.                    | Investigations on the sorption of phenols to dissolved organic matter by a QSAR study.<br>Chemosphere (2001) 45(3), 323-327.<br>Ohlenbusch, G.; Frimmel, F. H.                                                                                                                                                                                                       | 85 µm polyacrylate | GC-MS  |
|      |                                        |                                                                                                                                                                                                                                                                                                                                                                      |                    |        |
| 1357 | Phthalates in water.                   | Miniaturized solid-phase extraction as a sample preparation technique for the determination of phthalates in water.<br>Analytical and Bioanalytical Chemistry (2002) 373(1-2), 81-86.<br>Saito, Y.; Nakao, Y.; Imaizumi, M.; Morishima, Y.; Kiso, Y.; Jinno, K. *                                                                                                    |                    | HPLC   |
|      |                                        |                                                                                                                                                                                                                                                                                                                                                                      |                    |        |
| 1358 | PAH, PCB, pesticides and VOC           | Sorptive sample preparation long dash a review.<br>Analytical and Bioanalytical Chemistry (2002) 373(1-2), 3-22.<br>Baltussen, E.; Cramers, C. A.; Sandra, P. J. F.                                                                                                                                                                                                  | PDMS               |        |
|      |                                        |                                                                                                                                                                                                                                                                                                                                                                      |                    |        |
| 1374 | Tin and lead.                          | Determination of tin- and lead-organic compounds by SPME-GC-atomic-emission detection (SPME-GC-AED) after in situ propylation with sodium tetrapropylborate.<br>Journal of Analytical Atomic Spectrometry (2001) 16(10), 1160-1166.<br>Crnoja, M.; Haberhauer-Troyer, C.; Rosenberg, E. *; Grasserbauer, M.                                                          |                    | GC-AED |
|      |                                        |                                                                                                                                                                                                                                                                                                                                                                      |                    |        |
| 1376 | Volatile compounds in water.           | Simultaneous determination of traces of hydrophilic and volatile compounds in water by solid-phase microextraction and GC/MS.<br>Bunseki Kagaku (2001) 50(10), 685-693.<br>Miyazaki, T.; Kadokami, K.; Tukamoto, H.                                                                                                                                                  |                    | GC-MS  |
|      |                                        |                                                                                                                                                                                                                                                                                                                                                                      |                    |        |
| 1383 | Phenylurea herbicides in water.        | Determination of phenylurea herbicides in natural waters at concentrations below one nanogram-per-litre using solid-phase extraction, derivatization, and solid-phase microextraction-gas chromatography-mass spectrometry.<br>Journal of Chromatography, A (2001) 930(1-2), 9-19.<br>Gerecke, A. C.; Tixier, C.; Bartels, T.; Schwarzenbach, R. P.; Mueller, S. R.* | 85µm Polyacrylate  | GC-MS  |
|      |                                        |                                                                                                                                                                                                                                                                                                                                                                      |                    |        |
| 1405 | Organophosphorous pesticides in water. | Comparison between solid-phase extraction methods for the chromatographic determination of organophosphorus pesticides in water.<br>Journal of Environmental Science and Health Part B Pesticides Food Contaminants and Agricultural Wastes (2001) B36(5), 517-527.<br>Lancas, Fernando M.; Carvalho, Dermeval; Queiroz, Maria E. C.; Silva, Silvana M               |                    |        |
|      |                                        |                                                                                                                                                                                                                                                                                                                                                                      |                    |        |
| 1407 | Butyltin in water                      | Occurrence of butyltin compounds in the waters of selected lakes, rivers and coastal environments from China.<br>Environmental Pollution (2001) 115(1), 81-87.<br>Jiang Gui-bin; Liu Ji-yan; Wu Di-jing; Zhou Qun-fang                                                                                                                                               |                    | GC-FID |
|      |                                        |                                                                                                                                                                                                                                                                                                                                                                      |                    |        |
| 1408 | Alkylphenols and bisphenol-A           | Alkylphenols and bisphenol-A in the coastal environment of Singapore and their rapid extraction from seawater and biological materials.<br>Abstracts of Papers American Chemical Society (2001) 222(1-2), ENVR155.<br>Lee, Hian Kee; Chanbasha, Basheer                                                                                                              |                    |        |
|      |                                        |                                                                                                                                                                                                                                                                                                                                                                      |                    |        |
| 1416 | Nitroaromatic compounds in water.      | Screening method for nitroaromatic compounds in water based on solid-phase microextraction and infrared spectroscopy.<br>Environmental Science & Technology (2001) 35(17), 3507-3512.<br>Tilotta, David C.; Stahl, Danese C.                                                                                                                                         |                    | IR     |
|      |                                        |                                                                                                                                                                                                                                                                                                                                                                      |                    |        |
| 1419 | Phthalate esters from water.           | Comparison of different fibers for the solid-phase microextraction of phthalate esters from water.<br>Journal of Chromatography A (2001) 922(1-2), 377-384.<br>Pocurull, E.; Borrull, F.; Marce, R. M.; Penalver, A.                                                                                                                                                 | 65µm PDMS/DVB      | GC-MS  |
|      |                                        |                                                                                                                                                                                                                                                                                                                                                                      |                    |        |
|      |                                        | A rapid and sensitive method for methyl tert-butyl ether analysis in water samples by use of solid phase microextraction and gas chromatography-mass spectrometry.                                                                                                                                                                                                   |                    |        |

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| 1425 | MTBE in water           | Chemosphere (2001) 44(4), 539-544.<br><br>Roda, Aldo; Barbieri, Anna; Piazza, Francesco; Violante, Francesco Saverio<br><br>Optimisation of the hyphenation between solid-phase microextraction , capillary gas chromatography and inductively coupled plasma atomic emission spectrometry for the routine speciation of organotin compounds in the environment                                     | DVB/carboxen/PDMS                                           | GC-MS         |
| 1431 | Organotin compounds     | J Anal At Spectrom (2001) 16(12), 1429-1433.<br>Aguerre, S.; Donard, O.F.X.; Krupp, E.; Lespes, G.; Pecheyran, C.; Potin-Gautier, M.<br><br>Speciation without chromatography: Part I. Determination of tributyltin in aqueous samples by chloride generation, headspace solid-phase microextraction and inductively coupled plasma time of flight mass spectrometry                                |                                                             | GC-ICP-AES    |
| 1432 | Tributyltin             | J Anal At Spectrom (2001) 16(11), 1313-1316.<br>Lam, J.W.; Maxwell, P.S.; Mester, Z.; Peter, L.; Sturgeon, R.E.<br><br>Comparison of SPME/Transmission IR and SPME/ATR-IR spectroscopic methods in detection of chloroanilines in aqueous solutions                                                                                                                                                 | PDMS/DVB                                                    | ICP-TOFMS     |
| 1436 | Chloroanilines in water | Applied Spectroscopy (2001) 55(7), 919-926.<br>Tsai, F.-P.; Yang, J.<br><br>Analysis of carcinogenic aromatic amines in water samples by solid-phase microextraction coupled with high-performance liquid chromatography                                                                                                                                                                            |                                                             |               |
| 1444 | Amines in water         | Anal. Chim. Acta (2003) 495(1-2) 109-122<br><br>Chang, Wei-Yan; Huang, Shang-Da; Sung, Yu-Hsiang<br><br>Determination of aliphatic amines using N-succinimidyl benzoate as a new derivatization reagent in gas chromatography combined with solid-phase microextraction                                                                                                                             | Various fibers compared                                     | HPLC          |
| 1449 | Amines in water         | Journal of Chromatography A (2003) 1021 (1), 175-181<br><br>Cai, Ling-Shuang; Jing, Zhi-Zhong; Wang, Hong; Yu, Jian-Xin; Zhang, Hua-Shan; Zhao, Yuan-Yuan<br><br>Reevaluation of headspace solid-phase microextraction and gas chromatography-mass spectrometry for the determination of methyl tert-butyl ether in water samples                                                                   | Headspace after derivatization with N-succinimidyl benzoate | GC-FID, GC-MS |
| 1450 | MTBE in water           | Journal of Chromatography A (2003) 1021(1), 157-164<br>Bucciferro, Anthony; Chu, Shaogang; Fang, Fu; Hong, Chia-Swee; Kou, Wenpeng<br><br>Strategically designed sample composition for fastest screening of polychlorinated biphenyl congeners in water samples.                                                                                                                                   |                                                             | GC-MS         |
| 1460 | PCBs in water           | Journal of Environmental Monitoring (2002) 4(4), 490-497<br>Martinez, E.; Llompart, M. P.; Landin, P.; Cela, R.; Carro, A. M.                                                                                                                                                                                                                                                                       |                                                             |               |
| 2232 | MTBE in water and soil  | <b>State of the art in the determination of MTBE in natural waters &amp; soils</b><br><b>Crit. Rev. Anal. Chem.35 #4, 317-337 (2005)</b><br><b>Aragon, P.; Atienza, J.; Herrero, M; M., Angel; Aragon, P.; Atienza, J.; Herrero, Ma. Asuncion; Maquieira, A.; Puchades, R.</b><br><br>Sensitive method for determination of methyl tert-butyl ether (MTBE) in water by use of headspace-SPME/GC-MS. | headspace                                                   | FID           |
| 1475 | MTBE in water           | Fresenius' Journal of Analytical Chemistry (2001) 371(4), 519-525<br>Achten, Christine; Kolb, Axel; Puettmann, Wilhelm                                                                                                                                                                                                                                                                              | 75um Carboxen/PDMS, headspace                               | GC-MS         |
| 2230 | MTBE in drinking water  | <b>Methyl tert-butyl ether (MTBE) in finished drinking water in Germany</b><br><b>Environ. Pollut 140 #2, 294-303 (2006)</b><br><b>Kolb, Axel; Puttmann, Wilhelm</b><br><br>Correlation of musty odor and 2-MIB in two drinking water treatment plants in South Taiwan.                                                                                                                             |                                                             |               |
| 1480 | MIB in drinking water   | Science of the Total Environment (2002) 289(1-3), 225-235                                                                                                                                                                                                                                                                                                                                           |                                                             | GC-MS         |

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| Gas chromatographic determination of 2-hydroxy-4-methoxybenzophenone and octyldimethyl-p-aminobenzoic acid sunscreen agents in swimming pool and bathing waters by solid-phase microextraction |                                                                                                 |                                                                                                                                                                                                                                                                                                      |                                                   |                  |
| 1484                                                                                                                                                                                           | 2-hydroxy-4-methoxybenzophenone and octyldimethyl-p-aminobenzoic acid sunscreen agents in water | <i>Journal of Chromatography A</i> (2002) 967(2), 243-253                                                                                                                                                                                                                                            | 100µm PDMS, 85µm Polyacrylate                     |                  |
|                                                                                                                                                                                                |                                                                                                 | Albanis, T. A.; Giokas, D. L.; Karayannis, M. I.; Lambropoulou, D. A.; Sakkas, V. A.                                                                                                                                                                                                                 |                                                   |                  |
| 1488                                                                                                                                                                                           | Organochlorines in water                                                                        | Determination of organochlorides in water using solid-phase microextraction coupled to gas chromatography.<br><i>American Laboratory</i> (2002) 34(17), 12-14<br>Ou Qing-Yu; Liang Bing; Li Ju-bai; Huang Min-jia                                                                                    |                                                   | GC               |
| 1493                                                                                                                                                                                           | Estrogenic compounds in water                                                                   | Method based on solid-phase microextraction-high-performance liquid chromatography with UV and electrochemical detection to determine estrogenic compounds in water samples.<br><i>Journal of Chromatography A</i> (2002) 964(1-2), 153-160<br>Pocurull, E.; Borrull, F.; Marce, R. M.; Penalver, A. | 85µm Polyacrylate                                 | HPLC-UV, HPLC-ED |
| 1504                                                                                                                                                                                           | Methylmercury in water                                                                          | Application of SPME for the quantitative determination of methylmercury in aqueous solutions.<br><i>Abstracts of Papers American Chemical Society</i> (2002) 223(1-2) CHED 125<br>Moore, J. Taylor; McDowell, Derek R.; Ambler, Rich B.                                                              |                                                   |                  |
| 1536                                                                                                                                                                                           | Phthalic acid esters in water                                                                   | Development of a solid-phase microextraction method for the determination of phthalic acid esters in water.<br><i>Analytica Chimica Acta</i> (2002) 457(2), 211-223<br>Holadova, Katerina; Hajslova, Jana; Poustka, Jan; Prokupkova, Gabriela                                                        | Various fibers compared                           | GC-ECD           |
| 1538                                                                                                                                                                                           | Phenolic compounds in water                                                                     | Solid-phase microextraction coupled to high-performance liquid chromatography to determine phenolic compounds in water samples.<br><i>Journal of Chromatography A</i> (2002) 953(1-2), 79-87<br>Marce, R. M.; Borrull, F.; Penalver, A.; Pocurull, E.                                                | 85µm Polyacrylate                                 | HPLC-UV          |
| 2154                                                                                                                                                                                           | Chlorophenols in water                                                                          | <b>Vial position in the determination of chlorophenols in water by SPME</b><br><i>J. Chromatogr. A</i> , 1103, #1, 29-34 (2006)<br>Portillo, A; Prohibas, N.; Salvado, V.; Simonet, B. M.                                                                                                            | headspace                                         | GC-MS            |
| 1552                                                                                                                                                                                           | Chlorophenols in water                                                                          | Determination of chlorophenols by solid-phase microextraction and liquid chromatography with electrochemical detection.<br><i>Journal of Chromatography A</i> (2002) 947(2), 155-165<br>Galceran, M. T.; Santos, F. J.; Sarrion, M. N.                                                               | Various fibers compared                           | HPLC-ELCD        |
| 1354                                                                                                                                                                                           | Aldehydes in drinking water                                                                     | Determination of aldehydes in drinking water using pentafluorobenzylhydroxylamine derivatization and solid-phase microextraction<br><i>Journal of Chromatography A</i> (2002) 943(1), 1-13<br>Ventura, Francesc; Cancho, Beatriz; Galceran, Ma. Teresa                                               | 65µm DVB PDMS, on-fiber derivatization with PFBHA | GC-ECD           |
| 1156                                                                                                                                                                                           | Chlorophenols                                                                                   | Solid-phase microextraction liquid chromatography/tandem mass spectrometry for the analysis of chlorophenols in environmental samples.<br><i>Rapid Communications in Mass Spectrometry</i> (2002) 17 (1), 39-48.<br>Sarrion, M. N.; Santos, F. J.; Moyano, E.; Galceran, M. T.*                      | Carbowax/TPR                                      | LC-TMS           |
|                                                                                                                                                                                                |                                                                                                 | Simultaneous mercury and tin speciation in environmental samples by GC-MIP/AES after preconcentration by solid phase microextraction                                                                                                                                                                 |                                                   |                  |

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| 1166 | Mercury and tin in environmental samples. | <i>Journal De Physique. IV : JP (2003) 107 (II), 1423.</i><br><br>Carrera, R.; De Diego, A.; Delgado, A.; Madariaga, J.; Sanz, J.; Zuloaga, O.<br><br>Improvement of measurement precision of SPME-GC/MS determination of tributyltin using isotope dilution calibration.<br><i>Analytical Chemistry (2002) 74 (21), 5606-5613.</i><br>Bancon-Montigny, C.; Maxwell, P.; Yang, L.; Mester, Z.; Sturgeon, R. E. | PDMS                                                     | GC-MIP/AES   |
| 1074 | Tributyltin                               | Determination of methylphosphonic acid in water by SPME-GC<br><i>Fenxi Ceshi Xuebao, 23, #1, 106-108</i><br>Yuan, L.; Xu, D. N.                                                                                                                                                                                                                                                                                |                                                          | GC-MS        |
| 1952 | Methyl phosphoric acid in water           | Electrochemically controlled (EC) SPME based on over oxidized sulfonate polypyrrole<br><i>Talanta, 67, #1,, 245-251</i><br>Ertas, N; Pekmez, K; Sahin, Y; Tamer, U Udum, Y.; Yildiz, A.                                                                                                                                                                                                                        | sulfonated polypyrrole coated fiber immersed             | ETAAS        |
| 1953 | Nickle-cadmium from water                 | Risk assessment of domestic and industrial effluents unloaded into a freshwater environment<br><i>Ecotoxicology &amp; Environmental Safety, 61, #3, 380-391</i><br>Di Marzio, W.; Saenz, M.; Alberdi, J.; Tortorelli, M.; Silvana, G.                                                                                                                                                                          |                                                          | GC-MS        |
| 1954 | Industrial effluent in freshwater         | Low part per trillion determination of reactive alkanethiols in wastewater by in situ derivatization-SPME followed by GC/MS<br><i>Anal. Chem., 77, #18, 6012-6018</i><br>Alzaga, R.; Bayona, J.M.; Garcia-Jares, C.; Llompart, M.; Salgado-Petinal, C.                                                                                                                                                         | N-ethylmaleimide derivatives immersion sampling          | GC-MS        |
| 1955 | Alkanethiols in wastewater                | <b>Sediment toxicity of a rapidly biodegrading nonionic surfactant: Comparing the equilibrium partitioning approach with measurements in pore water</b><br><i>Env Sci &amp; Tech. 42, #11, 4215-4221 (Jun 1 2008)</i><br>Droge, Steven T. J.; Hermens, Joop L. M.; Postma, Jaap F.                                                                                                                             |                                                          | GC-MS        |
| 2876 | Alcohol ethoxylates in marine sediment    | <b>Analysis of freely dissolved alcohol ethoxylate homologues in various seawater matrixes using solid-phase microextraction</b><br><i>Anal. Chem. 79, #7, 2885-2891 (2007-04-01)</i><br>Droge, S. T.; Sinnige, T. L.; Hermens, J. L. M.                                                                                                                                                                       | headspace                                                | GC           |
| 2443 | Ethoxylates in seawater                   | Determination of total chromium in seawater by isotope dilution sector field ICPMS using GC s sample introduction<br><i>Anal. Chem., 76, #13, 3510-3516</i><br>Abranko, L; Mester, ; Sturgeon, .; Yang, L                                                                                                                                                                                                      | PDMS fiber TFA derivatives headspace                     | ICPMS        |
| 1956 | Chromium in seawater                      | Determination of chromium(III) in water by SPME w/ polyimide-coated fiber and GC-FPD<br><i>J. Chromatogr. A, 1062, #1, 49-55</i><br>Ding, Tzuoo-Huei; Lin, Huang-Huei; Whang, Chen-Wen                                                                                                                                                                                                                         | polyimide fiber TFA derivatives                          | GC-FPD       |
| 1957 | Chromium in Water                         | SPME: A powerful sample preparation tool prior to mass spectrometric analysis<br><i>J. Mass Spectrom.(2004) 39(3), 233-254</i><br>Vas, Gyorgy; Vekey, Karoly                                                                                                                                                                                                                                                   | review article                                           | GC-MS, LC-MS |
| 1958 | Organics in water                         | Comparison between headspace and aqueous phase SPME method for speciation analysis of butyltin compounds in sea water<br><i>J Food and Drug Analysis, 12, #3, 205-211</i><br>Hsia, Meng-Pei; Hsu, Tau-Being; Liu, Shiu-Mei                                                                                                                                                                                     | headspace & immersion sampling                           | GC           |
| 1959 | Butyltin in sea water                     | Multielemental speciation analysis of organometallic compounds of mercury, lead, and tin in natural water samples by headspace-SPME followed by GC-MS<br><i>J. Chromatogr. A, 1034,#1-2, 191-197</i><br>Centineo, G; Gonzalez, E; Sanz-Medel, A                                                                                                                                                                | Various fibers NaEt <sub>4</sub> B derivatives headspace | GC-MS        |
| 1960 | Hg,Pb,Tn in water & seawater              | Reevaluation of headspace SPME-GC-MS for the determination of methyl tert-butyl either in water samples<br><i>J. Chromatogr. A, 1021, #1-2, 157-164</i>                                                                                                                                                                                                                                                        | headspace                                                | GC-MS        |
| 1961 | MTBE in water                             |                                                                                                                                                                                                                                                                                                                                                                                                                |                                                          |              |

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|------|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|--------------------|
| 1962 | Diacetyl Odor in water                   | Identification of 2,3-butanedione (diacetyl) as the compound causing odor events at trace levels in the Llobregat River and Barcelona's treated water (Spain)<br><i>J. Chromatogr. A</i> , 1034, #1-2, 175-182<br>Diaz, A.; Galceran, Ma. Teresa; Ventura, F. | 75µm Carboxen<br>30min @ 60°C<br>NaEt <sub>4</sub> B derivative<br>Headspace | GC-MS              |
| 1963 | Odors/volatiles in water                 | Simultaneous determination of 22 volatile organic compounds, methyl-tert-butyl ether, 1,4-dioxane, 2-methylisoborneol and geosmin in water by headspace SPME-GC-MS<br><i>Anal. Chim. Acta</i> , 548, #1-2, 79-85<br>Daishima, Shigeki; Nakamura, Sadao        | 100µm PDMS<br>headspace                                                      | GC-MS              |
| 2807 | Geosmin and 2-methylisoborneol in water  | <b>Determination of musty odorants, 2-methylisoborneol and geosmin, in environmental water by headspace GC-MS</b><br><i>J. Chromatogr. A</i> , 1186, #1-2, 434-437 (Apr 4 2008)<br>Kataoka, Hiroyuki; Okamura, Kota; Saito, Keita                             | 65µm PDMS-DVB<br>Headspace<br>70 °C for 30 min.                              | GC-MS              |
| 1964 | Alkyl lead in water                      | Study of alkyl lead speciation by Head Space (HS).<br>SPME coupled with GC-MS<br><i>Fenxi Shiyansh</i> , 23, #2, 14-17<br>Shuai, Q.; Zheng, C; Shuai, Q.; Yang, W.; Zheng, Y.                                                                                 | Headspace                                                                    | GC-MS              |
| 2666 | Volatiles from linoleic acid             | <b>Effects of riboflavin-photo sensitization on the formation of volatiles in linoleic acid model systems with sodium azide or D2O</b><br><i>Food Chemistry</i> 105, #4, 1375-1381 (2007)<br>Yang, Seungk; Lee, JaeMin; Lee, JaeChul; Lee, JaeHwan            | Headspace                                                                    | GC-MS              |
| 1965 | C2-C7 Fatty acids in water/lanolin       | Volatile fatty acids as malodorous compounds in wool scouring water and lanolin. Origin and characterization.<br><i>Env Technology</i> , 24, #12, 1465-1470<br>Jover, E.; Abalos, M.; Ortiz, L.; Bayona, J.                                                   | headspace                                                                    | GC-CI-MS           |
| 1966 | Volatile oxidative products in oil-water | SPME of volatile oxidation compounds in oil-in-water emulsions<br><i>Food Chemistry</i> , 92, #3, 401-406<br>Beltran, G; Aguilera, M; Gordon, Michael H.                                                                                                      | headspace<br>50°C for 20 min.                                                | GC-FID.            |
| 1967 | Organometallic derivatives in water      | Full automation of derivatization: SPME-GC-MS with dual-arm system for the determination of organometallic compounds in aqueous samples.<br><i>J Chromatogr A</i> , 1025, #1, 77-84<br>Parkinson, D; Bruheim, I; Christ, I; Pawliszyn, J                      | phenyl derivative<br>headspace                                               | GC-MS              |
| 1968 | Methyl mercury from seawater             | Determination of methylmercury and mercury(II) in a marine ecosystem using SPME--GC-MS<br><i>Anal. Chim. Acta</i> , 551, #1-2, 192-198<br>Bhalke, S.; Mishra, S.; Puranik, V.D.; Shukla, V.K.; Tripathi, R.M.                                                 | headspace<br>Na(C <sub>6</sub> H <sub>5</sub> ) <sub>4</sub> B<br>derivative | GC-MS              |
| 1969 | Mercury from water/ sediment             | Speciation analysis of mercury by SPME and multicapillary GC hyphenated to ICP-TOF spectrometry.<br><i>J Chromatogr A</i> , 1055, #1-2, 197-207<br>Jitaru, P.; Adams, F. C.*                                                                                  | 75µm Carboxen<br>NaEt <sub>4</sub> B derivatives<br>headspace                | ICP-TOF-MS         |
| 1970 | BTEX in water                            | Diffusion-based calibration for SPME of benzene, toluene, ethylbenzene, p-xylene and chlorobenzenes from aqueous samples<br><i>J Chromatogr A</i> , 1025, #1, 11-16<br>Paschke, A.; Popp, P.                                                                  | headspace                                                                    | GC                 |
| 1971 | Chlorinated benzenes                     | Indirect determination of low vapour pressures using SPME - Application to tetrachlorobenzenes & trichlorobenzyltoluenes<br><i>J Chromatogr A</i> , 1072, #1, 93-97<br>Paschke, Albrecht; Schroter, Uwe; Schuurmann, Gerrit                                   | minutes to hour<br>headspace                                                 | GC                 |
| 2890 | Organo-phosphorus compounds              | <b>LC-MS-based procedures for monitoring of toxic organophosphorus compounds and verification of pesticide and nerve agent poisoning</b><br><i>Anal. Bioanal. Chem.</i> 391, #1, 97-116 (May 2008)<br>John, Harald; Thiermann, Horst; Worek, Franz            | review article                                                               | LC-MS              |
| 1972 | Organo-phosphorus pesticides in water    | Determination of organophosphorus pesticides in spiked river water samples using SPME-GC With EI-MS and ICP-MS detection<br><i>J Anal At Spectrom</i> , 20, #9, 876-882<br>Blanco-Gonzalez, E; Fidalgo-Used, N; Montes-Bayon, M; Sanz-Medel, A                | immersed sampling                                                            | GC-MS<br>GC-ICP-MS |

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| 2404 | Pyrethroids<br>in cucumber<br>and watermelon                             | using HPLC combined with post-column photochemically induced<br>fluorimetryderivatization and fluorescence detection<br><i>Anal. Chim. Acta</i> 607, #1, 74-82 (21 JAN 2008)<br>Vazquez, P. P.; Mughari, A. R.; Galera, M. M.                                                                                       | 30 min @ 65°C<br>fluorimetry<br>derivatization | HPLC-PIF-FD |
| 2609 | Pyrethroids<br>photodegradation                                          | Alternative sample preparation method for photochemical studies<br>based on SPME: Synthetic pyrethroid photochemistry<br><i>J. Chromatogr. A</i> 1152, #1-2, 156-167 (Jun 8 2007)<br>Cela, R.; Fernandez-Alvarez, M.; Garcia-Jares, C.; Llompарт, M.;<br>Lores, M.; Sanchez-Prado, L.                               | headspace                                      | GC-MS       |
| 2591 | Pyrethroids<br>photodegradation                                          | The photochemical behaviour of five household pyrethroid insecticides<br>and a synergist as studied by photo-solid-phase microextraction<br><i>Anal. Bioanal. Chem.</i> 388, #5-6, 1235-1247 (2007-07)<br>Fernandez-Alvarez, M.; Lores, M. ; Llompарт, M.; Garcia-Jares, C.; Cela, R                                | headspace<br>100µm PDMS                        | GC-MS       |
| 2625 | Pyrethroids<br>in sediment                                               | Occurrence and bioavailability of pyrethroids in a mixed land<br>use watershed<br><i>J. Environ. Qual.</i> 36, #4, 1006-1012 (July/August 2007)<br>Bondarenko, S.; Budd, R.; Gan, J.; Haver, D.; Kabashima, J.                                                                                                      |                                                |             |
| 2594 | Pyrethroids<br>in sediment                                               | Analysis of pyrethroids in sediment pore water by SPME<br><i>Environ Toxicol Chem</i> 26, #12, 2587-93 (2007 Dec)<br>Bondarenko, Svetlana; Spurlock, Frank; Gan, Jianying                                                                                                                                           |                                                |             |
| 2865 | Pyrethroids and<br>organochlorinated<br>pesticides in<br><br>bovine milk | Development of a SPME-GC with micro ECD detection method for<br>a multiresidue analysis of pesticides in bovine milk<br><i>Anal. Chim. Acta</i> 617, #1-2, 37-50 (Jun 9 2008)<br>Cela, Rafael; Dagnac, Thierry; Fernandez-Alvarez, Maria;<br><br>Garcia-Jares, Carmen; Lamas, J.: Pablo; Llompарт, Maria; Lores, M. | 65µm PDMS-DVB<br>30min @ 100°C<br>stirred      | GC-ECD      |
| 2537 | Pyrethroids<br>in water                                                  | Effects of sample pretreatment and storage conditions in the<br>etermination of pyrethroids in water samples by SPME-GC-MS<br><i>Anal Bioanal Chem</i> 387, #5, 1841-1849 (2007)<br>Casas, V.; Llompарт, M.; Garcia-Jares, C.; Cela, R.; Dagnac, T                                                                  | headspace<br>40°C                              | GC-MS       |
| 1973 | Pyrethroids<br>in water                                                  | Determination of enantiomers of synthetic<br>pyrethroids in water by SPME<br>enantioselective gas chromatography.<br><i>J Agri Food Chem</i> , 52, #4, 736-741<br>Liu, W. P.; Gan, J. J.*                                                                                                                           |                                                | GC          |
| 2908 | Pesticides in<br>water                                                   | Ultrasound-assisted emulsification-microextraction of emergent<br>contaminants and pesticides in environmental waters<br><i>J. Chromatogr. A</i> 1190, #1-2, 27-38 (May 9 2008)<br>Cela, R.; Garcia-Jares, C.; Garcia-Monteagudo, J.; Llompарт, M.;<br>Regueiro, J.                                                 | 10min immersion                                | GC-MS       |
| 2172 | Polar organics<br>in water                                               | Strategies for the microextraction of polar organic contaminants in<br>water samples<br><i>Anal. Bioanal. Chem.</i> 384, #7-8, 1447-1461 (2006)<br>Quintana, Jose Benito; Rodriguez, Isaac                                                                                                                          |                                                | GC-MS       |
| 2268 | Polybrominated<br>diphenyl ethers<br>from water                          | Photochemical studies of a polybrominated diphenyl ethers (PBDES)<br>technical mixture by SPME<br><i>Chemosphere</i> 60 #7, 922-928 (2005)<br>Sanchez-Prado, L.; Gonzalez-Barreiro, C.; Lores, M.; Llompарт, M.;<br>Garcia-Jares, C.; Cela, R.                                                                      |                                                |             |
| 1974 | Polybrominate<br>diphenyls/<br>biphenyls<br>in water                     | Development of a SPME-GC-MS method for poly-<br>brominated diphenyl ethers and polybrominated<br>biphenyls in water sample<br><i>Analytical Chemistry</i> , 76, #4, 1054-1062<br>Polo, M.; Gomez-Noya, G.; Quintana, J. B.; Llompарт, M.;<br>Garcia-Jares, C.; Cela, R.                                             | headspace                                      | GC-MS       |
| 1975 | Polybrominate<br>diphenyl ether<br>from water                            | Photochemical studies of a polybrominated diphenyl<br>ethers (PBDES) technical mixture by SPME<br><i>Chemosphere</i> , 60, #7, 922-928<br>Cela, R.; Garcia-Jares, C.; Gonzalez-Barreiro, C.;<br>Llompарт, M.; Lores, M.; Sanchez-Prado, L.                                                                          |                                                | GC          |
| 1976 | PCBs in<br>water                                                         | Determination of PDMS-seawater distribution<br>coefficients for PCBs and chlorinated biphenyls<br>and chlorinated pesticides by SPME-GC-MS                                                                                                                                                                          | 100µm PDMS<br>12 day extraction                | GC-MS       |

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|                                             | <i>J. Chromatogr. A</i> ,1066, #1-2, 165-175<br>Zeng, E; Tsukada, D; Noblet, J.; Peng, J                                                                                                                                                                          | immersion                                                            |                 |
| 1977 Phthalate esters in water              | Multivariate optimization of a SPME method for the analysis of phthalate esters in environmental waters<br><i>J. Chromatogr. A</i> ,1072, #1, 63-72<br>Cela, R; Garcia-Jares, C; Llompарт, M Polo, M                                                              | Various fibers<br>direct immersion & headspace                       | GC-MS           |
| 1978 Tin compounds in water                 | New approach of SPME improving the extraction yield of butyl and phenyltin compounds by combining the effects of pressure and type of agitation<br><i>J. Chromatogr. A</i> ,1072, #1, 19-27<br>Bueno, M; Darrouzes, J; Holeman, M; Pecheyran, C; Potin-Gautier, M | Ethylate derivatives<br>headspace<br>agitated                        | GC              |
| 1979 Aliphatic amines in water              | Determination of aliphatic amines using N-succinimidyl benzoate as a new derivatization reagent in GC combined with SPME<br><i>J. Chromatogr. A</i> ,1021, #1-2, 175-181<br>Zhao, Y.; Cai, L.; Jing, Z.; Wang, H.; Yu, J.; Zhang, H.                              | 60min @ 80°C<br>headspace<br>succinimidyl benzoate derivatives       | GC-MS<br>GC-FID |
| 2834 Aromatic amines in food                | <b>Analytical methods applied to the determination of heterocyclic aromatic amines in foods</b><br><i>J. Chromatogr. B</i> ,862, #1-2, 15-42 (Feb 1 2008)<br><b>Afonso, A.M.; Ayala, J.H.; Gonzalez, V.; Sanz Alaejos, M.</b>                                     | Review article                                                       |                 |
| 1980 Aromatic amines in water               | In situ derivatization/SPME determination of polar aromatic amines.<br><i>Analytical Chemistry</i> , 76, #4, 1028-1038<br>Zimmermann, T.; Ensinger, W. J.; Schmidt, T. C.*                                                                                        | 65µm PDMS-DVB<br>diazotation/ iodination                             | GC-MS           |
| 1981 Aromatic amines in water               | Determination of aromatic amines in waste water by SPME-GC<br><i>Fenxi Ceshi Xuebao</i> , 23, #3, 18-21<br>Peng, J. G.; Wang, D. H.; Wu, C. Y.                                                                                                                    |                                                                      | GC              |
| 1982 Phenols in water                       | Comparative study of the use of flow-through systems with and without air segmentation<br>determination of phenols by SPME-GC<br><i>Chromatographia</i> , 59, #5-6, 387-391<br>Nome, R. C.; Carasek, E. *                                                         | 80µm polyacrylate<br>100µm PDMS<br>immersed                          | GC              |
| 1983 Aldehydes in water                     | Determination of low-molecular mass aldehydes by automated headspace spme with in-fibre derivatisation<br><i>J. Chromatogr. A</i> , 1071, #1-2, 147-154<br>O'Reilly, John; Pawliszyn, Janusz; Wang, Qing                                                          | headspace<br>PFBHA derivatives                                       | GC-FID          |
| 1984 Aldehydes in water                     | Determination of low-molecular mass aldehydes by automated headspace SPME with in-fibre derivatization<br><i>J. Chromatogr. A</i> , 1071, #1-2,147-154<br>Wang, Qing; O'Reilly, John; Pawliszyn, Janusz                                                           | PFBHA derivatives<br>headspace                                       | GC-FID          |
| 2197 Organochlorine pesticides in sediments | <b>Concentration and fate of persistent organochlorine pesticides in estuarine sediments using headspace SPME</b><br><i>Chemosphere</i> 62, #11,1869-1878 (2006)<br>Chang, Sue-Min; Doong, Ruey-An                                                                | headspace                                                            |                 |
| 2388 Organochlorine pesticides in water     | <b>Determination of organochlorine pesticides in ground water samples using SPME by GC-ECD</b><br><i>Talanta</i> 72, #5, 1833-1841 (2007-07-31)<br>Raposo, J. L., Jr.; Re-Poppi, N.                                                                               | 50/30µm DVB/CAR<br>immersion                                         | GC-ECD          |
| 1985 Organochlorine pesticides in water     | Analysis of organochlorine pesticides in water by novel activated carbon fiber SPME coupled w/GC-MS<br><i>J. Environ. Sci. Health Part B</i> , 39, #2, 235-248<br>Fang, N; Jia, J; Sun, T; Wang, Y; Yu, J                                                         |                                                                      | GC-MS           |
| 2240 Tebuthiuron and diuron in water        | <b>Development and validation of a methodology for the determination of pesticides in water by SPME-LC/DAD</b><br><i>J. Liq. Chromatogr.</i> 28 #18, 2909-2919 (2005)<br>Brondi, Silvia H. G.; Lancas, Fernando M.; Rodrigues Da Silva, Jose C.                   | 85µm polyacrylate<br>50 minutes,                                     | LC/DAD          |
| 1986 Organochlorine pesticides in water     | Optimization of a methodology for the determination of organochlorine pesticides in surface water by SPME-GC-MS<br><i>J. Environ. Sci. Health Part B</i> , 40, #4, 513-523<br>Brondi, Silvia Helena G.; Lancas, Fernando M.                                       | 85µm polyacrylate<br>40min @ >20°C<br>agitation<br>immersed sampling | GC-MS           |

GC-MS methodology using SPME for the multiresidue

|      |                                  |                                                                                                                                                                                                                                                                                                                |                                                                                  |                   |
|------|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|-------------------|
| 1987 | Pesticides in surface water      | determination of pesticides in surface waters.<br><i>Intl J Env Analytical Chem</i> , 84, #14-15, 1079-1092<br>Albanis, T.; Hela, D.; Lambropoulou, D.; Sakkas, V.                                                                                                                                             | 65µm PDMS-DVB                                                                    | GC-SIM-MS         |
| 1988 | Endosulfan, carbofuran in water  | Pesticides in Esteros del Ibera (AR): Evaluation of impacts and proposal of guidelines for water quality protection<br><i>Ecol. Model.</i> , 86, #1, 85-97<br>Boia, C.; Borrego, C.; Silva, C.; Valente, J                                                                                                     | immersed sampling                                                                | GC-MS             |
| 1989 | Endosulfan, in water             | Optimization and application of SPME for the GC determination of endosulfan and its major metabolites in the ng L/sup-1 / range in aqueous solutions<br><i>Anal. Bioanal. Chem.</i> , 376, #1, 61-68<br>Deger, A.B.; Frimmel, F.H.; Gremm, T.J.; Mendez, L.                                                    | 100µm PDMS<br>30% NaCl                                                           | GC-ECD<br>GC-MS   |
| 2306 | PAHs in water                    | <b>Determination of membrane permeability without calibration using (SPME)</b><br><b>J. Membr. Sci. 68 #1, 65-73 (2005)</b><br><b>Liu, Xinyu; Pawliszyn, Janusz</b>                                                                                                                                            | PDMS                                                                             | GC                |
| 1990 | Phthalates in water              | Application of membrane techniques to water purification. Removal of phthalates<br><i>Desalination</i> , 162, #1-3, 121-128<br>Bodzek, M; Dudziak, M; Luks-Betlej, K                                                                                                                                           | 65µm CW/DVB                                                                      | GC-FID            |
| 1991 | PAHs in water                    | Degradation of PAHs in aqueous solutions by ultrasonic irradiation<br><i>J. Hazard. Mater.</i> , 108, #1-2, 95-102<br>Goula,G; Kalogerakis,N; Mantzavinos,D; Psillakis, E                                                                                                                                      | 20°C & 40°C<br>immersed sampling<br>sonicated                                    | GC-MS             |
| 1992 | Vinyl chloride in water          | Oxidative microbial transformation of vinyl chloride under anaerobic conditions in ground water<br><i>Proc. of the Third Int. Conf. on Rem. of Chlorinated and Recalcitrant 2002</i> , pp1571-1578<br>Banwart, S; Holliger, C; Morgan, PI; Shah, N.; Szynalski, K.                                             | headspace                                                                        | GC-MS             |
| 1993 | Adipate in water                 | Determination of adipate in water with headspace SPME and single ion monitoring GC-MS<br><i>Fenxi Shiyanshi</i> , 23, #4, 77-80<br>Zhang, W. Y.; Wang, C. Y.; Yang, Z. J.                                                                                                                                      | Headspace                                                                        | GC-MS             |
| 1994 | Bisphenol in water               | SPME coupled with HPLC w/ fluorimetric detection for the determination of bisphenol A, 4-n-nonylphenol and 4-t-octylphenol in environmental water samples.<br><i>Analytical Letters</i> , 37, #4, 739-753<br>Cai, Y. Q.; Jiang, G. B.*; Liu, J. F.; Liang, X.; Yao, Z. W.; Liu, J. M.; Liu, J. Y.; Zhou, Q. X. | 50µm CW-TPR                                                                      | HPLC-Fluorimetric |
| 1995 | Volatiles from Bacteria in water | Electronic nose technology for the detection of microbial and chemical contamination of potable water<br><i>Sens Actuators, B Chem</i> , 106, #1, 3-6<br>Canhoto, O.; Magan, N.                                                                                                                                | headspace @ 25°C                                                                 | GC                |
| 1996 | Herbicides in water              | On-fibre silylation following SPME for the determination of acidic herbicides in water samples by GC<br><i>Anal. Chim. Acta</i> , 537, #1-2, 259-266<br>Cela, R.; Gonzalez, R.; Quintana, J.; Rodriguez, I.; Rubi, E.                                                                                          | 85µm polyacrylate<br>MTBSTFA derivative<br>stirred                               | GC-MS             |
| 1997 | Herbicides in water              | Analysis of the chloroacetanilide herbicides in water using SPME with CAR/PDMS and GC/ECD<br><i>J of AOAC Intl</i> , 88, #4, 1236-1241<br>Hwanc, Ying-Ming; Wong, Yih-Gang; Ho, Wu-Hsiung                                                                                                                      | 75µm Carboxen<br>immersed sampling                                               | GC-ECD            |
| 2790 | Triclosan in water               | <b>Sonochemical degradation of triclosan in water and wastewater</b><br><b>Ultrason. Sonochem.</b> 15, #5, 689-694 (July 2008)<br><b>Barro, R.; Garcia-Jares, C.; Kalogerakis, N.; Llompert, M.; Lores, M.; Mantzavinos, D.; Petrakis, C.; Psillakis, E.; Sanchez-Prado, L.</b>                                |                                                                                  | GC-ECD<br>GC-MS   |
| 2171 | Triclosan in water               | <b>Further research on the photo-SPME of triclosan</b><br><b><i>Anal. Bioanal. Chem.</i>384, #7-8, 1548-1557 (2006)</b><br><b>Cela, R.; Fernandez-Alvarez, M.; Garcia-Jares, C.; Llompert, M.; Lores,Marta; Sanchez-Prado, L.</b>                                                                              | PDMS fiber                                                                       | GC-MS             |
| 1998 | Triclosan in water               | Optimization of SPMEconditions for the determination of triclosan and possible related compounds in water samples<br><i>J Chromatogr A</i> , 1072, #1, 107-115<br>Canosa, P.; Rodriguez, I.; Rubi, E.; Cela, R.                                                                                                | 85µm polyacrylate<br>MTBSTFA derivative<br>30min extraction<br>immersed sampling | GC-MS             |



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|------|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|----------------|
| 1999 | Anti-inflammatory drugs in water          | Application of strategic sample composition to the screening of anti-inflammatory drugs in water samples using SPME<br><i>Anal. Chim. Acta</i> , 524, #1-2, 63-71<br>Carpinteiro, J.; Carro, A.; Cela, R.; Lorenzo, R.; Martinez, E.; Quintana, J.; Rodriguez, I.                                        | 85µm polyacrylate silylated esterification headspace          | GC-MS          |
| 2793 | Anti-inflammatory drugs in water          | <b>Determination of anti-inflammatory drugs in water samples, by in situ derivatization, SPME-GC-MS</b><br><i>Talanta</i> 75, #1, 111-115 (MAR 15 2008)<br>Araujo, L.; Wild, J.; Villa, N.; Camargo, N.; Cubillan, D.; Prieto, A.                                                                        | 100µm PDMS headspace dimethyl sulphate, derivatives           | GC-MS          |
| 2499 | Anti-inflammatory drugs in water          | <b>Recently developed GC/MS and LC/MS methods for determining NSAIDs in water samples</b><br><i>Anal Bioanal Chemistry</i> 387, #4, 1203-1214 (FEB 2007)<br>Farre, M.; Petrovic, M.; Barcelo, D.                                                                                                         | derivatives                                                   | LC-MS<br>GC-MS |
| 2784 | Pharmaceutical residue in sewage effluent | <b>A combination of statistical and analytical evaluation methods as a new optimization strategy for the quantification of pharmaceutical residues in sewage effluent</b><br><i>Anal. Chim. Acta</i> , 613, #2, 169-176 (Apr 21 2008)<br>Budziak, D.; Carasek, E.; Costa, L.; Martendal, E.; Suchara, E. | 2.5-7 pH                                                      | GC-MS-MS       |
| 2000 | Estrogens in sewage water                 | Applicability of SPME followed by on-fiber silylation for the determination of estrogens in water samples by GC-MS-MS<br><i>J Chromatogr A</i> , 1056, #1-2, 179-185<br>Carpinteiro, J.; Carro, A.; Cela, R.; Lorenzo, R.A.; Quintana, J.; Rodriguez, I.                                                 | 85µm polyacrylate MSTFA derivatives immersed sampling         | GC-MS-MS       |
| 2001 | Chloro-brom-anisole in water              | Determination of odorous mixed chloro-bromoanisoles in water by SPME-GC-MS<br><i>J Chromatogr A</i> , 1064, #1-2, 97-106<br>Diaz, A.; Ventura, F.; Galceran, M.                                                                                                                                          | headspace<br>100µm PDMS                                       | GC-MS          |
| 2002 | Nonylphenol in water                      | Estimation of measurement uncertainty for the determination of nonylphenol in water using SPME and SPME procedures.<br><i>Analytica Chimica Acta</i> , 506, #1, 71-80<br>Diaz, A.; Vazquez, L.; Ventura, F.; Galceran, M.                                                                                |                                                               | GC-MS          |
| 2523 | Organics in sediment                      | <b>Predicting organic contaminant concentrations in sediment porewater using solid-phase microextraction</b><br><i>Chemosphere</i> 66, #8, 1408-1414 (JAN 2007)<br>Yang, Ze-Yu; Zeng, Eddy Y.; Maruya, Keith A.; Mai, Bi-Xian; Ran, Yong                                                                 |                                                               |                |
| 2003 | Organotin in water and sediment           | Validation, using a chemometric approach, of GC-inductively coupled plasma-atomic emission spectrometry (GC-ICP-AES) for organotin determination<br><i>Anal. Bioanal. Chem.</i> , 376, #2, 226-235<br>Aguerre, S.; Lespes, G.; Pecheyran, C.                                                             |                                                               | GC-ICP-AES     |
| 2004 | Bethrodine herbicide in water             | Development of a novel SPME element for thermal desorption GC analysis<br><i>J. Chromatogr. A</i> , 1035, #2, 277-279<br>Hosaka, A.; Ohtani, H.; Tsuge, S.; Wang, L.; Watanabe, C.                                                                                                                       | 30µm PDMS                                                     | GC-MS          |
| 2005 | Fumigants in soil/water                   | Application of SPME for the determination of soil fumigants in water and soil samples<br><i>Journal of Separation Science</i> , 28, #1, 98-103<br>Fuster, S.; Beltran, J.; Lopez, F. J.; Hernandez, F.                                                                                                   | soil headspace or immersed in water                           | GC/ECD/NPD     |
| 2006 | Surfactants in water                      | Impurity analysis of 1,4-dioxane in nonionic surfactants and cosmetics using headspace SPME coupled w/GC & GC-MS<br><i>J. Chromatogr. A</i> , 1071, #1-2, 141-145<br>Fuh, C. Bor; Lai, M.; Tsai, H. Y.; Chang, C. M.                                                                                     | headspace                                                     | GC, GC-MS      |
| 2007 | Surfactants in water                      | Rapid screening for trace nonyl-phenyl polyethylene glycol ether in water by SPME combining with laser desorption ionization MS<br><i>Proc. 50th ASMS Conf. Mass Spectrom. Allied Top.</i> 2002, p597-599<br>Chen, Yu-Chie; Sun, Mei-Chuan                                                               | 14 hour polycrystalline graphite coated fiber                 | SALDI-MS       |
| 2008 | Methylamine in water                      | Analysis of methylamine by SPME and HPLC after on-fiber derivatization with 9-fluorenylmethyl chloroformate<br><i>Anal. Chim. Acta</i> , 513, #2, 425-433<br>Campins-Falco, P.; Chafer-Pericas, C.; Herraiez-Hernandez, R                                                                                | 9-fluorenylmethyl chloroformate derivative immersion sampling | HPLC           |

|      |                                                          |                                                                                                                                                                                                                                                                                                                                                    |                                                                                       |         |
|------|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------|
| 2009 | Methylamine<br>in water                                  | A new selective method for dimethylamine in water analysis<br>by LC using SPME and two-stage derivatization with<br>o-phthalaldehyde and 9-fluorenylmethyl chloroformate<br><i>Talanta</i> , 66, #5, 1139-1145<br>Chafer-Pericas, C.; Herraiez-Hernandez, R.; Campins-Falco, P                                                                     | 50µm CW-TPR<br>9-fluorenylmethyl<br>chloroformate<br>derivative<br>immersion sampling | HPLC    |
| 2010 | Bisphenol A<br>from water                                | Determining leaching of bisphenol A from plastic<br>containers by SPME-GC-MS<br><i>Anal. Chim. Acta</i> , 539, #1-2, 41-47<br>Chang, Chia-Min; Chou, Chi-Chi; Lee, Maw-Rong                                                                                                                                                                        | 85µm polyacrylate<br>50min @ 65°C<br>BSTFA derivative<br>headspace                    | GC-MS   |
| 2011 | Bisphenol A<br>from water                                | Determination of trace bisphenol-A in leachate by<br>SPME coupled with HPLC<br><i>Fenxi Kexue Xuebao</i> , 20, #5, 461-464<br>Deng, L.; Zhang, W. H.; Feng, X. H.; Deng, N. S.*                                                                                                                                                                    |                                                                                       | HPLC-UV |
| 2426 | Trihalomethanes<br>in drinking water                     | <b>Fibre selection based on an overall analytical feature comparison for the<br/>solid-phase microextraction of trihalomethanes from drinking water</b><br><i>J. Chromatogr., A</i> 1139, #1, 27-35 (2007-01-12)<br>San Juan, P. M.; Carrillo, J. D.; Tena, M. T.                                                                                  | 65µm PDMS-DVB<br>headspace<br>40°C, 0.36 g mL salt                                    | GC-MS   |
| 2857 | Fuel oxygenates<br>in water                              | <b>Novel analytical methods for the determination of fuel oxygenates<br/>in water</b><br><b>HANDBOOK OF ENVIRONMENTAL CHEMISTRY pp1-30 (2007)</b><br>Jochmann, Maik A.; Schmidt, Torsten C.                                                                                                                                                        | review article                                                                        |         |
| 2758 | Fuel oxygenates<br>in tap water                          | <b>Measurement of fuel oxygenates in tap water using SPME-GC-MS</b><br><i>J Chrom Sci</i> , 46, #5, 381-387 (MAY-JUN 2008)<br>Cardinali, Frederick L.; Blount, Benjamin C.; Schmidt, Rachael; Morrow, J.                                                                                                                                           | headspace                                                                             | GC-MS   |
| 2012 | THM & TBE<br>in tap water                                | Measurement of trihalomethanes and methyl<br>tertiary-butyl ether in tap water using SPME-GC-MS.<br><i>J Chrom Sci</i> , 42, #4, 200-206<br>Cardinali, F.; Ashley, D.; Morrow, J.; Moll, D.; Blount, B.                                                                                                                                            | headspace                                                                             | GC-MS   |
| 2013 | Ethanol in<br>air & water                                | Methods for sampling and analysis of tropospheric<br>ethanol in gaseous and aqueous phases.<br><i>Chemosphere</i> , 52, #8, 1307-1319<br>Monod, A.; Bonnefoy, N.; Kaluzny, P.; Denis, I.;<br>Foster, P.; Carlier, P.                                                                                                                               | headspace from<br>cryocooled sample                                                   | GC-FID  |
| 2014 | Aniline<br>in water                                      | Determination of aniline in water by microwave-<br>assisted headspace SPME-gas chromatography.<br><i>Chromatographia</i> , 59, #7-8, 517-520<br>Yan, C. T.; Jen, J. F.*                                                                                                                                                                            | 65µm PDMS-DVB<br>headspace<br>pH12, salt added                                        | GC-FID  |
| 2015 | PAHs<br>in water                                         | Coupling of a modified in-tube spme technique w/<br>HPLC-fluorescence detection for the ultra-trace<br>determination of PAHs in water samples.<br><i>Chromatographia</i> , 59, #7-8, 501-505<br>Bagheri, H.; Salemi, A.                                                                                                                            | PDMS capillary tube                                                                   | HPLC    |
| 2773 | Formate in<br>plants                                     | <b>Quantitation of formate in plants and its enhancement in response<br/>to environmental stresses</b><br><i>J Applied Biological Chem</i> 50, #4, 211-214 (DEC 2007)<br>Kim, Jae-Kwang; Cho, Myoung-Rae; Baek, Hyung-Jin; Ryu, Tae-Hun;<br>Kim, Jung-Bong; Kim, Jun-Heong; Kim, Myong-Jo; Yu, Chang-Yeon;<br>Fukusaki, Ei-Ichiro; Kobayashi, Akio |                                                                                       | GC/MS   |
| 2458 | Antioxidants<br>in plants                                | <b>Improved method for the in vitro assessment of antioxidant activity of<br/>plant extracts by headspace SPME-GC-ECD</b><br><i>J. Chromatogr., A</i> 1152, #1-2, 150-155 (2007-06-08)<br>Gioti, E. M.; Fiamegos, Y. C.; Skalkos, D. C.; Stalikas, C. D.                                                                                           | headspace<br>hydrazone derivative                                                     | GC-ECD  |
| 2263 | Malonaldehyde                                            | <b>Development of malonaldehyde assay using headspace -SPME)<br/>and its application for antioxidants</b><br><i>Abstracts of Papers Am Chem Society</i> (2005) 229 #1, U57<br>Fujioka, Kazutoshi; Shibamoto, Takayuki                                                                                                                              | headspace                                                                             | GC/MS   |
| 2016 | Aromatic<br>compounds<br>in 10% alcohol<br>water mixture | SPME for qualitative and quantitative determination of<br>migrated degradation products of antioxidants in an<br>organic aqueous solution<br><i>J. Chromatogr. A</i> , 1080, #2, 107-116<br>Albertsson, Ann-Christine; Burman, L.; Hoglund, A.                                                                                                     | headspace                                                                             | GC      |
| 2017 | Anatoxin<br>in water                                     | Analysis of anatoxin-a using polyaniline as a sorbent in SPME<br>coupled to GC-MS<br><i>J. Chromatogr. A</i> , 1078, #1--2, 120-127                                                                                                                                                                                                                | 32µm polypyrrole film<br>10% salt                                                     | GC-MS   |

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|      |                                     | Davarani, H.; Fallahi, M.; Ghassempour, A.; Mehdiinia, A.; Najafi, N.; Nakhshab, M.                                                                                                                                                                                   | 30min w/agitation                                                  |              |
| 2018 | agrochemicals in water              | SPME-HPLCdetermination of Nabam, Thiram, and Azamethiphos in water samples with UV detection: preliminary data<br><i>Talanta</i> , 66, #1, 266-270<br>Aulakh, Jatinder Singh; Malik, A. K.; Mahajan, R. K.                                                            | PDMS fiber headspace                                               | HPLC-UV      |
| 2019 | Orgaonotin in water                 | Headspace single-drop microextraction for the detection of organotin compounds<br><i>Talanta</i> , 63, #3, 555-560<br>Bancon-Montigny, C; Colombini, V; Maxwell, P; Mester, Z; Sturgeon, R; Yang, Lu                                                                  | headspace                                                          | GC           |
| 2020 | Orgaonotin in water                 | Determination of organotin compounds in water by headspace SPMEwith GC-MS<br><i>J. Chromatogr. A</i> , 1064 #1, 1-8<br>Chou, Chi-Chi; Lee, Maw-Rong                                                                                                                   | NaEt <sub>4</sub> B derivatives<br>30min @ 45°C, pH 5 headspace    | GC-MS        |
| 2021 | Organotin in water/ sediment        | Automated headspace-SPME-retention time locked-isotope dilution GC-MS for the analysis of organotin compounds in water and sediment samples<br><i>J. Chromatogr. A</i> , 1079, #1-2, 408-414<br>David, F; Devos, C; Moens, L; Sandra, P.; Vlieghe, M; Willaert, B     | NaEt <sub>4</sub> B derivatives headspace                          | GC-MS        |
| 2022 | Phthalate esters in water           | Monitoring the sonochemical degradation of phthalate esters in water using SPME<br><i>Chemosphere</i> , 54, #7, 849-857<br>Psillakis, E.; Mantzavinos, D.; Kalogerakis, N.                                                                                            | immersion sampling<br>21°C & 50°C<br>NaCl addition                 | GC           |
| 2023 | Drugs from water                    | SPME-GC-MS for the analysis of selective serotonin reuptake inhibitors in environmental water<br><i>J. Chromatogr. A</i> , 1045, #1-2, 241-247<br>Cela, R; Garcia-Jares, C; Gomez, Mo; Llompert, M; Pablo Lamas, J.;Salgado-Petinal, Carmen                           | 65µm PDMS-DVB<br>100°C, direct extract in situ acetylation         | GC-MS        |
| 2024 | Musty odors in water                | Analysis of earthy and musty odors in water samples bySPME coupled with GC-ion trap MS<br><i>Talanta</i> , 65, #2, 518-524<br>Huang, Shang-Da; Li, Tzu-Ying; Sung, Yu-Hsiang                                                                                          | headspace                                                          | GC-ITMS      |
| 2913 | Triazine herbicides in ground water | <b>Determination of trace triazine and chloroacetamide herbicides in tile-fed drainage ditch water using SPME coupled with GC-MS</b><br><i>Environ. Pollut.</i> 152, #1, 239-244 (March 2008)<br>Huang, Chi-hua; Pappas, Elizabeth A.; Rocha, Cleonice                | <b>100 µm PDMS headspace</b><br><b>40 min,</b><br><b>83% NaCl,</b> | <b>GC-MS</b> |
| 2025 | Triazine herbicides in ground water | Optimization of a SPME procedure for the determination of herbicides by micellar electrokinetic chromatography.<br><i>J Separation Sci</i> , 27, #9, 660-666<br>Frias-Garcia, S.; Sanchez, M.; Rodriguez-Delgado, M                                                   | 65µm PDMS-DVB<br>120 min<br>10% NaCl, stirring                     | SPME-MEKC    |
| 2026 | Triazine herbicides in water        | Analysis of triazine in water samples by SPME-HPLC<br><i>Talanta</i> , 64, #4, 887-893<br>Huang, Hsin-I; Huang, Shang-Da; Sung, Yu-Hsiang                                                                                                                             | 50µm CW-TPR<br>100µm PDMS                                          | HPLC         |
| 2823 | Organics in wastewater              | <b>Applications of chitosan beads and porous crab shell powder combined with for detection and the removal of colour from textile wastewater</b><br><i>Carbohydr Polym</i> 72, #3, 550-556 (May 16 2008)<br>Lu, Li C.; Sye, Wen F.; Tai, Jia W.; Wang, Cheng I.       | <b>PDMS fiber headspace</b>                                        | <b>GC-MS</b> |
| 2027 | Volatiles in wastewater             | A laboratory batch reactor test for assessing nonspeciated volatile organic compound biodegradation in activated sludge<br><i>Water Environ. Res.</i> , 75, #4, 342-354<br>Allen, C.; Cano, M.; Huot, M.; Rhodes, I.; Saterbak, A; Van Compernelle,Remi; Williams, M. | headspace                                                          | GC           |
| 2028 | Organics in seawater                | Determination of organic contaminants in coastal water<br><i>Trends in Anal Chemistry</i> , 23, #4, 341-350<br>Gimeno, R. A.; Marce, R. M.*; Borrull, F.                                                                                                              |                                                                    | LC-MS        |
| 2029 | Musk compounds in water             | Study of the photoinduced degradation of polycyclic musk compounds by SPME and GC-MS<br><i>Rapid Comm in Mass Spec</i> , 18, #111, 1186-1192<br>Sanchez-Prado, L; Llompert,M; Lores,M;                                                                                | PDMS fiber headspace                                               | GC-MS        |

|      |                                                |                                                                                                                                                                                                                                                                                                                                        |                                                              |                      |
|------|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|----------------------|
| 2569 | Phenolic fire retardants in water              | Development of a SPME method for the analysis of phenolic flame retardants in water samples.<br><i>J. Chromatogr., A 1124, #1-2, 11-21 (2006-08-18)</i><br>Polo, M.; Llompарт, M. ; Garcia, C.; Gomez-Noya, G.; Bollain, M.; Cela, R.                                                                                                  | 75µm Carboxen headspace<br>100°C                             | GC-MS                |
| 2509 | Organophosphorus fire retardants in wastewater | Determination of organophosphorus fire retardants and plasticizers in wastewater samples using MAE-SPME with GC-ICPMS and GC-TOFMS detection<br><i>JEM 9, #12, 1329-1336 (2007)</i><br>Ellis, Jenny; Shah, Monika; Kubachka, Kevin M.; Caruso, Joseph A.                                                                               | 30min @ 65°C<br>10% NaCl                                     | GC-TOFMS<br>GC-ICPMS |
| 2483 | Brominated compounds<br>Review article         | Recent developments in the analysis of brominated flame retardants and brominated natural compounds<br><i>J. Chromatogr. A 1153, #1-2, 145-171 (15 JUN 2007)</i><br>Covaci, A.; Voorspoels, S.; Ramos, L.; Neels, H.; Blust, R                                                                                                         |                                                              |                      |
| 2464 | Polybrominated compounds in water              | Microwave-assisted extraction followed by headspace SPME-GC-MS detection for determination of polybrominated compounds in aquaculture samples<br><i>Anal. Bioanal. Chem. 388, #5-6, 1021-1029 (2007-07)</i><br>Carro, A. M.; Lorenzo, R. A.; Phan-Tan-Luu, R.; Cela, R.                                                                | headspace                                                    | GC-MS/MS             |
| 2571 | Polybrominated compounds in sewage sludge      | Simple approach for the determination of brominated flame retardants in environmental solid samples based on solvent extraction and SPME followed by gas chromatography-tandem mass spectrometry<br><i>J. Chromatogr., A 1124, #1-2, 139-147 (2006-08-18)</i><br>Salgado, C.; Llompарт, M. ; Garcia-Jares, C.; Gares-Chao, M.; Cela, R | headspace                                                    | GC-MS/MS             |
| 2030 | PBDEs in water                                 | Investigation of photodegradation products generated after UV-irradiation of five polybrominated diphenyl ethers using photo SPME<br><i>Journal of Chromatography A, 1071, #1-2, 85-92</i><br>Sanchez-Prado, L.; Llompарт, M.; Lores, M.; Garcia-Jares, C.; Cela, R.                                                                   | PDMS fiber                                                   | GC-MS                |
| 2031 | Organics in water                              | Determination of organic contaminants in coastal water<br><i>TrAC Trends Anal. Chem., 23, #4, 341-350</i><br>Borrull, F.; Gimeno, R.A.; Marce, R.M.                                                                                                                                                                                    |                                                              | GC                   |
| 2032 | Acaricide fenbutatin oxide in water            | Determination of the acaricide fenbutatin oxide in water samples by automated headspace-SPME-GC/MS<br><i>J. Sep. Sci., 26, #7, 665-668</i><br>Devos, Christophe; Moens, Luc; Sandra, Pat                                                                                                                                               | headspace<br>NaEt <sub>4</sub> B derivatives<br>30min @ 80°C | GC-MS                |
| 2033 | Alkylbenzene-sulphonic acid in water           | Linear alkylbenzenesulphonic acids (LAS) oxidation by H <sub>2</sub> O <sub>2</sub> and O <sub>2</sub> : An investigation by GC & LC coupled w/MS<br><i>Appl. Catal. B Environ. 59, #1-2, 113-120</i><br>Cuzzola, Angela; Raffaelli, Andrea; Salvadori, Piero                                                                          | headspace                                                    | GC-MS                |
| 2034 | Dioxin, hexa-chlorobenzene in water            | SPME for the evaluation of partition coefficients of a chlorinated dioxin and hexachlorobenzene into humic substances<br><i>Analytical Sciences, 20, #5, 787-791</i><br>Yabuta, H.; Fukushima, M. *; Tanaka, F.; Ichikawa, H.; Tatsumi, K.                                                                                             | immersed                                                     | GC-ECD               |
| 2035 | Dioxin, hexa-chlorobenzene in water            | Influence of chemical characteristics of humic substances on the partition coefficient of a chlorinated dioxin<br><i>Chemosphere, 58, #10, 1319-1326</i><br>Fukushima, Masami; Ichikawa, Hiroyasu; Kikuchi, Atsunori<br>Tanaka, Fumiko; Tatsumi, Kenji; Yabuta, Hikaru                                                                 | headspace                                                    | GC-ECD               |
| 2036 | Molinate herbicides in water                   | A case study of molinate application in a Portuguese rice field: Herbicide dissipation and proposal of a clean-up methodology<br><i>Chemosphere, 59, #7, 1059-1065</i><br>Castro, M.; Manaia, C.; Nunes, O.; Silva-Ferreira, A.                                                                                                        | immersed sampling                                            | GC-FPD               |
| 2037 | Organics in seawater                           | Determination of organic contaminants in coastal water<br><i>Trends in Analytical Chemistry, 23, #4, 341-350</i><br>Gimeno, R. A.; Marce, R. M.; Borrull, F.                                                                                                                                                                           |                                                              | LC-MS                |
| 2816 | Copper II from environmental samples           | Development of SPME-HPLC method for the determination of copper(h) in environmental samples using morpholine-4-carbodithioate<br><i>Annali di Chimica 97, #11-12, 1279-1290 (NOV-DEC 2007)</i><br>Kaur, Varinder; Malik, Ashok Kumar                                                                                                   | 100µm PDMS derivatives                                       | LC-MS                |

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| 2038 | Organometals<br>in water                                    | Simultaneous multi-elemental speciation analysis of organometallic compounds by SPME and multi-capillary GC hyphenated to ICP-time-of-flight-MS<br><i>J Anal At Spectrom</i> , 19, #7, 867-875<br>Adams, Freddy C.; Infante, Heidi G; Jitaru, Petru                                         | 65µm PDMS-DVB<br>75µm Carboxen<br>headspace<br>NaEt <sub>4</sub> B derivatives | ICP-TOF-MS        |
| 2039 | Mercury<br>in water                                         | Speciation analysis of mercury by SPME and multi-capillary GC- inductively coupled plasma-TOF-MS<br><i>J. Chromatogr. A</i> , 1055, #1-2, 197-207<br>Adams, Freddy C.; Jitaru, Petru                                                                                                        | 75µm Carboxen<br>headspace<br>NaEt <sub>4</sub> B derivatives                  | GC-ICP-MS         |
| 2040 | Iodophenols<br>in river water                               | Fast speciation analysis of iodophenol compounds in river waters by capillary electrophoresis-ICP-MS with off-line SPME<br><i>Electrophoresis</i> , 25, #12, 1843-1851<br>Kannamikumarath, Sasi S.; Wuilloud, Rodolfo G.; Jayasinghe, Sarath; Caruso, Joseph A.                             | immersion sampling                                                             | ICP-MS            |
| 2195 | Oil pollutants<br>in water                                  | <b>Determination of oil pollutants in aqueous samples with the use of steam carrier gas chromatography</b><br><b><i>Pet. Chem.</i> 46, #1, 60-64 (2006)</b><br><b>Chuikin, A.V.; Grigor'ev, S.V.; Velikov, A.A.</b>                                                                         |                                                                                |                   |
| 2041 | Organic<br>pollutants<br>from water                         | Optimization of SPME for the GC-MS analysis of persistent organic pollutants<br><i>J AOAC Int</i> , 87, #4, 1021-1027<br>Alpendurada, M.; Gago-MARTINEZ, A; Nogueiras, M, Prado, Juan; Rellan, Satvdra; Vetter, Walter                                                                      | various fibers                                                                 | GC/MS             |
| 2042 | Amines, fatty<br>acids, alkyl-<br>sulfides in<br>wastewater | Use of headspace SPME to characterize odour compounds in subsurface flow constructed wetland for wastewater treatment<br><i>Water Sci. Technol.</i> , 49, #9, 89-98<br>Aguirre, P.; Bayona, J.M.; Garcia, J.; Huang, Y.; Mujeriego, R.; Ortiz, L.                                           | headspace                                                                      | GC/MS or GC/NPD   |
| 2043 | Odorous<br>compounds<br>from waste<br>gas                   | Development of a simple and sensitive method for the characterization of odorous waste gas emissions by means of SPME-GC-MS/olfactometry<br><i>Waste Manage.</i> , 25, #9, 872-879<br>Jans, M.; Kleeberg, K.K.; Liu, Y.; Schlegelmilch, M.; Stegmann, R.; Streese, J.                       | 75µm Carboxen<br>headspace                                                     | GC/MS or GC/FID/O |
| 2044 | PAHs in<br>drinking water                                   | Comparison of strategies for extraction of high molecular weight PAHs from drinking waters<br><i>J Agr Food Chem</i> , 52, #23, 6897-6903<br>Garcia-Falcon, M. S.; Perez-Lamela, M.; Simal-Gandara, J.                                                                                      | immersion sampling                                                             | HPLC-FLD          |
| 2045 | PAHs in<br>water                                            | Determination of PAHs in water by SPME-HPLC<br><i>Analytical Sciences</i> , 20, #10, 1383-1388<br>Chen, H. W.                                                                                                                                                                               | 35min immersed extract<br>added 1.5M sodium<br>monochloroacetate               | HPLC-FLD          |
| 2046 | organochlorides<br>in water                                 | Determination of organochlorides in water using solid-phase microextraction coupled to GC<br><i>Am Lab</i> , 34, #17, 12-14<br>Huang, Min-Jia; Li, Ju-Bai; Liang, Bing; Ou, Qing-Yu                                                                                                         | 65µm PDMS-DVB<br>45sec @ 50°C                                                  | GC                |
| 2047 | PAHs in<br>water                                            | SPME measurement of parent and alkyl PAHs in milliliter sediment pore water samples and determination of K' values<br><i>Environ. Sci. Technol.</i> , 39, #8, 2795-2803<br>Grabanski, C.; Hawthorne, S.; Kreitinger, J.; Miller, D.                                                         | immersion sampling                                                             | GC/ MS            |
| 2048 | Organics in<br>groundwater                                  | Coupling of SPME with MCC/UV-IMS as a tool for rapid on-site detection of groundwater and surface water contamination<br><i>Anal. Bioanal. Chem.</i> , 382, #8, 1842-1847<br>Baumbach, J.I.; Klockow, D.; Walendzik, G.                                                                     | headspace                                                                      | UV-IMS            |
| 2292 | Trichloroanisoles<br>and gesomin in<br>water                | <b>Simultaneous picogram determination of "earthy-musty" odorous compounds in water using SPME-GC-MS coupled with initial cool programmable temperature vaporizer inlet</b><br><b><i>J. Chromatogr. A</i> 1098, #1-2, 7-13 (2005)</b><br><b>Hu, Ruikang; Yang, Zhaoguang; Zhang, Lifeng</b> | DVB/CAR 50/30µm<br>headspace                                                   | GC/MS             |
| 2049 | 2,4,6-Trichloro-<br>anisole in<br>chlorinated               | Detection of 2,4,6-trichloroanisole in chlorinated water at nanogram per litre levels by SPME-GC-ECD<br><i>Anal. Bioanal. Chem.</i> , 382, #2, 341-346<br>Da Silva, Joaquim C. G. Esteves; Pinheiro, Paula B. M.                                                                            | 100µm PDMS<br>headspace                                                        | GC-ECD            |

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|      | water                                                |                                                                                                                                                                                                                                                                                                        |                                                     |                              |
| 2050 | Clenbuterol<br>in water                              | SPME and headspace derivatization of clenbuterol followed<br>by GC-FID and GC-SIMMS quantification<br><i>Anal. Bioanal. Chem.</i> , 375, #3, 460-464<br>Engelmann, M.D.; Hinz, D.; Wenclawiak, B.W.                                                                                                    | 85µm polyacrylate<br>HMDS derivative<br>headspace   | GC-FID, GC-MS                |
| 2051 | Explosives<br>in water                               | Use of SPME-GC-ECD for the determination of energetic<br>chemicals, in marine samples<br><i>J Chromatogr A</i> , 1066, #1-2, 177-187<br>Monteil-Rivera, Fanny; Beaulieu, Chantale; Hawari, J.                                                                                                          | 65µm CW/DVB<br>30% salt added                       | GC-ECD                       |
| 2051 | Explosives<br>in water                               | SPME ion mobility spectrometer interface for explosive<br>and taggant detection<br><i>J Sep Science</i> , 28, #2, 177-183<br>Perr, Jeannette M.; Furton, Kenneth G.; Almirall, J.                                                                                                                      | headspace                                           | Ion mobility<br>spectrometry |
| 2052 | Explosives<br>in water                               | Determination of explosives in environmental water samples<br>by SPME-liquid chromatography<br><i>J. Chromatogr. A</i> , 1048, #2, 213-221<br>Beaulieu, C.; Deschamps, S.; Hawari, J.;<br>Monteil-Rivera, F.; Paquet, L.                                                                               | 50µm CW-TPR<br>immersed                             | HPLC-UV                      |
| 2053 | Anthracen<br>in water                                | In-tube capillary solid-phase microextraction coupled<br>on-line to micro-HPL<br><i>Fenxi Shiyanshi</i> , 24, #2, 41-43<br>Shu, X.; Yang, B. C.; Tan, F.; Guan, Y. F.                                                                                                                                  | In-tube capillary                                   | HPLC                         |
| 2521 | Nitro musk<br>fragrance in<br>water                  | <b>Optimization of a sensitive method for the determination of nitro musk<br/>fragrances in waters by SPME-GC with micro ECD using factorial<br/>experimental design</b><br><i>Anal Bioanal Chem</i> 388, #8, 1789-1798 (AUG 2007)<br>Polo, Maria; Garcia-Jares, Carmen; Llompарт, Maria; Cela, Rafael | 75µm Carboxen<br>65µm PDMS/DVB<br>headspace @ 100°C | GC-ECD                       |
| 2054 | Volatiles<br>from musks                              | Further SPME-GC-MS applications: "On-fibre" and<br>and aqueous photodegradation of nitro musks<br><i>J. Chromatogr. A</i> , 1048, #1, 73-80<br>Cela, R.; Garcia-Jares, C.; Llompарт, M.; Lores, M.;<br>Lourido, M.; Sanchez-Prado, L.                                                                  | immersion sampling                                  | GC-MS                        |
| 2341 | Volatiles<br>from sediment                           | <b>Analysis of volatile organic compounds (VOCs) in sediments using in .<br/>situ SPME sampling</b><br><i>J Environ Monit</i> 9 # 5, 411-418 (2007 May)<br>Bravo-Linares, Claudio M; Mudge, Stephen M                                                                                                  | headspace                                           | GC                           |
| 2055 | 2,4,6-trinitro-<br>toluene in<br>water &<br>sediment | SPME for predicting the bioavailability of<br>2,4,6-trinitrotoluene and its primary transformation<br>products in sediment and water<br><i>Environ. Toxicol. Chem.</i> , 24, #5, 1059-1066<br>Conder, Jason M.; La Point, Thomas W.                                                                    | 85µm polyacrylate                                   | GC-MS                        |
| 2056 | Aromatics<br>in water                                | Rapid analysis of aromatic contaminants in water samples<br>by means of laser ionization mass spectrometry<br><i>Anal. Bioanal. Chem.</i> , 377, #7-8, 1124-1132<br>Globig, Daniel; Weickhardt, Christian                                                                                              |                                                     | GC-MS                        |
| 2057 | phycoerythrin<br>in water                            | Coupling of SPME and capillary isoelectric focusing<br>w/ laser-induced fluorescence whole column imaging<br>detection for protein analysis.<br><i>Analytical Chemistry</i> , 77, #1, 165-171<br>Liu, Z.; Pawliszyn, J. *                                                                              | 10 min sampling                                     | CIEF-WCID                    |
| 2058 | Nitroaromatics<br>in sediment,<br>water              | Spme fibers for estimating the toxicity of nitroaromatic<br>compounds<br><i>Aquatic Ecosystem Health &amp; Mgmt</i> , 7, #3, 387-397<br>Conder, J. M.; Lotufo, G. R.; Bowen, A. T.; Turner, P. K.;<br>La Point, T. W.; Steevens, J. A.                                                                 | 85µm polyacrylate<br>immersion sampling             | GC                           |
| 2059 | Perfluoro-<br>carboxylic<br>acid in<br>water         | Determination of perfluorocarboxylic acids in aqueous<br>matrices by ion-pair SPME in-port derivatization GC<br>negative ion chemical ionization mass spectrometry<br><i>J Chromatogr. A</i> , 1042, #1-2, 155-162<br>Alzaga, R.; Bayona, J. M.*                                                       | headspace<br>butyl ester derivative                 | CI-MS                        |
| 2060 | perfluoro-<br>carboxylic<br>acid in<br>water         | Development of a procedure for the determination of<br>perfluorocarboxylic acids in sediments by pressurised<br>fluid extraction, headspace SPME followed by GCMS<br><i>Journal of Chromatography, A</i> , 1083, #1-2, 1-6<br>Alzaga, R.; Bayona, J.M.; Jover, E.; Salgado-Petinal, C.                 | headspace                                           | CI-MS                        |

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| 2061 | Dialkyl ethers<br>in water              | Determination of fuel dialkyl ethers and BTEX in water<br>using headspace SPME and GC-FID<br><i>J Chromatogra A</i> , 1033, #2, 193-203<br>Arambarri, I.; Lasa, M.; Garcia, Rosa; Millan, E.                                                                     | 65µm PDMS-DVB<br>headspace<br>10min @ 10°C                      | GC-FID                  |
| 2062 | MTBE<br>in water                        | Identification of MTBE in water by SPME and GC-MS<br><i>Am Lab</i> , 34, #21, 34<br>Blasi, G.; Guidotti, M.; Lucarelli, E.; Onorati, B.;<br>Ravaioli, G.; Stella, D.                                                                                             | headspace                                                       | GC/MS                   |
| 2063 | Taste/odor<br>in water                  | Analysis of taste- and odor-causing compounds<br>in drinking water using solid-phase microextraction<br><i>Am Lab</i> , 35, #17, 42-46<br>Voit, Jim                                                                                                              | review technique                                                | GC                      |
| 2064 | MTBE<br>in water                        | Interlaboratory comparison study for the determination<br>of methyl tert-butyl ether in water<br><i>Anal. Bioanal. Chem.</i> , 377, #7-8, 1140-1147<br>Fuhrer, M.; Kandler, W.; Krška, R.;<br>Schuhmacher, R.; Stadlmann, C.                                     | various fibers                                                  | GC/MS<br>GC-FID         |
| 2065 | MTBE, TBA<br>in water                   | Comparison of SPME headspace analysis to U.S.<br>EPA Method 5030/8260B for MTBE monitoring<br><i>Ground Water Monit. Rem.</i> , 25, #2, 52-58<br>Oh, Keun-Chan; Stringfellow, William T.                                                                         | 75µm Carboxen<br>headspace                                      | GC-MS                   |
| 2066 | MTBE<br>in water                        | Observations on SPME for MTBE analysis<br><i>Chemosphere</i> , 57, #6, 523-527<br>Bergendahl, J.; Erdem-Senatalar, Ayse; Thompson, Robert W.                                                                                                                     | headspace                                                       | GC-MS                   |
| 2067 | MTBE<br>in water                        | Sources, distribution and behaviour of methyl tert-butyl<br>ether (MTBE) in the Tamar Estuary, UK<br><i>Chemosphere</i> , 57, #6, 429-437<br>Bayona, Josep M.; Guitart, Carlos; Readman, James W.                                                                | 75µm Carboxen<br>75% salt added<br>headspace                    | GC-MS                   |
| 2068 | Chromium in<br>sea water                | Spme for the determination of chromium in sea-water.<br><i>J of Anal Atomic Spectrometry</i> , 19, #9, 1098-1103<br>Abranko, L.; Yang, L.; Sturgeon, R. L.; Fodor, P.; Mester, Z.                                                                                | 100µm PDMS<br>headspace derivatives<br>(trifluoroacetylacetone) | GC-ECD<br>ICP-MS, EI-MS |
| 2069 | Saccharides<br>from water &<br>juices   | Micro-solid-phase extraction with helical-solid-sorbent in<br>the presence of organic solvent for GC-MS analysis of -<br>per-O-methylated mono and disaccharides.<br><i>Analytica Chimica Acta</i> , 519, #1, 93-101<br>Ciucanu, I.; Swallow, K. C.; Caprita, R. | headspace<br>per- O -methylation                                | GC-MS                   |
| 2070 | Volatiles in<br>water                   | Analysis of compound-specific carbon isotopic compositions<br>of trace-level volatile organic compounds in aqueous phases.<br><i>Sepu</i> , 22, #4, 439-441<br>Liu, G. Q.; Zhang, G.; Huang, S. Q.; Peng, X. Z.; Chen, H. H.                                     | cryofocused injection<br>headspace sampling                     | GC                      |
| 2071 | Volatiles in<br>water                   | On-line coupling of in-tube SPME to capillary GC<br>for trace analysis of aqueous samples.<br><i>Sepu</i> , 22, #4, 354-357<br>Guan, Y. F.; Wang, H. W.; Liu, W. M.                                                                                              |                                                                 | GC                      |
| 2071 | Chlorinated<br>paraffins in<br>water    | SPE versus SPME for the determination of chlorinated<br>paraffins in water using GC-negative chemical ion MS<br><i>J Chromatography, A</i> , 1025, #2, 157-162<br>Castells, P.; Santos, F. J.; Galceran, M. T.*                                                  | immersed fiber                                                  | GC-NCI-MS               |
| 2175 | Chlorinated<br>hydrocarbons in<br>soils | <b>Headspace SPME GC-ECD determination of organic chlorinated<br/>hydrocarbons in soils</b><br><i>Annali di Chimica</i> 95, #11-12, 741-756 (2005)<br>Pastore, Paolo; Favaro, Gabriella; Badocco, Denis; Lavagnini, Irma                                         | headspace<br>water solution                                     | GC-ECD                  |
| 2073 | Chlorinated<br>hydrocarbons<br>in water | Development of a SPME-based method for sampling<br>of persistent chlorinated hydrocarbons in an<br>urbanized coastal environment<br><i>Environ. Sci. Technol.</i> , 38, #21, 5737-5743<br>Diehl, Dario W.; Tsukada, David; Zeng, Eddy Y.                         | 100µm PDMS<br>in situ sampling<br>18 to 43 days                 | GC                      |
| 2074 | Odors from<br>water                     | An automated headspace SPME-GC-ITMS technique for<br>taste and odor compound identification<br><i>Water Qual. Res. J. Can.</i> , 39, #3, 213-222<br>Davies, John-Mark; Furtula, Vesna; Mazumder, Asit                                                            | 65µm PDMS-DVB<br>headspace                                      | GC-ITMS                 |
| 2075 | PAHs in<br>water                        | Determination of PAHs in water by SPME-GC-MS<br><i>Anal. Chim. Acta</i> , 523, #2, 259-267<br>King, A.J.; Readman, J.W.; Zhou, J.L.                                                                                                                              | agitation applied<br>immersed                                   | GC-MS                   |

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| 2076              | Phenols<br>in waste<br>water                                               | Determination of phenolic compounds in wastewater samples using a novel fiber by SPME coupled to GC<br><i>Analytica Chimica Acta</i> , 538, #1-2, 63-70<br>Zhou, Furong; Li, Xiujuan; Zeng, Zhaorui                                                                                  | 85µm polyacrylate                                         | GC-FID                       |
| 2077              | Selenite<br>in water                                                       | SPME - capillary GC combined w/ microwave-Inducted plasma atomic-emission spectrometry for selenite determination<br><i>Anal&amp; Bioanalytical Chem</i> , 379, #5, 842-848<br>Dimitrakakis, E.; Haberhauer-Troyer, C. *; Abe, Y.; Ochsenkuhn-Petropoulou, M. T.; Rosenberg, E.      | NaEt <sub>4</sub> B derivatives<br>headspace              | GC-MIP-AED                   |
| <b>Pesticides</b> |                                                                            |                                                                                                                                                                                                                                                                                      |                                                           |                              |
| 441               | Pesticides<br>in water                                                     | Determination of Pesticides in Aqueous Environmental Samples via SPME (Solid-Phase Microextraction)<br>GIT Frachz. Lab. 39: 25-26 (1995)<br>Eisert, R., Levsen, K.                                                                                                                   |                                                           |                              |
| 522               | Pesticides<br>in water                                                     | Quantitative analysis of pesticides in water by SPME coupled with Mass Spectrometry<br><i>Spectra. Anal.</i> 1999, 28(208), 23-29<br>Massat, F. Laurent, A.                                                                                                                          | 100µm PDMS, 65µm<br>DVB/PDMS<br>30 min<br>agitated        | GC-MS                        |
| 523               | Organochlorine &<br>organophosphorus<br>in water/ethanol                   | A Systematic Approach to Optimize SPME determination of Pesticides in Ethanol/Water mixtures used as Food Simulates<br><i>Anal. Chem.</i> (1999), 71(13), 2417-2422<br>Battle, R, Sanchez, C., Nerin, C.                                                                             |                                                           |                              |
| 442               |                                                                            | Solid-Phase Microextraction (SPME)<br>GIT Frachz. Lab. 39: 325-331 (1995)<br>Popp, P., Kauert, A., Kalbitz, K.                                                                                                                                                                       |                                                           |                              |
| 781               | Organophosphorus<br>pesticides<br>in water                                 | Determination of organophosphorus insecticides in natural waters using SPE-disks and SPME followed by GC-FTD and GC-MS<br><i>Fresenius' J Anal Chem</i> (2000) 368(6) 616-623<br>Lambropoulou, D.; Sakellarides, T.; Albanis, T.                                                     | 85µm polyacrylate                                         | GC-FTD and<br>GC-MS          |
| 915               | Organophosphorus<br>pesticides<br>in water                                 | Optimization of headspace SPME conditions for the determination of organophorus insecticides in natural water<br><i>J. Chromatogr. A</i> (2001) 922(1-2) 243-255<br>Lambropoulou, D.; Albanis, T.                                                                                    |                                                           |                              |
| 123               | Organophosphorus<br>pesticides<br>in water                                 | Pesticide Analysis by SPME<br><i>Am. Env. Lab.</i> April 1997, pp 20-22<br>Eisert, R., Gorecki, T., Pawliszyn, J.                                                                                                                                                                    | 100µm PDMS<br>60 min<br>immersion                         | GC-FID                       |
| 2487              | <b>Benzimidazole<br/>Fungicides<br/>in water</b>                           | <b>SPME of benzimidazole fungicides in environmental liquid samples and HPLC-fluorescence determination</b><br><i>Anal Bioanal Chemistry</i> 387, #6, 1957-1963 (2007)<br><b>Lopez-Monzon, A.; Vega-Moreno, D.; Torres-Padron, M. E.; Sosa-Ferrera, Z.; Santana-Rodriguez, J. J.</b> | 75µm Carboxen                                             | <b>HPLC<br/>fluorescence</b> |
| 104               | Insecticides,<br>fungicides<br>in water                                    | Influence of Ethanol on Pesticide Extraction in Aqueous Solutions by SPME<br><i>J. Agric. Food Chem.</i> 44: 3871-3877 (1996)<br>Urruty, L., Montury, M.                                                                                                                             | 100µm PDMS<br>30 min<br>headspace                         | GC-MS                        |
| 122               | Pesticides<br>in water                                                     | Simultaneous Determination of 60 Pesticides in Water Using SPME and GC/MS<br><i>Analyst</i> 121: 929-938, July 1996<br>Boyd-Boland, A., Magdic, S., Pawliszyn, J.                                                                                                                    | 100µm PDMS<br>50 min<br>immersion<br>stirring, salt added | GC-MS                        |
| 241               | Nitrogen- & phosphate-<br>Containing Pesticides from Water and GC Analysis | Solid-Phase Microextraction of Nitrogen- and Phosphorus-                                                                                                                                                                                                                             | 100µm PDMS                                                | GC-NPD                       |



|                                                                          |                                                    |                                                                                                                                                                                                                                                                              |                                                                                 |                  |
|--------------------------------------------------------------------------|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|------------------|
|                                                                          | pesticides<br>in water                             | Environ. Sci. Technol. 30: 3259-3265 (1996)<br>Choudhury, T., Gerhardt, K., Mawhinney, T.                                                                                                                                                                                    | 60 min<br>immersion                                                             |                  |
| 52                                                                       | Pesticides<br>in water                             | Determination of Organophosphorus, Triazine, and<br>2,6-Dinitroaniline Pesticides in Aqueous Samples via<br>SPME and GC with NPD Detection<br>Fresenius J. Anal. Chem. 351: 555-562 (1995)<br>Eisert, R., Levsen, K.                                                         | 100µm PDMS,<br>85µm polyacrylate<br>25 min<br>immersion<br>stirring, salt added | GC-NPD           |
| 443                                                                      | Organophosphate<br>pesticides<br>in water          | Simple Extraction of Organophosphate Pesticides Using<br>(SPME) Before Capillary Gas Chromatography<br>Hochudoku 13 (2): 122-123 (1995)<br>Lee, X., Kumazawa, T., Taguchi, T., Sato, K., Suzuki, O.                                                                          |                                                                                 | GC-NPD, -MS      |
| 167                                                                      | Organophosphorus<br>insecticides<br>in water       | Analysis of Organophosphorus Insecticides from<br>Environmental Samples Using SPME<br>J. Chromatogr. A 736: 219-228 (1996)<br>Magdic, S., Boyd-Boland, A., Jinno, K., Pawliszyn, J.                                                                                          | 85µm polyacrylate<br>60°C, 60 min<br>immersion<br>salt added                    | GC-NPD           |
| 861                                                                      | Organophosphorus<br>pesticides<br>in water         | Solventless sample preparation procedure for<br>organophosphorus pesticides analysis using SPME and<br>on-line supercritical fluid extraction/HPLC technique.<br><i>Analytica Chimica Acta</i> (2001) 433(2) 207-215<br>Jinno, K; Kiso, Yoshiaki; S, Yoshihiro; S, Shamsul H |                                                                                 | HPLC             |
| 93                                                                       | Organophosphorus<br>pesticides<br>in water         | Matrix Effects on SPME of Organophosphorus<br>Pesticides from Water<br>J. Chromatogr. A 767: 195-203 (1997)<br>Valor, I., Molto, J., Apraiz, D., Font, G.                                                                                                                    | 85µm polyacrylate<br>60°C, 45 min<br>immersion<br>stirring                      | GC-NPD           |
| 839                                                                      | 52 Pesticides, PCBs                                | SPME of 52 pesticides and polychlorinated biphenyls:<br>efficiencies of the SPME coatings PDMS, polyacrylate,<br>PDMS/DVB, Carboxen/PDMS, and Carbowax/DVB<br><i>J. Sep. Sci.</i> 2001) 24(1), 39-48<br>Valor, I; Perez, M; Cortada, C; Apraiz, D; Molto, J; Font, G         | 65µm PDMS/DVB                                                                   |                  |
| 118                                                                      | Organophosphorus<br>pesticides<br>in water         | Solid Phase Microextraction of Organophosphorus<br>Pesticides from Water<br>J. Chromatogr. A 759: 225-230 (1997)<br>Sng, M., Lee, F., Lakso, H.                                                                                                                              | 65µm PDMS/DVB<br>30 min<br>immersion                                            |                  |
| 524                                                                      | Organophosphorus<br>pesticides<br>in water         | Determination of organophosphorus pesticides in water<br>using GC-MS<br>Qim. Nova (1999), 22(2), 197-200<br>Silva, F., Cardeal, Z., De Carvalho, C.                                                                                                                          | 100µm PDMS<br><br>Portuguese                                                    | GC-MS            |
| <b>Headspace solid-phase microextraction for the gas chromatographic</b> |                                                    |                                                                                                                                                                                                                                                                              |                                                                                 |                  |
| 2579                                                                     | Organophosphorus<br>pesticides<br>in vegetables    | analysis of organophosphorus insecticides in vegetables<br><i>J AOAC Int</i> 90, #6, 1677-81 (2007 Nov-Dec)<br>Fytianos, K.; Drimaropoulou, G.; Raikos, N.; Theodoridis, G.; Tsoukali, H.                                                                                    | 100µm PDMS<br>headspace                                                         | GC-FPD           |
| 350                                                                      | Organophosphorus<br>pesticides<br>in food plant    | The Application of SPME in the Analysis of<br>Organophosphorus Pesticides in a Food Plant<br>Environ Sci. Technol. 1998, 32, 3816-820<br>Chen, W., Poon, K., Lam, M.                                                                                                         | 100µm PDMS<br>90 min<br>immersion (water)                                       | GC-FPD           |
| 525                                                                      | Pyrethrins in<br>insect spray,<br>shampoo, flowers | Heterogenic catalytic hydrolysis and analysis of natural<br>pyrethrins in subcritical water coupled w/SPME-GC-MS<br>Fresenius J. Anal. Chem. 1999, 364(7), 625-630<br>Krappe, M, Hawthorne, S., Weclawiak, B.                                                                | 100µm PDMS<br>20 min @ pH 2<br>immersed                                         | GC-FID or<br>MSD |
| 705                                                                      | Pyrethroids<br>in water                            | SPME of pyrethroid pesticides from water at low and<br>sub-ppt levels at different temperature<br><i>J.High Resolut.Chromatogr.</i> (2000), 23(7/8), 485-488<br>Barrionuevo, W., Lancas, F.                                                                                  | 100µm PDMS<br>5 min<br>40-90°C                                                  | GC-ECD           |
| 837                                                                      | Pyrethroids                                        | Solid-phase extraction (SPE) and solid-phase microextraction<br>( SPME ) of pyrethroids in water                                                                                                                                                                             |                                                                                 |                  |

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|      | in water                             | <i>Quim. Nova (2001), 24(2), 172-175</i><br>Barrionuevo, W., Lancas, F.                                                                                                                                                          |                                                                    |                   |
| 299  | Organophosphorus pesticides in water | Online Determination of Organophosphorus Pesticides in Water by SPME and GC with Thermionic-Selective Detection<br><i>J. High Resolut. Chromatogr. 20 (9): 487-492(1997)</i><br>Lopez-Avial, V., Young, R., Becker, W.           | 30µm PDMS<br>30 min<br>immersion<br>stirring                       | GC-TCD            |
| 390  | Organophosphorus pesticides in water | SPME for quantitative analysis of organophosphorus Pesticides in Environmental Water Samples<br><i>J. Chromatogr. A 808 (1998) 257-263</i><br>Beltran, J., Lopez, F., Hernandez, F.                                              | 100µm PDMS,<br>85µm polyacrylate<br>30 min<br>stirring, salt added | GC-NPD            |
| 706  | Pesticides in water                  | SPME for the determination of systemic and non-volatile pesticides in river water using GC with NPC and ECD<br><i>J. Chromatogr. A 893(2000) 347-358</i><br>Sampedro, M.; et al                                                  | 100µm PDMS<br>15min<br>immersed                                    | GC-NPD<br>ECD     |
| 868  | Herbicides in water                  | Determination of herbicides in natural waters using (SPME) and GC coupled with flame thermionic and MS detection<br><i>Int. J. Environ. Anal. Chem (2000) 78(3-4), 223-240</i><br>Lambropoulou, D.; Konstantinou, I; Albanis, T. |                                                                    | GC-MS             |
| 707  | Nitrogen herbicides in water         | Use of SPME for the Quantitative determination of Herbicides in soil and water samples<br><i>Anal. Chem. 2000, 72, 2313-2322</i><br>Hernandez, F., Beltran, J., Lopez, F, Gaspar, J.                                             | Carbowax DVB<br>30 min<br>salt added, stirred                      | GC-MS<br>SIM mode |
| 28   | Nitrogen herbicides in water         | Solid Phase Microextraction of Nitrogen-Containing Herbicides<br><i>J Chromatogr. 704: 163-172 (1995)</i><br>Boyd-Boland, A., Pawliszyn, J.                                                                                      | 85µm polyacrylate<br>50 min<br>immersion<br>pH 2, salt added       | GC-NPD            |
| 53   | Triazine herbicides in water         | Automated Determination of S-Triazine Herbicides Using Solid-Phase Microextraction<br><i>J. Chromatogr. 705: 305-312 (1995)</i><br>Barnabas, I., Dean, J., Fowles, I., Owen, S.                                                  | 100µm PDMS<br>15 min (manual)<br>3 min (automated)<br>immersion    | GC-NPD            |
| 177  | Triazine herbicides                  | Determination of Triazine Herbicides in Environmental Samples<br><i>J. Chromatogr. 733: 295-335 (1996) (review)</i><br>Dean, J., Wade, G., Barnabas, I.                                                                          | 100µm PDMS<br>10 min<br>immersion (water)                          | GC-NPD            |
| 111  | Triazine herbicides in water         | Validation of SPME for the Analysis of Triazine Herbicides at ppt Level in Aqueous Samples<br><i>J. Chromatogr. A. 795 (1998) 371-376</i><br>Nilsson, T., Ferrari, R., Basta, R., Dellavedova, P.                                | Carbowax/DVB<br>30 min<br>immersion, stirring<br>salt added        | GC-NPD,<br>GC-MS  |
| 708  | Urea herbicides in water             | Indirect analysis of urea herbicides from environmental water using solid phase microextraction<br><i>J. Chromatogr. A. 890 (2000) 303-312</i><br>Berrada, H., Font, G., Molto, J.                                               | 85µm polyacrylate<br>immersed<br>sat. salt, pH 4                   | GC-NPD            |
| 2162 | Pesticides                           | <b>Depletion SPME for the evaluation of fiber-sample partition coefficients of pesticides</b><br><i>J. Chromatogr. A, 1102, #1-2, 51-59 (2006)</i><br>Zimmermann, Thomas; Ensinger, Wolfgang J.; Schmidt, Torsten C.             | headspace                                                          | GC-MS             |
| 231  | Pesticides                           | Minimization of Solvent Consumption in Pesticide Residue Analysis<br><i>J. Chromatogr. A 754: 43-47 (1996)</i><br>Wan, H., Wong, M.                                                                                              | overview<br>article                                                |                   |
| 838  | Chlorinated pesticides in water      | Determination of chlorine-containing pesticides in aqueous media by solid-phase microextraction method<br><i>Zh. Prikl. Khim (2000) 73(11), 1877-1882</i><br>Stolyarov, B. V.; Boiko, V. V                                       |                                                                    |                   |

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| 156  | Organochlorine pesticides in water   | Online Determination of Organochlorine Pesticides in Water by SPME and GC-ECD<br>J. High Res. Chromatogr. 19(5): 24756 (1996)<br>Young, R., Lopez-Avila, V., Beckert, W.                                                                                                                                                                              | 100µm PDMS<br>20 min<br>immersion<br>stirring        | GC-ECD          |
| 2307 | Chlorinated pesticides in soils      | <b>Development and validation of a novel method for the analysis of chlorinated pesticides in soils using microwave-assisted extraction- headspace SPME-GC-MS</b><br><i>Anal. Bioanal. Chem.</i> 384 #3, 810-816 (2006)<br>Alves, A.; Herbert, P.; Morais, S.; Paiga, P.; Santos, L.<br><br>Optimization of a Technique of SPME and Capillary GC with | headspace                                            | GC/MS           |
| 180  | Chlorinated pesticides in water      | ECD for the Determination of Nine Organochlorine Pesticides in Drinking Water<br>Analisis 25 (3): 51-54 (1997)<br>Almeida, M., Conceicao, P., Alpendurada, M.                                                                                                                                                                                         |                                                      | GC-ECD          |
| 709  | Chlorinated pesticides in water      | Application of SPME and GC with ECD for the analysis of chlorinated pesticides in water<br><i>Spectra Anal</i> (2000) 29(213)<br>Boussahel, R., Bouland, S., Montiel, A., Moussaoui, K                                                                                                                                                                | 100µm PDMS<br>20min.                                 | GC-ECD          |
| 864  | Organochlorine pesticides in water   | Comparison of three analytical procedures for determination of organochlorine pesticides and their by-products in water suspension during photocatalytic oxidation<br><i>Chemia Analityczna (Warsaw)</i> (2000) 45(6) 901-910<br>Wiergowski, M.; Zaleska, A.; Biziuk, M.; Hupka, J.                                                                   |                                                      | GC-ECD<br>GC-MS |
| 710  | Organochlorine pesticides in water   | Monitoring organochlorine pesticides from landfill leachates by GC-ECD detection after solid phase microextraction<br><i>J. Chromatogr. A</i> 891 (2000) 305-311<br>Bras, I., Santos, L., Alves, A.                                                                                                                                                   | 100µm PDMS<br>30 min @ 55°C<br>immersion<br>stirring | GC-ECD          |
| 2506 | Pesticides in herbal teas            | <b>Pesticide analysis in herbal infusions by SPME-GC-AED.</b><br><i>Talanta</i> 71, #3, 1417-1423 (2007-02-28)<br>Campillo, N.; Penalver, R.; Hernandez-Cordoba, M.                                                                                                                                                                                   | 100µm PDMS<br>immersion                              | GC-AED          |
| 711  | Organochlorine pesticides in herbs   | SPME for organochlorine pesticides residues analysis in Chinese herbal formulations<br><i>J. Chromatogr. A</i> 898 (2000) 245-256<br>Hwang, B. H.; Lee, M. R                                                                                                                                                                                          | 100µm PDMS                                           | GC-MS           |
| 43   | Organophosphorus pesticides in water | Element-Selective Detection of Pesticides by Gas Chromatography-Atomic Emission Detection and SPME<br><i>J. Chromatogr. A</i> 683: 175-183 (1994)<br>Eisert, R., Levsen, K., Wunsch, G.                                                                                                                                                               | 100µm PDMS<br>20 min<br>immersion                    | GC-AED          |
| 526  | Organophosphorus in water            | Determination of organophosphorus pesticides in water by SPME<br><i>Talanta</i> (1999), 49(2), 393-402<br>Su, P., Huang, S.                                                                                                                                                                                                                           | 85µm polyacrylate                                    | GC-FPD          |
| 712  | Pesticide residue various matrices   | Solid Phase microextraction in pesticides residue analysis<br><i>J. Chromatogr. A</i> 885 (2000) 389-404<br>Beltran, J., Lopez, F., Hernandez, F.                                                                                                                                                                                                     | review article                                       |                 |
| 713  | Pesticides in water                  | An approach to solventless sample preparation procedure for pesticide analysis using SPME/supercritical fluid extraction technique<br><i>Analytica Chimica Acta</i> 2000, 418(1), 69-77<br>Salleh, S., Saito, Y., Jinno, K.                                                                                                                           |                                                      | HPLC            |
| 917  | Organophosphorus pesticides          | Solventless sample preparation procedure for organo-phosphorus pesticides analysis using SPME and on-line supercritical fluid extraction/HPLC technique                                                                                                                                                                                               |                                                      | HPLC            |

|     |                                          |                                                                                                                                                                                                                                                                     |                                                                |                  |
|-----|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|------------------|
|     | in water                                 | <i>Analytica Cheimica Acta</i> 2001, 433(2), 207-215<br>Salleh, S., Saito, Y., Kiso, Y., Jinno, K.                                                                                                                                                                  |                                                                |                  |
| 87  | Pesticides<br>in water                   | Determination of Pesticides in Aqueous Samples by SPME<br>In-Line Coupled to Gas Chromatography-Mass Spectrometry<br>Am. Soc. Mass Spectrom. 6: 1119-1130 (1995)<br>Eisert, R., Levsen, K.                                                                          |                                                                | GC-MS            |
| 157 | Contaminants<br>in water                 | Development of a Prototype System for Quasi-Continuous<br>Analysis of Organic Contaminants in Surface or Sewage<br>Water Based on In-Line Coupling of SPME to GC<br>J. Chromatogr. A 737: 59 (1996)<br>Eisert, R., Levsen, K., Wuensch, G.                          | 85µm polyacrylate<br>10 min<br>immersion                       | GC-FID           |
| 77  | Metolachlor<br>in water                  | Solid Phase Microextraction of the Herbicide Metolachlor<br>in Runoff and Tile Drainage Water Samples<br>J. Chromatogr. A 725: 129 (1996)<br>Webster, G., Gaynor, J., Ng, H., Graham, J., Sama, L.                                                                  | 100µm PDMS<br>15 min<br>immersion<br>stirring                  | GC-ECD           |
| 193 | Metolachlor<br>in water                  | Comparative SPE, SPME, and Immunoassay Analysis<br>of Metolachlor in Surface Runoff and Tile Drainage<br>J. Agric. Food Chem. 44: 2736-2741 (1996)<br>Graham, K., Ng, H., Tan, C., Gaynor, J., Cancilla, D.,<br>Webster, G., Drury, C., Welacky, T., Sama, L.       | 100µm PDMS<br>15 min<br>immersion<br>stirring                  | GC-ECD           |
| 112 | Polar herbicides                         | Application of SPME Coupled with HPLC for Analysis<br>of Polar Herbicides<br>Request from Environmental Institute, European Commission<br>Joint Research Centre, 21020 Ispra (Va) Italy<br>Nilsson, T.                                                              |                                                                | HPLC             |
| 190 | Pesticides<br>in water                   | Analysis of Pesticides in Environmental Water Sample<br>by SPME-HPLC<br>J. Chromatogr. A 754: 137-144 (1996)<br>Jinno, K., Muramats, T., Saito, Y., Kiso, Y., Magdic, S.,<br>Pawliszyn, J.                                                                          | 85µm polyacrylate<br>60°C, 60 min<br>immersion<br>salt added   | HPLC-UV<br>220nm |
| 242 | Pesticides<br>in water                   | Pesticides by Solid-Phase Microextraction: Results of<br>Round Robin Test<br>Analyst (Cambridge) 121: 1381-1386 (1996)<br>Gorecki, T., Mindrup, R., Pawliszyn, J.                                                                                                   | 100µm PDMS<br>45 min<br>immersion<br>stirring                  | GC-MS            |
| 438 | Pesticides in<br>water                   | SPME and GC for Rapid Analysis of Pesticides<br>Aanalusis (1998), 26(6), M137-M143<br>Miege, C., Dugay, J.                                                                                                                                                          | Review                                                         | GC-MS            |
| 298 | Chlorinated pesticides                   | Analysis of Organochlorine Pesticides by SPME<br>J. Chromatogr. A 723(1): 111-112 (1996)<br>Magdic, S., Pawliszyn, J.                                                                                                                                               | 100µm PDMS<br>90 min<br>immersion<br>salt added                | GC-MS, -NPD      |
| 527 | Organochlorine<br>pesticides<br>in water | Optimization of SPME conditions using a response surface<br>methodology to determine organochlorine pesticides in<br>water by GC-ECS<br>J. Chromatogr. A (1999), 844(1+2), 425-432<br>Aguilar, C., Penalver, A., Pocurull, E., Ferre, J., Borrull, F.,<br>Marce, R. | 85µm polyacrylate<br>45 min @ 60°C<br>immersed<br>agitated     | GC-ECD           |
| 300 | Pesticides<br>in water                   | Effect of Various Parameters Governing SPME for the Trace<br>Determination of Pesticides in Water<br>J. Chromatogr., A 795 (1): 27-42 (1998)<br>Dugay, J., Miege, C., Hennion, M.                                                                                   | 65µm PDMS/DVB<br>25°C, 30 min<br>immersion<br>pH 7, salt added | GC-NPD           |
| 301 | Pesticides<br>in water                   | SPME and GC-MS Detection for the Determination of<br>Pesticides in Aqueous Samples<br>J. Chromatogr. A. 795 (1): 105-115 (1998)<br>Aguilar, C., Penalver, S., Pocurull, E., Borrull, F., Marce, R.                                                                  | 85µm polyacrylate<br>55°C, 45 min<br>immersion                 | GC-MS            |

Ambient temperature, unless otherwise indicated.

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|------|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|------------------|
|      |                                        |                                                                                                                                                                                                                                                                                                                             | stirring, salt added                                                   |                  |
| 528  | Pesticides in water                    | Analysis of some pesticides in water samples using SPME-GC with different Mass Spectrometric techniques<br><i>J. Chromatogr. A</i> , 859(2): 193-202 (1999)<br>Natangelo, M., Tavazzi, S., Fanelli, R., Befenatti, E.                                                                                                       |                                                                        | GC-MS            |
| 714  | Fentin in environmental samples        | Headspace SPME capillary GC-ICP-MS for the determination of the organotin pesticide fentin in environmental samples<br><i>J. Anal. At. Spectrom.</i> (2000), 15(6), 651-656<br>Vercauteren, J., DeMeester, A, DeSmaele, T.<br>Vanhaecke, F., Moens, L., Dams, R., Sandra, P.                                                | 100µm PDMS<br>10-20 min<br>75-85°C<br>NaBEt4<br>pH 8                   | GC-ICP-MS        |
| 445  | Pesticides in water                    | Analysis of Pesticides in Environmental Water Samples by SPME-HPLC<br><i>J. Chromatogr. A</i> 754 (1+2): 137-144 (1996)<br>Jinno, L., Muramatsu, T., Saito, Y., Kiso, Y., Magdic, S., Pawliszyn, J.                                                                                                                         | 85µm polyacrylate<br>60°C, 60 min<br>immersion<br>stirring, salt added | HPLC-UV<br>220nm |
| 587  | Pesticides                             | Study on solventless sample preparation of pesticides with SPME-SFE technique.<br><i>Chromatography</i> . Jun 1999; 20(2): 126-127<br>Selleh,-SH; Saito,-Y; Jinno,-K                                                                                                                                                        | 85µm polyacrylate<br>3 hr @ 60°C                                       | HPLC-UV          |
| 2329 | Biologically active substance in water | <b>Bioanalytical applications of solid-phase microextraction</b><br><i>Trends Anal. Chem.</i> 26, #1, 36-45 (2007-01)<br>Musteata, F. M.; Pawliszyn, J.                                                                                                                                                                     | Review article                                                         |                  |
| 715  | Biologically active substance in water | SPME-GC-MS of biologically active substance in water samples<br><i>J. Chromatogr. A.</i> , (2000) 873(1), 95-106<br>Moeder, M., Schrader, S., Winkler, M., Popp, P.                                                                                                                                                         | 85µm polyacrylate<br>65µm Carbowax/DVB<br>30 min                       | GC-MS            |
| 223  | PCBs in water                          | SPME and Headspace SPME for the Determination of PCBs in Water Samples<br><i>Anal. Chem.</i> 1998, 70, 2510-2515<br>Llompart, M., Fingas, M., Li, K.                                                                                                                                                                        | 100µm PDMS<br>100°C, 30 min<br>headspace/immersion<br>stirring         | GC-MSD           |
| 973  | Organochlorine pesticides in water     | Determination of organochlorine pesticides in ground water.<br><i>J. Chromatogr. A</i> (2002) 963(1-2), 95-105<br>Perez-Trujillo, J.P.; Frias, S.; Conde, J.E.; Rodriguez-Delgado, M.A.                                                                                                                                     | Various                                                                |                  |
| 977  | Pesticides in water                    | Comparison of different fibers for the analysis of pesticides in water.<br><i>J. Chromatogr. A</i> (2002) 963(1-2), 19-26<br>Goncalves, C.; Alpendurada, M.F.                                                                                                                                                               | Various                                                                |                  |
| 982  | Pesticides in water                    | Monitoring of pesticides in the Kalamas River (Greece)<br><i>J. Chromatogr. A</i> (2002) 963(1-2), 107-116<br>Lambropoulou, D. A.; Sakkas, V.A.; Hela, D.G.; Albanis, T.A.                                                                                                                                                  | 100 um PDMS                                                            | GC-MS            |
| 998  | Pesticides in oranges                  | Comparison of microextraction procedures to determine pesticides in oranges by liquid chromatography-mass spectrometry.<br><i>J. Chromatogr. A</i> (2002) 970(1-2), 201-212<br>Blasco, C.; Font, G.; Pico, Y.                                                                                                               |                                                                        | LC-MS            |
| 1000 | Pesticides in drinking water           | Multiresidue method for the simultaneous determination of four groups of pesticides in ground and drinking waters, using solid-phase microextraction-gas chromatography with electron-capture and thermionic specific detection.<br><i>J. Chromatogr. A</i> (2002) 968(1-2), 177-190.<br>Goncalves, C.; Alpendurada, M. F.* | PDMS/DVB                                                               | GC               |
| 1004 | Pesticides in water                    | Monitoring of priority pesticides using SPME (solid phase microextraction) in river water from Greece<br><i>Water Sc. Technol. Water Supply</i> (2003) 3 (1-2), 335-342.                                                                                                                                                    | PDMS                                                                   | GC-MS            |

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|      | Albanis, T.A.; Hela, D.; Lambropoulou, D.A.; Sakkas, V.A.                                                                                                                                       |                |        |
|      | Determination of atrazine and four organophosphorus pesticides in ground water using solid phase microextraction ( SPME ) followed by gas chromatography with selected-ion monitoring.          |                |        |
| 1009 | Pesticides in groundwater<br><i>J.Chromatogr. A (2002) 972(2), 183-194.</i><br>Tomkins, B. A.; Ilgner, R. H.                                                                                    | 65 um PDMS/DVB | GC-SIM |
|      | An enzyme-linked immunosorbent assay (ELISA) for the detection of acetochlor                                                                                                                    |                |        |
| 1011 | Acetochlor in water<br><i>International Journal of Environ. Anal. Chem. (2002) 82 (11-12), 879-891.</i><br>Belai, Ivan; Eremin, Sergei; Hegedus, Gyongyver; Krikunova, Vitalia; Szekacs, Andras |                | GC-MS  |
|      | Evaluation of an enzyme immunoassay for the detection of the insect growth regulator fenoxycarb in environmental and biological samples.                                                        |                |        |
| 1019 | Fenoxycarb in environmental samples<br><i>Pest Management Science (2003) 59 (4), 410-416.</i><br>Szekacs, Andras; Le, Hong T. M.; Szurdoki, Ferenc                                              |                | GC-MS  |
|      | Application of solid-phase microextraction for the determination of organonitrogen pesticides in aqueous samples by gas chromatography with nitrogen-phosphorus detector.                       |                |        |
| 1046 | Organonitrogen pesticides in water.<br><i>International Journal of Environmental Analytical Chemistry (2002) 82 (10), 691-703.</i><br>Le Calvez, N.; Bodineau, L.; Fischer, J. C.               | Various        | GC     |
|      | Analysis of organochlorine pesticides by solid-phase microextraction followed by gas chromatography-mass spectrometry.                                                                          |                |        |
| 1047 | Organochlorine pesticides.<br><i>International Journal of Environmental Analytical Chemistry (2002) 82 (10), 651-657.</i><br>Zambonin, C. G.; Aresta, A.; Nilsson, T.                           | Various        | GC-MS  |
|      | Application of solid-phase microextraction for monitoring the photocatalytic decomposition of fenthion and parathion in aqueous TiO 2 suspensions.                                              |                |        |
| 1048 | Fenthion and parathion<br><i>Analytica Chimica Acta (2002) 467 (1-2), 233-243.</i><br>Sakkas, V. A.; Lambropoulou, D. A.; Sakellarides, T. M.; Albanis, T. A.*                                  |                | GC-MS  |
|      | Validation of an SPME method, using PDMS, PA, PDMS-DVB, and CW-DVB SPME fiber coatings, for analysis of organophosphorus insecticides in natural waters.                                        |                |        |
| 1096 | Organophosphorous insecticides in water.<br><i>Analytical and Bioanalytical Chemistry (2002) 374 (5), 932-941.</i><br>Lambropoulou, D. A.; Sakkas, V. A.; Albanis, T. A.*                       | Various        |        |
|      | Solid-phase microextraction for herbicide determination in environmental samples                                                                                                                |                |        |
| 1113 | Herbicides in environmental samples.<br><i>Journal of Chromatography A (2003) 999 (1-2), 103-121.</i><br>Krutz, L.J.; Sciumbato, A.S.; Senseman, S.A.                                           |                | GC     |
|      | Determination of herbicides, including thermally labile phenylureas, by solid-phase microextraction and gas chromatography-mass spectrometry                                                    |                |        |
| 1123 | Herbicides<br><i>Journal of Chromatography A (2003) 1002 (1-2), 1-12.</i><br>Carabias-Martinez, R.; Garcia-Hermida, C.; Hernandez-Mendez, J.; Rodriguez-Gonzalo, E.; Soriano-Bravo, F.E.        | Polyacrylate   | GC-MS  |
|      | Determination of dichlorvos by online microwave-assisted extraction coupled to headspace solid-phase microextraction and gas chromatography-electron-capture detection.                         |                |        |
| 1148 | Dichlorvos<br><i>Journal of Chromatography, A (2002) 976 (1-2), 349-355.</i><br>Chen, Y. I.; Su, Y. S.; Jen, J. F.*                                                                             |                | GC-ECD |
|      | Analysis of polar pesticides in water and wine samples by automated in-tube solid-phase microextraction coupled with high-performance liquid chromatography-mass spectrometry.                  |                |        |

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| 1152 | Polar pesticides in water and wine.              | <i>Journal of Chromatography, A</i> (2002) 976 (1-2), 357-367.<br>Wu, J. C.; Tragas, C.; Lord, H.; Pawliszyn, J. *                                                                                                                                                                                                                                                                |                          | ESI-MS |
| 1172 | Oxidation residues of herbicides                 | Determination of oxadiazon residues by headspace solid-phase microextraction and gas chromatography-mass spectrometry<br><i>Journal of Chromatography A</i> (2002) 946(1-2), 239-245<br>Araujo, Lilia; Navalon, Alberto; Prieto, Avismelsi; Vilchez, Jose Luis                                                                                                                    |                          |        |
| 1177 | Pesticides in water samples.                     | Solventless sample preparation for pesticides analysis in environmental water samples using solid-phase microextraction-high resolution gas chromatography/mass spectrometry (SPME-HRGC/MS)<br><i>Journal of Environmental Science and Health - Part B Pesticides, Food Contaminants, and Agricultural Wastes</i> (2003) 48 (4), 417-428.<br>Lancas, Fernando M.; Souza, Dalva A. | Various                  |        |
| 1192 | Atrazine and organophosphorus pesticides in soil | Solid-phase microextraction method for the determination of atrazine and four organophosphorus pesticides in soil samples by gas chromatography.<br><i>Journal of Chromatography A</i> (2001) 939(1-2), 13-21<br>Camara, C.; Bouaid, A.; Fernandez, P.; Gonzalez, M. J.; Ramos, L.                                                                                                |                          | GC-MS  |
| 1219 | DDT                                              | On-fiber photodegradation after solid-phase microextraction of p,p'-DDT and two of its major photoproducts, p,p'-DDE and p,p'-DDD.<br><i>Journal of Chromatography, A</i> (2003) 985 (1-2), 175-183.<br>Llompard, M.; Lores, M.; Lourido, M.; Sanchez-Prado, L.; Cela, R.                                                                                                         |                          | GC-MS  |
| 1299 | Organophosphorous insecticide residues.          | Determination of organophosphorus insecticide residues by solid-phase microextraction coupled with gas chromatography-mass spectrometry.<br><i>Sepu</i> (2003), 21 (3), 273-276.<br>Shuai, Q.; Yang, W.; Zheng, Y. J.; Zheng, C. G.                                                                                                                                               | PDMS or polyacrylate.    | GC-MS  |
| 1309 | Phenylureas herbicides in aqueous samples.       | Solid-phase microextraction coupled with high-performance liquid chromatography for the determination of phenylurea herbicides in aqueous samples<br><i>Journal of Chromatography, A</i> (2003) 1012 (1), 57-66.<br>Huang, Shang-Da; Lin, Hsin-Hang; Sung, Yu-Hsiang                                                                                                              | PDMS-DVB, CW-TPR         | HPLC   |
| 1316 | Dichlorvos in pesticides.                        | Pesticide vapours in confined atmospheres. Determination of dichlorvos by SPME-GC-MS at the mg m-3 level.<br><i>Journal of Environmental Monitoring</i> (2003) 5 (4), 574-577.<br>Sanusi, Astrid; Montury, Michel; Ferrari, Federico; Millet, Maurice                                                                                                                             | PDMS                     | GC-MS  |
| 2440 | Acaricides from honey                            | <b>GC-MS determination of acaricides from honey after a new fast ultrasonic-based SPME sample treatment</b><br><i>Talanta</i> 71, #5, 1906-1914 (2007-03-30)<br>Rial-Otero, R. ; Gaspar, E. M.; Moura, I.; Capelo, J. L.                                                                                                                                                          | 85µm polyacrylate 30 min | GC-MS  |
| 1355 | Pesticides in honey.                             | A solid-phase microextraction-gas chromatography-mass spectrometry approach for antivarroa acaricides and pesticide residues in honey.<br><i>Chromatographia</i> (2001) 54 (3-4), 241-246.<br>Volante, M.; Galarini, R.; Miano, V.; Cattaneo, M.; Pecorelli, I.; Bianchi, M.; Marinoni, M. T.; Cossignani, L.; Damiani, P                                                         | 100 um PDMS              | GC-MS  |
| 1364 | Organophosphorous pesticides                     | Application of solid-phase microextraction for the determination of organophosphorus pesticides in aqueous samples by gas chromatography with flame photometric detector.<br><i>Talanta</i> (2001) 55(4), 807-814.<br>Yao, Z. W.; Jiang, G. B.*; Liu, J. M.; Cheng, W.                                                                                                            | Various                  | GC-FID |
| 1369 | Pesticides in strawberries.                      | Focused microwave assistance for extracting some pesticide residues from strawberries into water before their determination by SPME/HPLC/DAD.<br><i>Journal of Agricultural and Food Chemistry</i> (2001) 49(11).                                                                                                                                                                 | 60µm PDMS/DVB            | HPLC   |

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| 1395 | Pesticides                                                 | Analysis of acidic pesticides using in situ derivatization with alkylchloroformate and solid-phase microextraction ( SPME ) for GC-MS.<br><i>Chemosphere</i> (2001) 44(7), 1531-1539.<br>Henriksen, T.; Svensmark, B.; Lindhardt, B.; Juhler, R. K.                                                      | PDMS                             | GC-MS         |
| 1406 | Pesticides                                                 | Formation of volatile halogenated by-products during chlorination of isoproturon aqueous solutions.<br><i>Chemosphere</i> (2001) 45(3), 269-274.<br>Lopez, A.; Ciannarella, R.; Mascolo, G.; Tiravanti, G.                                                                                               | 85 µm polyacrylate               | GC-MS         |
| 1439 | Herbicides in water                                        | Factors affecting multiresidue determination of priority herbicides when using solid-phase microextraction.<br><i>Journal of AOAC International</i> (2002) 85(2), 486-493<br>Albanis, Triantafyllos A.; Konstantinou, Ioannis K.; Lambropoulou, Dimitra A.                                               | 100µm PDMS and 85µm Polyacrylate | GC-FID, GC-MS |
| 1445 | Organochlorine pest. In water                              | Determination of organochlorine pesticides in water using microwave assisted headspace solid-phase microextraction and gas chromatography<br><i>Journal of Chromatography A</i> (2003) 1012(2), 129-137<br>Jen, Jen-Fon; Li, Gwo-Chen; Li, Hong-Ping                                                     | Various fibers compared          | GC-ECD        |
| 1459 | Methyl parathion in apples                                 | Field study for degradation of methyl parathion in apples cultivated with integrated crop management system.<br><i>Bulletin of Environmental Contamination and Toxicology</i> (2002) 69(6), 771-778<br>Tsatsakis, A. M.; Danis, T. G.; Nikitovic, D. P.; Stratis, I. A.; Toutoudaki, M.; Tsakiris, I. N. |                                  |               |
| 1483 | triazole in wine and strawberries                          | Solid-phase microextraction and gas chromatography-mass spectrometry for the rapid screening of triazole residues in wine and strawberries.<br><i>Journal of Chromatography A</i> (2002) 967(2), 255-260<br>Zambonin, C. G.; Cilenti, A.; Palmisano, F.                                                  |                                  |               |
| 1494 | Organochlorine pesticides in water                         | Determination of organochlorine pesticides in ground water using solid-phase microextraction followed by dual-column gas chromatography with electron-capture detection.<br><i>Journal of Chromatography A</i> (2002) 964(1-2), 21-33<br>Tomkins, Bruce A.; Barnard, Angela R.                           | 30µm PDMS                        | GC-ECD        |
| 1495 | Pesticides in bee products                                 | Analytical methods for pesticide residue determination in bee products.<br><i>Journal of Food Protection</i> (2002) 65(9), 1502-1511<br>Fernandez, M.; Manes, J.; Pico, Y.                                                                                                                               |                                  |               |
| 1505 | Dimethylchloroarsine                                       | Identification of dimethylchloroarsine near a former herbicide factory by headspace solid-phase microextraction gas chromatography-mass spectrometry.<br><i>Chemosphere</i> (2002) 48(9), 1003-1008<br>Aldstadt, Joseph H., III; Killelea, Daniel R.                                                     | 85µm Carboxen PDMS Stableflex    | GC-MS         |
| 1522 | Chlorinated pesticides in water                            | Determination of chlorinated pesticides in water by SPME/GC.<br><i>Water Research</i> (2002) 36(7), 1909-1911<br>Boussahel, R.; Baudu, M.; Bouland, S.; Montiel, A.; Moussaoui, K. M.                                                                                                                    | 100µm PDMS                       | GC-ECD        |
| 1531 | Organophosphorus pesticides in cherry and strawberry juice | Headspace solid phase microextraction applied to the analysis of organophosphorus insecticides in strawberry and cherry juices.<br><i>Journal of Agricultural and Food Chemistry</i> (2002) 50(12), 3359-3365<br>Albanis, Triantafyllos A.; Lambropoulou, Dimitra A.                                     | Various fibers compared          | GC-MS         |



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|      |                               | Evaluation of Solid Phase Microextraction-gas chromatography in the analysis of some pesticides with different mass spectrometric techniques: Application to environmental waters and food samples.                                                                                                                         |                                                               |         |
| 1554 | Pesticides in water and food  | <i>Analytical Letters</i> (2002) 35(2), 327-338<br>Benfenati, E.; Natangelo, M.; Tavazzi, S.                                                                                                                                                                                                                                |                                                               | GC-ITMS |
| 1551 | Pesticides in human blood     | Headspace solid-phase microextraction in combination with gas chromatography and tandem mass spectrometry for the determination of organochlorine and organophosphorus pesticides in whole human blood.<br><i>Journal of Chromatography B</i> (2002) 769(1), 65-77<br>Hernandez, F.; Beltran, J.; Lopez, F. J.; Pitarch, E. |                                                               | GC-MS   |
| 1386 | Herbicides                    | Applications of solid-phase microextraction ( SPME ) in the determination of residues of certain herbicides at trace levels in environmental samples.<br><i>Journal of Environmental Monitoring</i> (2001) 49(9), 505-508.<br>Ramesh, A.; Ravi, P. E.                                                                       | 65µm Carobwax/DVB                                             | GC-ECD  |
| 1384 | Tebufenpyrad and oxadiazon.   | Determination of tebufenpyrad and oxadiazon by solid-phase microextraction and gas chromatography-mass spectrometry.<br><i>Chromatographia</i> (2001) 54(5-6), 377-382.<br>Navalon, A.; Prieto, A.; Araujo, L.; Vilchez, J. L.*                                                                                             | 100µm PDMS                                                    | GC-MS   |
| 2550 | 2-aminoacetophenone in wine   | Analysis of 2-aminoacetophenone by direct-immersion SPME-GC-MS and its sensory impact in Chardonnay and Pinot gris wines.<br><i>Food Chemistry</i> 105, #3, 1144-1150 (2007)<br>Wenlai Fan; I-Min Tsai; Qian, M. C.                                                                                                         | immersion                                                     | GC-MS   |
| 2815 | Phthalates in wine            | Determination of phthalates in wine by headspace SPME followed by GC-MS use of deuterated phthalates as internal standards<br><i>J Chromatography A</i> 1181, #1-2, 125-130 (FEB 15 2008)<br>Carrillo, J. D.; Martinez, M. P.; Tena, M. T.                                                                                  | headspace                                                     | GC-MS   |
| 2535 | Phthalates in wine            | Determination of phthalates in wine by headspace SPME followed by . GC-MS. Fibre comparison and selection<br><i>J Chromatography A</i> 1164, #1-2, 248-261 (2007)<br>Carrillo, J. D.; Salazar, C.; Moreta, C.; Tena, M. T.                                                                                                  | 65µm PDMS-DVB headspace                                       | GC-MS   |
| 2746 | guaiacols, phenols in wine    | Determination of Brett character responsible compounds in wines by using multiple headspace solid-phase microextraction<br><i>J Chromatography A</i> 1143, #1-2, 176-181 (2007)<br>Pizarro, C.; Perez-del-Notario, N.; Gonzalez-Saiz, J. M.                                                                                 | 65µm CW-DVB headspace                                         | GC-MS   |
| 2526 | Ethylphenols in wine          | Determination of ethylphenols in wine by in situ derivatisation and headspace solid-phase microextraction-GC-MS<br><i>Anal Bioanal Chem</i> 387, #7, 2547-2558 (2007)<br>Carrillo, J. D.; Tena, M. T.                                                                                                                       | 50/30 DVB/CAR headspace<br>70C for 70 min<br>acetic anhydride | GC-MS   |
| 2573 | Polyfunctional thiols in wine | Automated analysis of 2-methyl-3-furanthiol and 3-mercaptopentyl . acetate at ng L minus 1 level by headspace SPME with on-fibre . derivatisation.and GC-negative chemical ionization MS determination<br><i>J. Chromatogr., A</i> 1121, #1, 1-9 (2006-07-14)<br>Mateo-Vivaracho, L.; Ferreira, V. ; Cacho, J.              | 65µm PDMS-DVB headspace<br>5 min<br>pentafluorobenzyl bromide | GC-MS   |
| 1558 | Polyphenols in wine.          | Gas phase post derivitization following SPME for rapid analysis of polyphenols in wine by GC-MS.<br><i>Zhongshan Daxue Xuebao, Ziran Kexueban</i> 40(1) 54-57.<br>Luan, Tian-gang; Li, Gong-ke; Zhang, Zhan-xia.                                                                                                            | Chinese                                                       |         |
| 2078 | Pesticides in water           | Fast screening determination of some ubiquitous pesticides with SPME in water samples<br><i>Analytical Letters</i> , 37, #7, 1427-1436<br>Moreira Vaz, J.; Komatsu, E.                                                                                                                                                      | 85µm polyacrylate immersion sampling                          | GC-MS   |
| 2079 | Pesticides in air             | Multiresidue method using SPME for the determination of various pesticides with different volatility in confined atmospheres<br><i>Anal and Bioanal Chemistry</i> , 379, #3, 476-483<br>Ferrari, F; Sanusi, Ad; Millet, M; Montury, M                                                                                       | 100µm PDMS<br>40min<br>dynamic air sampling                   | GC-MS   |

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| 2855 | Pesticides in rainwater                 | Pesticides analysed in rainwater in Alsace region (Eastern France): Comparison between urban and rural sites<br><i>Atmospheric Environment</i> 41, #34, 7241-7252 (NOV 2007)<br>Scheyer, Anne; Morville, Stephane; Mirabel, Philippe; Millet, Maurice                                   | 100µm PDMS<br>65µm PDMS-DVB<br>PFBBBr derivatives              | GC-MS/MS |
| 2241 | Pesticides in rainwater                 | Development of an SPME-GC-MS/MS method for the determination of pesticides in rainwater: Laboratory and field experiments<br><i>Environ. Pollut.</i> 139 #1, 133-142 (2006)<br>Mirabel, Philippe; Sauret-Szczepanski, Nathalie; Wortham, Henri                                          |                                                                | GC-MS/MS |
| 2223 | Pesticides in rainwater                 | Analysis of trace levels of pesticides in rainwater using SPME and GC tandem mass spectrometry<br><i>Anal. Bioanal. Chem.</i> 384, #2, 475-487 (2006)<br>Millet, Maurice; Mirabel, Philippe; Morville, Stephane; Scheyer, Anne                                                          | PDMS                                                           | GC-MS-MS |
| 2467 | Pesticides in rainwater                 | Analysis of trace levels of pesticides in rainwater by SPME and GC-tandem mass spectrometry after derivatisation with PFBBBr.<br><i>Anal Bioanal Chem</i> 387, #1, 359-68 (2007 Jan)<br>Scheyer, A.; Briand, O.; Morville, S.; Mirabel, P.; Millet, M.                                  | 65µm PDMS-DVB headspace<br>PFBBBr derivative<br>60 min at 68°C | GC-MS    |
| 2080 | Chlorpyrifos from water                 | Interactions of chlorpyrifos with colloidal materials in aqueous systems<br><i>J of Environmental Quality</i> , 33., #5, 1765-1770<br>Wu, Jigang; Laird, David A.                                                                                                                       |                                                                | GC       |
| 2081 | Pesticides in water                     | SPME-GC-(tandem) MS as a tool for pesticide residue analysis in water samples at high sensitivity and selectivity w/ confirmation capabilities<br><i>J Chromatogr A</i> , 1026, #1-2, 239-250<br>Goncalves, C.; Alpendurada, M. F.                                                      | 65µm PDMS-DVB immersed fiber                                   | GC-MS-MS |
| 2082 | Dieldrin in trees                       | Transport and fate of dieldrin in poplar and willow trees analyzed by SPME<br><i>Chemosphere</i> , 61, #1., 85-91<br>Anderson, Larry G.; Ramaswami, Anu; Skaates, S.                                                                                                                    | headspace                                                      | GC       |
| 2083 | Pesticides in water                     | Pesticide residue analysis in waters by SPME coupled to GC-tandem mass spectrometry.<br><i>Analytical Letters</i> , 37, 1, 99-117<br>Arrebola, F. ; Cortes Aguado, S.; Sanchez-Morito, N.; Garrido Frenich, A.; Martinez Vidal, J.                                                      | 100µm PDMS<br>65µm PDMS-DVB                                    | GC-MS-MS |
| 2084 | Pesticides in milk                      | Determination of pesticides and some metabolites in different kinds of milk by SPME and low-pressure GC-MS-MS<br><i>Anal. Bioanal. Chem.</i> , 381, #1, 164-172<br>Frenich, A. Garrido; Gonzalez-Rodriguez, M.J.; Liebanas, F. J. Arrebola; Lopez, F. J. Sanchez; Vidal, J. L. Martinez | headspace/ immersed acidified sample                           | GC-MS-MS |
| 2741 | Chlorophenol in honey                   | Evaluation of SPME conditions for the determination of chlorophenols in honey samples using gas chromatography<br><i>J Chromatogr A</i> , 1125, #1, 31-37 (2006-08-25)<br>Campillo, N.; Penalver, R.; Hernandez-Cordoba, M.                                                             | 100µm PDMS headspace<br>15 min @ 75°C acetylation              | GC-AED   |
| 2085 | Organo-phosphorus insecticides in honey | Comparison of SPME and stir bar sorptive extraction for determining six organophosphorus insecticides in honey by LC-MS<br><i>J Chromatogr A</i> , 1030, #1-2, 77-85<br>Blasco, C.; Fernandez, M.; Pico, Y.; Font, G.                                                                   | 100µm PDMS                                                     | LC-MS    |
| 2086 | Pyrethroid In vegetables                | Application of SPME for the determination of pyrethroid residues in vegetable samples by GC-MS<br><i>Anal. Bioanal. Chem.</i> , 376, #4, 502-511<br>Beltran, J.; Hernandez, F.; Lopez, F.J.; Peruga, A.; Pitarch, E.                                                                    | immersion sampling                                             | GC/MS    |
| 2087 | Pesticides in water                     | Water quality and presence of pesticides in a tropical coastal wetland in southern Mexico<br><i>Mar. Pollut. Bull.</i> , 48, #11-12, 1130-1141<br>Bello-Mendoza, R; Hernandez-Romero, A.; Malo, E.; Tovilla-Hernandez, C                                                                | immersion sampling                                             | GC       |
| 2348 | p,p'-DDT in water                       | Spatial and temporal variations and possible sources of (DDT) and a its metabolites in rivers in Tianjin, Chin<br><i>Chemosphere</i> 68, #1,10-6 (May-2007)<br>Tao, S; Li, B G; He, X C; Liu, W X; Shi, Z                                                                               |                                                                | GC       |
| 2088 | p,p'-DDT in water                       | Determination of dichlorodiphenyltrichloroethane in water using automated SPME-GC-ECD<br><i>Fenxi Huaxue</i> , 32, #4, 500-502<br>Luan, T. G.; Lan, C. Y.; Zhou, H. L.; Wong, M. H.                                                                                                     | 100µm PDMS immersion sampling                                  | GC-ECD   |

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| 2089                                                      | Fluazifop<br>in water                   | Evaluation of an SPME and GC-MS method for<br>analysis of fluazifop in water.<br><i>Acta Chromatographica</i> , 14, #1, 231-236<br>Olszewska, E.                                                                                                                                        | 100µm PDMS<br>stirring                                              | GC-MS            |
| 2090                                                      | Pesticides<br>in water                  | Cost analysis of ELISA, solid-phase extraction, and<br>SPME for the monitoring of pesticides in water<br><i>Environmental Research</i> , 98, #1, 143-150<br>Dalvie, M.; Sinanovic, E.; London, L; Cairncross, E;<br>Solomon, A.; Adam, H.                                               | comparison of cost                                                  | GC               |
| 2091                                                      | Prethroid<br>residue on<br>strawberries | Advanced method using microwaves and SPME<br>coupled w/GC-MS for the determination of pyrethroid<br>residues in strawberries<br><i>J. Chromatogr. A</i> , 1046, #1-2, 35-40<br>Guillet, Valerie; Montury, Michel; Sanusi, Astrid                                                        | 100µm PDMS<br>30min immersed<br>water/acetonitrile<br>preextraction | GC-MS            |
| 2092                                                      | Pesticides in<br>beverages              | Analysis of pesticide residues in juice and beverages "review"<br><i>Crit. Rev. Anal. Chem.</i> , 34, #2, 121-131<br>Albero, B; Gonzalez, L; Sanchez-Brunete, C; Tadeo, J.                                                                                                              | Review article                                                      | GC-MS            |
| 2093                                                      | Pesticides<br>in water                  | Combining SPME and on-line preconcentration-capillary<br>electrophoresis sensitive analysis of pesticides in foods<br><i>Electrophoresis</i> , 26, #4-5, 980-989<br>Hernandez-Borges, J.; Cifuentes, A.;<br>Garcia-Montelongo, F.; Rodriguez-Delgado, M.                                |                                                                     | CE-UV            |
| 2094                                                      | Pesticides in<br>food                   | Highly sensitive analysis of multiple pesticides in foods<br>combining SPME, capillary electrophoresis-MS & chemometrics<br><i>Electrophoresis</i> , 25, #13, 2065-2076<br>Hernandez-Borges, Javier; Rodriguez-Delgado, M.;<br>Garcia-Montelongo, Francisco J.; Cifuentes, A.           | NH <sub>2</sub> HCO <sub>3</sub> buffer<br>pH 4                     | CE-MS<br>CE-UV   |
| 2095                                                      | Pesticides<br>in water                  | Application of SPME to the study of the photochemical<br>behaviour of five priority pesticides: "On-fiber"<br>and aqueous photodegradation<br><i>J. Chromatogr. A</i> , 1047, #2, 271-279<br>Sanchez-Prado, Lucia; Llompert, Maria; Lores, Marta;<br>Garcia-Jares, Carmen; Cela, Rafael | 100µm PDMS<br>30min extract<br>immersion sampling                   | GC-MS            |
| 2096                                                      | Pesticides in<br>water                  | Applicability of headspace SPME to the determination<br>of multi-class pesticides in waters.<br><i>J Chromatogr A</i> , 1028, #1, 63-74<br>Sakamoto, Mitsushi; Tsutsumi, Taizou                                                                                                         | 30µm polyacrylate<br>30° to 100°C<br>headspace                      | GC-MS            |
| Soil                                                      |                                         |                                                                                                                                                                                                                                                                                         |                                                                     |                  |
| Application of SPME and GC with Electron-Capture and Mass |                                         |                                                                                                                                                                                                                                                                                         |                                                                     |                  |
| 36                                                        | Hexachlorocyclohexane<br>in soil        | Mass Spectrometric Detection for the Determination of<br>Hexachlorocyclohexanes in Soil Solutions<br><i>J. Chromatogr.</i> 687: 133-140 (1994)<br>Popp, P., Kalbitz, K., Opperman, G.                                                                                                   | 100µm PDMS<br>20-30 min<br>immersion<br>stirring                    | GC-ECD,<br>GC-MS |
| 74                                                        | Diesel fuel<br>in soil                  | Solid Phase Microextraction-GC for Analysis of Diesel Fuel<br>Residues in Soil<br>Request from Dept. Soil Science, University of Manitoba<br>Winnipeg, MB, Canada R3T 2N2.<br>Graham, K., Webster, B., Sarna, L.                                                                        | 100µm PDMS<br>55°C, 30 min<br>headspace                             | GC-FID           |
| 716                                                       | THF, methanol<br>in distillate          | Analysis of THF and methanol in distillation residue<br>samples by automated headspace SPME-GC with FID<br><i>J Chromatogr. Sci.</i> (2000), 38(3), 117-121<br>Gavlick, W.                                                                                                              | 65µm PDMS/DVB<br>9min.<br>headspace                                 | GC-FID           |
| 870                                                       | PAHs in<br>environmental<br>samples     | The use of SPME and GC-MS for the chemical characterization<br>and assessment of PAH pollution in aqueous<br>environmental samples<br><i>Int. J. Environ. Anal. Chem</i> (2000) 78(3-4) 205-221<br>Havenga, Willem J.; Rohwer, Egmont R                                                 |                                                                     |                  |
| 717                                                       | PAHs<br>in soil                         | Solid Phase Microextraction of PAHs from soil<br><i>Chem. Ana.</i> , 2000 (45 No.6) 835-842<br>Sedukiene, I., Vickackaite, V., Kazlauskas, R.                                                                                                                                           |                                                                     |                  |

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| 567  | PAHs<br>in soil                               | Chemical characterization and screening of hydrocarbon pollution in industrial soils by headspace SPME<br><i>J-Chromatogr.</i> , A. 2 Jul 1999; 848(1-2): 279-295<br>Havenga,-WJ; Rohwer,-ER                                                                               | 100µm PDMS<br>40 min<br>headspace                                        | GC-MS         |
| 865  | PAHs<br>in soil                               | Solid phase microextraction of PAHs from soil<br><i>Chemia Analytyczna (Warsaw) (2000) 45(6) 835-842</i><br>Seduikiene, I.; Vickackaite, V.; Kazlauskas, R.                                                                                                                | 30min @ 60°C<br>headspace                                                |               |
| 75   | Pesticides<br>in soil                         | Extraction of Pesticides by Solid Phase Microextraction (from Soil)<br>Request from: Dept. Environmental Assessment, Swedish University of Agricultural Sciences, PO Box 7050, Uppsala, Sweden<br>Bengsson, S., Berglof, T.                                                | 100µm PDMS<br>immersed,<br>water solution                                | GC-ECD, -NPD  |
| 2336 | Alcohols, esters,<br>carbonyls in air         | <b>Distribution coefficients of aliphatic alcohols, carbonyl compounds and esters between air and Carboxen/PDMS fiber coating</b><br><i>Anal. Chim. Acta. 560 #1-2, 103-109 (2006)</i><br>Isidorov, V.; Modzelewska, A.; Purzynska, A.; Serowiecka, M.                     | <b>Carboxen/PDMS<br/>air sample<br/>15-30°C</b>                          | <b>GC/MS</b>  |
| 2149 | Amides in Air                                 | <b>Analysis of amides in the air by sampling with SPME and detection by GC-FID</b><br><i>J. Sep. Sci., 29, #3, 346-350 (2006)</i><br>de Lourdes Cardeal, Z.; de Souza Bergo, P.; Parreira, F.; Rabelo de Carvalho, C.                                                      | <b>passive air sampling<br/>65µm PDMS-DVB<br/>90min @25°C</b>            | <b>GC-FID</b> |
| 2718 | Triazine<br>in water                          | <b>On-fibre SPME coupled to conventional HPLC versus in-tube SPME coupled to capillary LC screening analysis of triazines in water samples.</b><br><i>J. Chromatogr., A 1125, #2, 159-171 (2006-09-01)</i><br>Chafer-Pericas, C.; Herraiz-Hernandez, R.; Campins-Falco, P. | <b>65µm PDMS-DVB</b>                                                     | <b>LC</b>     |
| 855  | Triazine, amides<br>in water                  | Determination of triazines and amides in water using solid-phase microextraction coupled with GC-MS.<br><i>Chromatographia (2001) 53(5-6), 306-310</i><br>Hu, R.; Elia, D.; Berthion, J. -M.; Poliak, S.                                                                   |                                                                          | GC-MS         |
| 529  | Triazines,<br>carbamates<br>in soil leachates | Determination of polar pesticides in soil by SPME couple to HPLC-MS<br>Fresenius'J. Anal. Chem. (1999), 363(7), 680-685<br>Moder, M., Popp, P., Eisert, R., Pawliszyn, J.                                                                                                  | 85µm polyacrylate<br>salt added                                          | HPLC-MS       |
| 718  | Triazines,<br>in soil leachates               | Determination of triazines in soil leachates by SPME coupled to GC-MS<br><i>J. Chromatogr. A 2000, 874(2), 247-255</i><br>Zambonin, C., Palmisano, F.                                                                                                                      | 85µm polyacrylate<br>30min @ 20°C<br>agitation                           | GC-MS         |
| 530  | Organophosphorus<br>pesticides in<br>soil     | Determination of organophosphorus pesticides in soil by headspace SPME<br>Fresenius'J. Anal. Chem (1999), 363(7), 673-679<br>Ng, W., Teo, M., Lakso, H.                                                                                                                    | 85µm polyacrylate<br>1 hr @ 80°C<br>headspace over soil                  | GC-FID        |
| 76   | Lindane<br>in water and soil                  | Analysis of Lindane in Water and Soil by Solid Phase Microextraction<br>Request from: Dept. Soil Science, University of Manitoba, Winnipeg MB, Canada R3T 2N2.<br>Anderson, K., Sarna, L., Webster, B.                                                                     | 30µm & 100µm PDMS<br>58°C<br>40 min (headspace)<br>15-20 min (immersion) | GC-ECD        |
| 2170 | Organochlorine<br>pesticides in<br>soil       | <b>A novel headspace SPME method for the exact determination of organochlorine pesticides in environmental soil samples</b><br><i>Anal. Bioanal. Chem. 384, #7-8, 1584-1589 (2006)</i><br>Fu, Shan; Jiang, Ting; Wang, Xia; Xu, Xiaobai; Yuan, Jinpeng; Zhao, R.           |                                                                          | <b>GC-ECD</b> |
| 880  | Organochlorine<br>pesticides in<br>soil       | Determination of organochlorine pesticides and their metabolites in soil samples using headspace SPME<br><i>J.Chromatogr. A (2001) 918(1), 177-188</i><br>Doong, R., Liao, P.                                                                                              | 100µm PDMS,<br>65µm DVB/PDMS<br>60min@70°C<br>headspace                  | GC-ECD        |

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| 881 | Fipronil in water, soil, urine                         | Determination of fipronil by SPME and GC-MS<br><i>J chromatogr. A</i> 919(2001) 215-221<br>Vilchez, J., Prieto, A., Araujo, L., Navalon, A.                                                                                                                                      | 85µm polyacrylate<br>30min. @ 60°C<br>stirred<br>9.5 pH                  | GC-MS             |
| 857 | Metochlor from soil                                    | Determination of metolachlor volatile flux from soil using SPME<br><i>Prepr. Ext. Abstr. ACS (2001) 41(1) 307-311</i><br>McConnell, L.; Kim, H; Nochetto, C; Gish, T; Prueger, J                                                                                                 |                                                                          |                   |
| 833 | Halobenzenes in soil and water                         | Gas chromatography/ion-trap tandem mass spectrometry for the analysis of halobenzenes in soils by SPME<br><i>Rapid Commun Mass Spectrometry (2000) 14(23) 2271-2281</i><br>Sarrion, M. N.; Santos, F. J.; Galceran, M. T.                                                        | 100µm PDMS<br>45min                                                      | GC-MS             |
| 92  | Chlorobenzenes in soil and water                       | Analysis of Chlorobenzenes in Soils by Headspace SPME and GC-Ion Trap MS<br><i>J. Chromatogr. A</i> 771: 181-189 (1997)<br>Santos, F., Sarrion, M., Galceran, M.                                                                                                                 | 100µm PDMS<br>headspace                                                  | GC-Ion Trap<br>MS |
| 921 | Chlorobenzenes in soil                                 | Strategies for the analysis of chlorobenzenes in soils using SPME coupled with GC-ion trap mass spectrometry<br><i>J. Chromatogr. A</i> (1998), 819(1-2), 197-209<br>Sarrión, M., Santos, F., Galceran, M.                                                                       |                                                                          | GC-Ion Trap<br>MS |
| 238 | Chlorobenzenes, nitrobenzenes, anilines in soil, water | Analysis of Chloro- and Nitroanilines and Benzenes in Soil by Headspace Solid-Phase Microextraction<br><i>J. Chromatogr. A</i> 746: 71-81 (1996)<br>Fromberg, A., Nilsson, T., Larsen, R., Montanarella, L., Facchetti, S., Madsen, J.                                           | 85µm polyacrylate<br>headspace<br>50°C, 30 min                           | GC-ECD            |
| 97  | Semivolatiles in solids                                | Coupled Subcritical Water Extraction with SPME for Determining Semivolatile Organics in Environmental Solids<br><i>Anal. Chem.</i> 68: 3892-3898 (1996)<br>Hageman, K., Mazeas, L., Grabanski, C., Miller, D., Hawthorne, S.                                                     | 100µm PDMS<br>15 min<br>immersion                                        | GC-MS             |
| 793 | Phenols in soil                                        | Fast determination of phenols in contaminated soils<br><i>J. Chromatogr., A (2001) 911(1), 135-141</i><br>Baclocchi, R.; Attina, M.; Lombardi, G.; Boni, M. R                                                                                                                    | 85µm polyacrylate<br>60min. @ 20°C<br>immersion, pH 1                    | GC-FID            |
| 719 | Chlorophenols in soil                                  | Determination of chlorophenols in soil using accelerated solvent extraction combined with SPME<br><i>Anal. Chem. (2000), 72(3), 46-551</i><br>Wennrich, L, Popp, P., Moeder, M.                                                                                                  | 85µm polyacrylate<br>20min. @ 20°C<br>immersion, pH 2<br>satr NaCl       | GC-MS             |
| 531 | Volatiles and semivolatiles in soils/water             | Headspace SPME for the determination of volatile and semivolatile pollutants in soils<br><i>Talanta (1999), 48(2), 451-459</i><br>Llompert, M., Li, K., Fingas, M.                                                                                                               | 100µm PDMS<br>30 min @ 20°C<br>headspace                                 | GC-MSD            |
| 532 | PAHs, hydrocarbons in pollutant crust                  | Investigation by SPME and GC-MS of organic films on stone monuments<br><i>Rapid. Commun. Mass Spectrom. (1999), 13(10), 895-900</i><br>Angelis, F., Di Tullio, A., Mellerio, G., Quaresima, R, Volpe, R                                                                          |                                                                          | GC-MS             |
| 533 | Aldehydes, acids from palmitic acid                    | Degradation of palmitic (Hexadecanoic) acid deposited on TiO2 coated self cleaning glass: kinetics of disappearance, intermediate products and degradation pathways<br><i>New J. Chem (1999), 23(4), 365-374</i><br>Romeas, V., Pichat, P., Guillard, C., Chopin, T., Lehaut, C. |                                                                          |                   |
| 534 | PAHs in organic matter                                 | Interaction between natural organic matter (NOM) and polycyclic aromatic compounds, Comparison of fluorescence quenching and SPME<br><i>Fresenius'J. Anal. Chem. (1999), 364(4), 313-319</i><br>Myung, S., Kim, M., Min, H., Yoo, E. Kim, K.                                     | 85µm polyacrylate<br>30 min<br>pH3, immersed<br>alkyl formate derivative | GC-MS             |

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|------|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|------------|
| 172  | Elemental analysis of soil                | Elemental and Organometallic Analysis of Soil Using Glow-Discharge MS and GC-MS<br>Rapid Commun. Mass Spectrom. 10: 341-346 (1996)<br>Barshick, C., Barshick, S., Mohill, M., Britt, P., Smith, D.                                                                                | 100µm PDMS<br>50°C, 10 min<br>salt added | GC-MS      |
| 174  | Mercury species in natural gas condensate | Performance Improvements in the Determination of Mercury Species in Natural Gas Condensate Using Online Amalgamation Trap or SPME with Capillary GC-Microwave-Induced Plasma Atomic Emission Spectrometry<br>Analyst 121: 1055-1060 (1996)<br>Snell, J., Frech, W., Thomassen, Y. |                                          | GC-ICP     |
| 535  | Organomercury in soil and water           | SPME and GC-MIP-AED for the speciation analysis of organomercury compounds<br>J. High Resolut. Chromatogr. (1999), 22(3), 181-182<br>Mothes, S., Wennrich, R.                                                                                                                     |                                          | GC-MIP-AED |
| 2314 | BTEX in sand                              | <b>Headspace solid-phase microextraction (HS-SPME) for the determination of BTEX in foundry molding sand</b><br><i>Analytical Letters</i> 38 #14, 2393-2405 (2005)<br>Dungan, Robert S.                                                                                           | 75µm Carboxen headspace                  | GC/MS      |
| 239  | BTEX, chlorinated hydrocarbons in soil    | The Determination of Volatile Organic Compounds in Soils Using SPME with Gas Chromatography-Mass Spectrometry<br>J. High Res. Chromatogr. 19: 515-519 (1996)<br>James, K., Stack, M.                                                                                              | 100µm PDMS<br>5 min<br>headspace         | GC-MS      |
| 197  | VOCs in water and sediment                | Environmental Analysis of Volatile Organic Compounds in Water and Sediment by GC<br>J.Chromatogr. A 733A 733: 119-141 (1996) (review)<br>Kuran, P., Sojak, L.                                                                                                                     | overview article                         |            |
| 536  | VOCs in sediment                          | Determination of VOC contamination in borehole sediments by headspace SPME-GC analysis<br>Fresenius' J. Anal. Chem 1999, 364(7), 645-647<br>Dermietzel, Jurgen, Strenge, G.                                                                                                       | water solution<br>headspace              |            |
| 768  | Tributyltin in water                      | Determination of tributyltin by automated in-tube SPME with HPLC-ES-MS<br><i>J Anal At Spectrom</i> (2001) 16(2), 159-165<br>Wu, J; Mester, Z; Pawliszyn, J.                                                                                                                      | In-tube SPME<br>Supel-Q PLOT             | LC-ES-MS   |
| 720  | Butyltin in water                         | Determination of butyltin compounds in aqueous samples by GC w/FPD and headspace SPME after in-situ hydride derivatization<br><i>Aanl. Sci.</i> 2000, 16(6), 585-588<br>Jiang, G, Liu, J.                                                                                         | NaBEt <sub>4</sub><br><br>Japanese       | GC-FID     |
| 771  | Butyltin in sediment                      | Determination of butyltin compounds in sediments by headspace SPME and capillary GC w/FPD using quartz surface induced luninescence<br><i>Fenxi Huaxue</i> (20001) 29(2), 158-160<br>Liu, J; Jiang, G.                                                                            | KBH-4<br>in Chinese                      | GC-FPD     |
| 721  | Butyltin in water                         | Determination of butyltin species in water and sediment by SPME-GC-FID<br><i>J.Chromatogr. A</i> (2000), 873(1), 61-71<br>Millan, E., Pawliszyn, J.                                                                                                                               | NaBEt <sub>4</sub>                       | GC-FID     |
| 888  |                                           | Solid phase microextraction as a tool for trace element speciation<br><i>Spectrochim. Acta, Part B</i> (2001) 56B(3), 233-260<br>Mester, Z.; Sturgeon, R.; Pawliszyn, J.                                                                                                          |                                          |            |
| 852  | Butyltin                                  | Speciation of butyltin compounds in marine sediments with headspace SPME and gas chromatography: MS                                                                                                                                                                               | 100µm PDMS                               | GC-MS      |

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|      | in marine sediment                                       | <i>Fresenius' J. Anal. Chem</i> 2001, 369(6), 510-515<br>Cardellicchio, N.; Decataldo, A.; Di Leo, A.; Giandomenico, S.                                                                                                                                      | headspace<br>NaBEt <sub>4</sub> derivative                                                                                        |        |
| 722  | Butyl-, phenyltin<br>in water                            | SPME: a new procedure for the control of butyl-<br>and phenyltin pollution in the environment by GC-FID<br><i>Analyst (Cambridge, UK)</i> 2000, 125(2), 263-268<br>Aguerre, S., Montigny, C., Lespes, G., Gaultier, M.                                       | 100µm PDMS<br>60 min, immersed<br>NaBEt <sub>4</sub>                                                                              | GC-FID |
| 199  | Organotin<br>in humic organic<br>matter                  | Solid Phase Microextraction to Study the Sorption of<br>Organotin Compounds onto Particulate and Dissolved<br>Humic Organic Matter<br><i>Environ. Sci. Technol.</i> 31: 3629-3636 (1997)<br>Poerschmann, J., Kopinke, F., Pawliszyn, J.                      | 100µm PDMS<br>30 min<br>immersion                                                                                                 | GC-MS  |
| 343  | Methylmercury<br>derivative<br>in soil                   | Development of a Technique for the Analysis of Inorganic<br>Mercury salts in Soils by GC-MS<br><i>Intl. J. Mass Spectrometry</i> 178 (1998) 31-41<br>Barshick, C., Barshick, S., Britt, P., Lake, D., Vance, M.,<br>Walsch, E.                               | 100µm PDMS,<br>65µm PDMS/DVB<br>50°C, 5 min<br>stirring, salt added<br>methyl bis(dimethyl-<br>gloximate) pyridinecobalt<br>(III) | GC-MS  |
| 723  | Methylmercury<br>derivative<br>in soil                   | Determination of methylmercury by SPME-ICP-MS: a new<br>sample introduction method for volatile metal species<br><i>J. Anal. AT. Spectrom</i> (2000) 15(7), 837-842<br>Mester, Z., Lam, J., Sturgeon, R., Pawliszyn, J.                                      |                                                                                                                                   | ICP-MS |
| 209  |                                                          | Applications of Sorbent Extraction in Environmental Analysis<br><i>Chem. Anal. (Warsaw)</i> 42 (3): 297-314 (1997)<br>Gorlo, D., Namiesnik, J., Zygmunt, B.                                                                                                  |                                                                                                                                   |        |
| 303  | PAHs, amines,<br>aromatic<br><br>from soil & particulate | Coupled Subcritical Water Extraction with SPME for<br>Determining Semivolatile Organics in Environmental Solids<br><i>Anal. Chem.</i> (1996) 68, 3892-3898<br>Hageman, K., Mazeas, L., Grabanski, C., Miller, D.,<br>Hawthorne, S.                           | 100µm PDMS<br>15 min<br>immersion                                                                                                 | GC-ECD |
| 884  | Phenyl compounds<br>in water                             | Determination of phenyl compounds in drinking water by<br>solid phase microextraction coupled with capillary GC/MS<br><i>Huanjing Huaxue</i> (2001) 20(2) 191-195                                                                                            |                                                                                                                                   |        |
| 2572 | PCBs<br>in sediment                                      | <b>Rapid screening of polychlorinated biphenyls in sediments using<br/>non-equilibrium SPME and fast gas chromatography with ECD</b><br><i>J. Chromatogr., A</i> 1124, #1-2, 43-50 (2006-08-18)<br>Montes, R.; Ramil, M.; Rodriguez, I. ; Rubi, E.; Cela, R. | 100µm PDMS<br>10 min @ 100°C<br>headspace                                                                                         | GC-ECD |
| 920  | PCBs<br>in soil                                          | Simple method for estimating PCH concentratons on soils<br>and sediments using subcritical water extraction coupled<br>with SPME<br><i>J. Chromatogr. A</i> (1998), 814(1-2) 151-160<br>Hawthorne, S., Grabanski, C., Hageman, K. Miller, D.                 |                                                                                                                                   |        |
| 304  | PCBs<br>in soil                                          | Solid-Phase Microextraction of Polychlorinated Biphenyls<br><i>J. Chromatogr. A</i> 800 (2): 257-266 (1998)<br>Yang, Y., Miller, D., Hawthorne, S.                                                                                                           | 100µm PDMS<br>15 min<br>immersion                                                                                                 | GC-ECD |
| 370  | PCBs<br>in soil                                          | Adsorption versus Absorption of PCBs onto SPME Coatings<br><i>Anal. Chem.</i> 1998, Vol. 70, 1866-1869<br>Yang, Y., Hawthorne, S., Miller, D.                                                                                                                | 7µm PDMS<br>5 hr<br>immersion<br>stirring, salt added                                                                             | GC-ECD |
| 537  | PCBs in<br>soil & sediment<br>water slurry               | Headspace SPME for the determination of PCBs in soils<br>and sediments<br><i>J. Microcolumn Sep.</i> (1999), 11(6), 307-402<br>Llompart, M., Li, K., Fingas, M.                                                                                              | 100µm PDMS<br>30 min @ 100°C<br>headspace                                                                                         | GC-MS  |

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| 724  | PAHs<br>in sediment                        | Determination of PAHs in sediment using SPME w/GC-MS<br><i>J. Chromatogr. Sci. (2000), 38(2), 55-60</i><br>Cam, D., Gagni, S., Meldolesi, L., Galletti, G.                                                                                                                                                                                                                | 100µm PDMS                   | GC-MS      |
| 538  | Bisphenol A<br>in water                    | An attempt by SPME with on-column silylation for a rapid<br>and highly sensitive determination of bisphenol A<br><i>Bunseki Kagaku (1999) 48(6), 589-593</i><br>Takao, Y. Lee, H., Arizono, K.                                                                                                                                                                            | BSTFA derivative<br>Japanese | GC-MS      |
| 305  | Organics<br>from odoriferous<br>samples    | SPME of Semivolatile Organic Compounds from<br>Odoriferous Samples<br><i>Hazard. Ind. Wastes (28th) 734-738 (1996)</i><br>Wojtowicz, C., Clifton, A., Willy, D.                                                                                                                                                                                                           |                              |            |
| 1014 | Tin and butyltin in<br>sediment            | Assessment of tin and butyltin species in estuarine superficial sediments from<br>Gipuzkoa, Spain<br><i>Chemosphere (2003) 51 (8), 643-649.</i><br>Arambarri, I.; Garcia, R.; Millan, E.                                                                                                                                                                                  | PDMS                         | GC-FID     |
| 1028 | Methylmercury and<br>butyltin in sediments | Determination of methylmercury and butyltin compounds in marine biota and<br>sediments using microwave-assisted acid extraction, solid-phase<br>microextraction, and gas chromatography with microwave-induced plasma<br>atomic emission spectrometric detection.<br><i>Analytical Chemistry (2002) 74 (18), 4694-4701.</i><br>Tutschku, S.; Schantz, M. M.; Wise, S. A.* |                              | GC-MIP-AES |
| 1040 | Bis(2-chloroethyl)<br>sulfide in soil.     | Application of headspace solid-phase microextraction and gas chromatography-<br>mass spectrometry for detection of the chemical warfare agent bis(2-chloroethyl)<br>sulfide in soil.<br><i>Journal of Chromatography, A (2002) 971 (1-2), 185-191.</i><br>Kimm, G. L.; Hook, G. L.; Smith, P. A.*                                                                         | Polyacrylate                 | GC-MS      |
| 1068 | Chlorophenols in<br>landfill leachates     | Direct determination of chlorophenols in landfill leachates by solid-phase micro-<br>extraction-gas chromatography-mass spectrometry.<br><i>Journal of Chromatography, A (2002) 975 (2), 267-274.</i><br>Ribeiro, A.; Neves, M. H.; Almeida, M. F.; Alves, A.; Santos, L. *                                                                                               |                              | GC-MS      |
| 1108 | Musk compounds in<br>sludge.               | Determination of musk compounds in sewage treatment plant sludge samples<br>by solid-phase microextraction<br><i>Journal of Chromatography A (2003) 999 (1-2), 185-193.</i><br>Cela, Rafael; Garcia-Jares, Carmen; Llopart, Maria; Polo, Maria; Salgado,<br>Carmen                                                                                                        | Various                      | GC-MS      |
| 1193 | VX in soil                                 | Detection of VX contamination in soil through solid-phase microextraction<br>sampling and gas chromatography/mass spectrometry of the VX degradation<br>product bis(diisopropylaminoethyl)disulfide.<br><i>Journal of Chromatography A (2003) 992 (1-2), 1-9.</i><br>Smith, Philip A.; Ding, Bangwei; Hook, Gary L.; Kimm, Gregory; Koch, David;<br>Savage, Paul B.       | PDMS                         | GC-MS      |
| 1220 | Triazines in soil.                         | Determination of triazines in soil by microwave-assisted extraction followed by<br>solid-phase microextraction and gas chromatography-mass spectrometry.<br><i>Journal of Chromatography, A (2003) 985 (1-2), 167-174.</i><br>Shen, G.; Lee, H. K.*                                                                                                                       |                              | GC-MS      |
| 2713 | PAHs in sediment                           | <b>New cold-fiber headspace Spme device for quantitative extraction of<br/>polycyclic aromatic hydrocarbons in sediment.</b><br><i>Journal of Chromatography, A 1124, #1-2, 35-42</i><br><b>Ghiasvand, A. R.; Hosseinzadeh, S.; Pawliszyn, J.</b>                                                                                                                         | headspace                    | GC-MS      |
| 1240 | PAHs in sediment                           | Micellar microwave-assisted extraction combined with solid-phase<br>microextraction for the determination of polycyclic aromatic hydrocarbons in a<br>certified marine sediment.<br><i>Analytica Chimica Acta (2003) 477 (1), 81-91.</i><br>Pino, V.; Ayala, J. H.; Afonso, A. M.; Gonzalez, V. *                                                                         | PDMS, polyacrylate.          | GC-MS      |



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|      | Detection of O -ethyl- S -(2-diisopropylaminoethyl) methylphosphonothiolare (VX) contamination in soil through solid-phase microextraction sampling and gas chromatography/mass spectrometry of the VX degradation product bis(diisopropylaminoethyl)disulfide.                                                                |                                                                 |  |        |
| 1255 | VX nerve agent in soil. <i>Journal of Chromatography, A</i> (2003) 992 (1-2), 1-9.<br>Hook, G. L.; Kimm, G.; Koch, D.; Savage, P. B.; Ding, B. W.; Smith, P. A.*                                                                                                                                                               |                                                                 |  | GC-MS  |
| 1297 | Determination of isocarbophos in soil samples by gas chromatography-mass spectrometry with combination of microwave-assisted extraction and solid-phased microextraction.<br>Fenxi Ceshi Xuebao (2003) 22 (4), 13-16.<br>Yang, Y.; Li, G. K.*                                                                                  |                                                                 |  | GC-MS  |
| 1320 | Determination of antifouling compounds in marine sediments by solid-phase microextraction coupled to gas chromatography-mass spectrometry.<br><i>Journal of Chromatography, A</i> (2003) 1010 (1), 1-8.<br>Lambropoulou, D. A.; Sakkas, V. A.; Albanis, T. A.*                                                                 |                                                                 |  | GC-MS  |
| 1363 | Petroleum hydrocarbons in soil<br>Determination of petroleum hydrocarbons in contaminated soils using solid-phase microextraction with gas chromatography-mass spectrometry.<br><i>Journal of Chromatographic Science</i> (2001) 39(11), 481-486.<br>Cam, D.; Gagni, S.                                                        | 100 µm PDMS                                                     |  | GC-MS  |
| 1385 | n-alkanes in soil.<br>A new PVC-activated charcoal fibre coated on silver wire: application in determination of n-alkanes in the headspace of soil samples by SPME-GC.<br><i>Analytical Sciences</i> (2002) 18(1), 77-81.<br>Farajzadeh, M.; Matin, A. A.                                                                      | Activated charcoal/PVC                                          |  | GC     |
| 1394 | Hydrocarbons in soil.<br>Determination of hydrocarbons in old creosote contaminated soil using headspace solid-phase microextraction and GC-MS.<br><i>Chemosphere</i> (2001) 44(7), 1641-1648.<br>Eriksson, M.; Faeldt, J.; Dalhammar, G.; Borg-Karlson, A. -K.                                                                | 30 µm PDMS                                                      |  | GC-MS  |
| 1411 | Butyltin species in sediment.<br>Headspace solid-phase microextraction of butyltin species in sediments and their gas chromatographic determination.<br><i>Journal of Separation Science</i> (2001) 24(6), 459-464.<br>Gui-bin, Jiang; Ji-yan, Liu; Ke-wu, Yang; Qun-fang, Zhou                                                | 100 µm PDMS                                                     |  |        |
| 1446 | Chlorophenols in soil<br>Determination of chlorophenols in soil samples by microwave-assisted extraction coupled to headspace solid-phase microextraction and gas chromatography - Electron-capture detection<br><i>Journal of Chromatography A</i> (2003) 1012(2), 111-118<br>Jen, Jen-Fon; Wei, Ming-Chi                     | 85µm Polyacrylate, 1g soil in 6mL water, pH 2, 9mins. Headspace |  | GC-ECD |
| 1461 | Organophosphorus pesticides in soil<br>Solid-phase microextraction coupled to gas chromatography- mass spectrometry for the study of soil adsorption coefficients of organophosphorus pesticides<br><i>Journal of Environmental Monitoring</i> (2002) 4(4), 477-481<br>Zambonin, C. G.; Palmisano, F.; Losito, I.; Cilenti, A. |                                                                 |  | GC-MS  |
| 1462 | Tributyltin in water and soil<br>Gas phase detection of tributyltin chloride arising from aqueous and solid matrices.<br><i>Journal of Analytical Atomic Spectrometry</i> (2002) 17(11), 1506-1510<br>Bancon-Montigny, Chrystelle; Lam, Joseph W.; Maxwell, Paulette; Mester, Zoltan; Sturgeon, Ralph E.; Yang, Lu             |                                                                 |  | GC-MS  |
| 1464 | Aromatic acids in soil<br>Separation and identification of aromatic acids in soil and the Everglades sediment samples using solid-phase microextraction followed by capillary zone electrophoresis.<br><i>Journal of Chromatography A</i> (2002) 979(1-2), 417-424<br>Deng, Yiwei; Fan, Xiaofang                               | 85µm Polyacrylate                                               |  | CZE    |

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|------|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-------------|
| 1486 | Monoaromatic hydrocarbons in soil | Solid-phase microextraction-gas chromatographic determination of volatile monoaromatic hydrocarbons in soil.<br><i>Fresenius' Journal of Analytical Chemistry</i> (2002) 370(8), 1096-1099<br>Zygmunt, Bogdan; Namiesnik, Jacek                                                                                 | 100µm PDMS                                                                 | GC-MS       |
| 1490 | Tributyltin in sediment           | Improvement in measurement precision with SPME by use of isotope dilution mass spectrometry and its application to the determination of tributyltin in sediment using SPME GC-ICP-MS.<br><i>Journal of Analytical Atomic Spectrometry</i> (2002) 17(8), 944-949<br>Yang, Lu; Mester, Zoltan; Sturgeon, Ralph E. | 100µm PDMS, sodium tetraethylborate derivative                             | GC-IDMS     |
| 2243 | Organometallic in water           | <b>Trace element speciation using solid phase microextraction</b><br><i>Spectrochimica Acta Part B: 60 #9-10, 1243-1269 (2005)</i><br><b>Mester, Zoltan; Sturgeon, Ralph</b><br><br>Gas phase sampling of volatile (organo)metallic compounds above solid samples.                                              | <b>Review article</b>                                                      |             |
| 1491 | Organometallics in soil           | <i>Journal of Analytical Atomic Spectrometry</i> (2002) 17(8), 868-871<br>Mester, Zoltan<br>Determination of tributyltin compounds in surface sediments of harbour by gas chromatography with headspace solid-phase microextraction                                                                             |                                                                            | ICP-MS      |
| 1150 | Tributyltin in sediment           | <i>Fenxi Ceshi Xuebao</i> (2003) 22 (2), 28-30.<br>Lei, Z.; Huang, C. J.; Jia, L.; Shi, H. H.                                                                                                                                                                                                                   |                                                                            | GC-FPD      |
| 1326 | Polycyclic musks in sewage.       | Removal of two polycyclic musks in sewage treatment plants: freely dissolved and total concentrations.<br><i>Environmental Science and Technology</i> (2003) 37 (14), 3111-3116.<br>Artola-Garicano, E.; Borkent, I.; Hermens, J. L. M.; Vaes, W. H. J.                                                         |                                                                            | GC-MS       |
| 2097 | Chloro-benzenes in soil           | SPME as a tool to predict internal concentrations of soil contaminants in terrestrial organisms after exposure to a laboratory standard soil<br><i>Chemosphere</i> , 54, #4, 561-568<br>van der Wal, L.; van Gestel, C.; Hermens, J.                                                                            | 30µm PDMS<br>1 day sample headspace                                        | GC          |
| 2098 | Butyltin in sediment              | Applicability of SPME combined with GC-MIP AED for the determination of butyltin compounds in sediment samples.<br><i>Analytical and Bioanalytical Chemistry</i> , 380, #5-6, 853-857<br>Carpinteiro, J.; Rodriguez, I. *; Cela, R.                                                                             | ethylated derivative headspace sonication                                  | GC-MIP AED. |
| 2099 | Hydrocarbons in soil              | Surface geochemical results complement conventional development approaches<br><i>World Oil</i> , 225, #12, 54-65<br>Quinlan, W.; Wood, James; Wylie, Albert                                                                                                                                                     | headspace                                                                  | GC          |
| 2100 | Phenanthrene in soil              | Plant-assisted degradation of phenanthrene as assessed by solid-phase microextraction (SPME)<br><i>Intl J of Phytoremediation</i> , 6, #3, 253-268<br>Hynes, Russell K.; Farrell, Richard E.; Germida, James J.                                                                                                 | headspace                                                                  | GC-FID      |
| 2101 | Prometryn in soil                 | Determination of prometryn in soil by GC-MS using microwave-assisted extraction associated with SPME<br><i>Fenxi Huaxue</i> , 32, #6, 775-778<br>Yang, Y.; Luan, W.; Luo, X. J.; Li, G. K.*                                                                                                                     | microwave heated                                                           | GC-MS       |
| 2102 | Fungistasis in soil               | Soil volatile fungistasis and volatile fungistatic compounds<br><i>Soil Biol. Biochem.</i> , 36, #12, 1997-2004<br>Chuankun, Xu; Keqin, Zhang; Leming, Zhang; Minghe, Mo                                                                                                                                        | Headspace                                                                  | GC-MS       |
| 2103 | BTEX in soil                      | Determination of benzene, toluene, ethylbenzene and xylenes in soils by multiple headspace SPME<br><i>J. Chromatogr. A</i> , 1035, #1, 17-22<br>Ezquerro, O; Ortiz, G; Pons, B; Tena, M                                                                                                                         | 75µm Carboxen<br>30min @ 30°C<br>headspace over soil<br>suspended in water | GC-FID      |
| 2104 | Fungicides in soil                | Determination of the fungicides vinclozolin and dicloran in soils using ultrasonic extraction coupled with SPME<br><i>Anal. Chim. Acta</i> , 514, #1, 125-130<br>Albanis, Triantafyllos A.; Lambropoulou, Dimitra A.                                                                                            | 85µm polyacrylate<br>5% acetone/water                                      | GC-MS       |

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|-----------------------------------------------------------|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|------------|
| 2105                                                      | Fungicides in<br>in soil              | Determination of pyrimethanil and kresoxim-methyl<br>in soils by headspace SPME and GC-MS<br><i>Anal. Bioanal. Chem.</i> , 379, #7-8, 1100-1105<br>Araujo, L.; Navalon, A.; Prieto, A.; Vilchez, J                                                                                                               | 85µm polyacrylate<br>headspace             | GC-MS, SIM |
| 2106                                                      | Tetracyclic<br>diterpene<br>from moss | The moss <i>Physcomitrella patens</i> releases a<br>tetracyclic diterpene<br><i>Plant Cell Rep.</i> , 22, #10, 780-786<br>Kassner, H.; Schultze, W.; VonSchwartzenberg, K.                                                                                                                                       | headspace                                  | GC-MS      |
| 2107                                                      | Chlorinated<br>solvents in            | Static headspace versus head space SPME for the<br>for the determination of volatile organochlorine<br>compounds in landfill leachates by GC<br><i>Talanta</i> , 63, #4, 809-814<br>Fernandez Martinez, E.; Fernandez Sanchez, M.;<br>Florez Menendez, J.; Sanchez Uria, J.; Sanz-Medel, A.                      | headspace                                  | GC-MS      |
| 2108                                                      | Organics<br>in sebum                  | Optimization of microwave-assisted extraction<br>followed by SPME-GC-MS detection for the assay<br>of some semi-volatile organic<br><i>J. Chromatogr. B</i> , 825, #1, 11-20<br>Diaz-Vazquez, Liz; Garcia, Oscar; Marrero, I.;<br>Rosario, Osvaldo; Velazquez, Zorangelys                                        |                                            | GC-MS      |
| 2109                                                      | Organic<br>chemicals in<br>sediment   | Sediment dilution method to determine sorption<br>coefficients of hydrophobic organic chemicals<br><i>Environ. Sci. Technol.</i> , 39, #11, 4220-4225<br>Busser, F.; Hermens, J.; Klamer, H.; Mayer, P.; Ter Laak, T                                                                                             | Immersed extract from<br>sediment in water | GC         |
| 2698                                                      | Dioxin congeners<br>from cultures     | <b>Microbial dehalogenation of trichlorinated dibenzo-p-dioxins by a<br/>Dehalococcoides-containing mixed culture is coupled to<br/>carbon isotope fractionation</b><br><i>Environ. Sci. Technol.</i> 41, #22, 7744-7751 (15 NOV 2007)<br>Ewald, E. -M.; Wagner, A.; Nijenhuis, I.; Richnow, H. -H.; Lechner, U. | headspace                                  | GC-MS      |
| 2110                                                      | PCDDs/PCDF<br>in soil                 | Simple device for the SPME screening of<br>polychlorodibenzo-p-dioxins and polychlorodibenzo-<br>furans in heavily contaminated soil samples.<br><i>Analytica Chimica Acta</i> , 527, #2, 157-162<br>Chia, K. J.; Lee, T. Y.; Huang, S. D.*                                                                      | 100µm PDMS<br>headspace<br>sonicated       | GC-MS      |
| <b>Air</b>                                                |                                       |                                                                                                                                                                                                                                                                                                                  |                                            |            |
| 725                                                       | Organic vapors<br>in gaseous matrices | Application of SPME for determination of organic vapors in<br>gaseous matrices<br><i>J. Chromatogr. A</i> , 885(2000) 405-418<br>Namiesnik, J., Zygmunt, B., Jastrzebska, A.                                                                                                                                     | review article                             |            |
| 846                                                       | Solvent vapors<br>in air              | Solvent vapour monitoring in work space by SPME<br><i>J Hazardous Materials</i> (2001) 83(1-2), 83-91<br>Li, K.; Fingas, M.; Goldthorp, M.; Lambert, P.;<br>Santilli, A.; Whitar, S.                                                                                                                             | 100µm PDMS<br>75µm Carboxen/PDMS           |            |
| <b>Diffusive sampling of methylene chloride with SPME</b> |                                       |                                                                                                                                                                                                                                                                                                                  |                                            |            |
| 2563                                                      | Methylene chloride<br>in air          | <i>J. Chromatogr.</i> , A 1137, #2, 138-144 (2006-12-29)<br>Chen, C. Y.; Hsieh, C. M.; Lin, J. M.                                                                                                                                                                                                                | 85µm Carboxen/PDMS<br>diffuse sampling     | GC-ECD     |
| 2460                                                      | Volatiles<br>in air                   | <b>Characterization of sorption mechanisms of SPME with volatile organic<br/>compounds in air samples using a linear solvation energy relationship<br/>approach</b><br><i>J. Chromatogr. A</i> 1179, #1, 24-32 (25 JAN 2008)<br>Prikryl, P.; Sevcik, J.                                                          | 100µm PDMS<br>85µm polyacrylate            | GC         |
| 726                                                       | Volatiles<br>in air                   | Airflow Rate in the Quantitation of Volatiles in Air Streams<br>by Solid Phase Microextraction<br><i>Anal. Chem</i> 2000, 72, 3949-3955<br>Bartelt, R., Zilkowski, B.                                                                                                                                            | 100µm PDMS<br>30 min                       | GC-FID     |
| 727                                                       | Volatile organic<br>in air            | Sorbent trapping of volatile organic compounds from air<br><i>J. Chromatogr. A</i> , 885 (2000) 120-151<br>Harper, M.                                                                                                                                                                                            | 75µm Carboxen/PDMS<br>review article       | GC-FID     |
| Air sampling with porous SPME fibers compounds            |                                       |                                                                                                                                                                                                                                                                                                                  |                                            |            |

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| 758  | Volatile organic<br>in air                                | <i>Anal. Chem.</i> 2000, 72, 5178-5186<br>Koziel, J., Jia, M., Pawliszyn, J.                                                                                                                                                                                                                                                       | 75µm Carboxen/PDMS<br>65µm DVB/PDMS<br>5-10 sec air sampling     | GC-FID |
| 754  | Volatile organic<br>in air                                | Air sampling and Analysis of Volatile Organic compounds<br>with Solid Phase Microextraction<br><i>J. Air &amp; waste Manage. Assoc</i> 51: 173-184<br>Koziel, J., Pawliszyn, J.                                                                                                                                                    | 100µm PDMS                                                       | GC-FID |
| 55   | BTEX<br>in air                                            | Analysis of Environmental Air Samples by Solid Phase<br>microextraction and GC/Ion Trap Mass Spectrometry<br><i>Environ. Sci. Technol.</i> 29: 693-701 (1995)<br>Chai, M., Pawliszyn, J.                                                                                                                                           | 100µm PDMS<br>3 min<br>gas sampling                              | GC-MS  |
| 226  | Petroleum<br>hydrocarbons<br>in air                       | Estimation of Air-Coating Distribution Coefficients for SPME<br>Using Retention Indexes from Linear Temperature-Programmed<br>Capillary Gas Chromatography. Application to the Sampling<br>and Analysis of Total Petroleum Hydrocarbons in Air<br><i>Anal. Chem.</i> 69: 402-408 (1997)<br>Martos, P., Saraullo, A., Pawliszyn, J. | 100µm PDMS,<br>30µm PDMS<br>30-480 min                           | GC-FID |
| 375  | Formaldehyde<br>derivatives<br>in air                     | Sampling and Determination of Formaldehyde Using SPME<br>with On-Fiber Derivatization<br><i>Anal. Chem.</i> 198, 70, 2311-2320<br>Martos, P., Pawliszyn, J.                                                                                                                                                                        | 65µm PDMS/DVB<br>10-150 sec<br>gas sampling<br>PFBHA derivatives | GC-MS  |
| 110  | Amines<br>in air                                          | Determination of Amines in Air and Water Using Derivatization<br>Combined with SPME<br><i>J. Chromatogr. A</i> 773: 249-260 (1997)<br>Pan, L., Chong, M., Pawliszyn, J.                                                                                                                                                            | 65µm Carbowax/DVB<br>30 min<br>gas sampling<br>DPTFA derivatives | GC-FID |
| 539  | Thiol and sulfides<br>in air samples                      | Evaluation of SPME for sampling of volatile organic sulfur<br>compounds in air for subsequent GC analysis with<br>atomic emission detection<br><i>J. Chromatogr., A</i> 1999, 848(1+2), 305-315<br>Haberhauer-Troyer, C., Rosenberg, E., Grasserbauer, M                                                                           | 75µm Carboxen/PDMS                                               | GC-AED |
| 540  | Sulfur compounds<br>in water/ N <sub>2</sub> &<br>propane | Studies on the application of SPME for analysis of volatile<br>organic sulfur compounds in gaseous and liquid samples<br><i>Chem. Anal. (Warsaw)</i> , 1999, 44(3A), 485-493<br>Wardencki, W., Namiesnik, J.                                                                                                                       | 100µm PDMS<br>10 min                                             | FPD-GC |
| 233  | C5-C11 hydrocarbons,<br>BTEX<br>in air                    | Based on Physical Chemical Properties of the Coating<br><i>Anal. Chem.</i> 69: 206-215 (1997)<br>Martos, P., Pawliszyn, J.                                                                                                                                                                                                         | 30µm & 100µm PDMS<br>15-450 sec<br>gas sampling                  | GC-FID |
| 541  | Chlorobenzen and<br>p-xylene<br>in air                    | On Calibration of SPME-GC-MS system for analysis of<br>organic air contaminants using gaseous standard mixtures<br><i>Chem. Anal. (Warsaw)</i> (1999), 44(2), 201-213<br>Namiesnik, J., Gorlo, D., Wolska, L., Zygmunt, B.                                                                                                         | Optimization of sampling                                         | GC-MS  |
| 2851 | Review article                                            | <b>SPME in environmental analysis</b><br><i>Anal. Bioanal. Chem.</i> 386, #4, 1059-1073 (Oct 2006)<br>Ouyang, Gangfeng; Pawliszyn, Janusz                                                                                                                                                                                          |                                                                  |        |
| 2903 | PAHs                                                      | <b>Standard-free kinetic calibration for rapid on-site analysis by SPME</b><br><i>J. Sep. Sci.</i> 31, #6-7, 1167-1172 (April 2008)<br><br>Cai, Jibao; Li, Hui; Ouyang, Gangfeng; Pawliszyn, Janusz; Zhang, Xu                                                                                                                     |                                                                  | GC-MS  |
| 2297 | PAHs                                                      | <b>Calibration of SPME for quantitative analysis by gas chromatography</b><br><i>J. Chromatogr. A</i> , 1097, #1-2, 9-16 (2006)<br>Chen, Yong; Ouyang, Gangfeng; Pawliszyn, Janusz; Setkova, Lucie                                                                                                                                 |                                                                  | GC     |
| 308  | Organic vapors<br>in air                                  | Calibration Procedure for SPME-GC Analysis of Organic<br>Vapors in Air<br><i>Talanta</i> 44 (9): 1543-1550 (1997)                                                                                                                                                                                                                  |                                                                  |        |

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|      |                                 | Gorlo, D., Wolska, L., Zygmunt, B., Namiesnik, J.                                                                                                                                                                                                                   |                           |        |
| 756  | Organic vapors<br>in air        | Diffusion-Based Calibration for SPME Analysis of<br>Aqueous samples<br><i>Anal. Chem.</i> 2001, 73 (1), 13-18                                                                                                                                                       | Carboxen/PDMS<br>DVB/PDMS |        |
|      |                                 | Sukola, K., Koziel, J., Augusto, F., Pawliszyn, J.                                                                                                                                                                                                                  | 10sec. Passive sampling   |        |
| 828  |                                 | Determination of absolute amount extracted by SPME<br>different approaches under examination<br><i>J. Microcolumn Separations</i> (2000) 12(10), 550-557<br>Tuduri, L.; Desauziers, V.; Fanlo, J. L                                                                 |                           |        |
| 757  | Aerosols, particulate<br>in air | Sampling and Analysis of Airbourne Particulate matter<br>and aerosols using In-Needle Trap and SPME fiber devices<br><i>Anal. Chem.</i> , 2001, 73(1), 47-54<br>Koziel, J., Odziemkowski, M., Pawliszyn, J.                                                         | 7µm PDMS<br>10 sec        | GC-MS  |
| 739  | Aerosols, particulate<br>in air | Sampling and Raman Confocal Microspectroscopic Analysis<br>of Airborne Particulate Matter Using Poly(dimethylsiloxane<br>Solid-Phase Microextraction Fibers<br><i>Anal. Chem</i> (2001) 73(13), 3131-3139<br>Odziemkowski, M.; Koziel, J.; Irish, D.; Pawliszyn, J. | PDMS                      | Raman  |
| 2714 | Volatiles in<br>Indoor air      | <b>Study of preservation of polydimethylsiloxane/carboxen SPME fibres<br/>before and after sampling of volatile organic compounds in indoor air.</b><br><i>J. Chromatogr. A</i> 1124, #1-2, 106-111 (2006-08-18)<br>Larroque, V.; Desauziers, V. ; Mocho, P         | 75µm Carboxen             | GC-MS  |
| 2236 | Volatiles in<br>Indoor air      | <b>Volatile organic compounds in indoor environments</b><br><i>HANDBOOK OF ENVIRONMENTAL CHEMISTRY, (2004) p1-35</i><br>Ayoko, Godwin A.                                                                                                                            | book                      |        |
| 574  | Solvents<br>in air              | Application of SPME to monitoring indoor air quality.<br>Fresenius'-J-Anal-Chem. Apr 1999; 363(7): 696-699<br>Gorlo, -D; Zygmunt, -B; Dudek, -M; Jaszek, -A; Pilarczyk, -M; Namiesnik, -J                                                                           | 100µm PDMS<br>15 min      | GC-MS  |
| 542  | Organic pollutants<br>in air    | Application of SPME to monitoring indoor air quality<br>Fresenius' J. Anal. Chem. (1999), 363(7), 696-699<br>Gorlo, D., Zygmunt, B., Dudek, M., Jaszek, A, Pilarczyk, M.,<br>Maniesnik, J.                                                                          | 100µm PDMS                | GC-MS  |
| 2293 | PAHs in<br>water                | <b>Time-weighted average water sampling with a SPME device</b><br><i>Anal. Chem.</i> 77 #22, 7319-7325 (2005)<br>Chen, Yong; Ouyang, Gangfeng; Pawliszyn, Janusz                                                                                                    | PDMS                      | GC     |
| 543  | Organic vapors<br>in Air        | Time-Weighted Average Sampling with SPME Device;<br>Implications for Enhanced Personal Exposure Monitoring to<br>Airborne Pollutants<br><i>Anal. Chem.</i> (1999), 71(8), 1513-1520<br>Martos, p. Pawliszyn, J.                                                     | 100µm PDMS                |        |
| 932  | Organic vapors<br>in Air        | Time-weighted average sampling of volatile and semi-<br>volatile airborne organic compounds by the SPME device<br><i>J. Chromatogr. A</i> (2000), 892(1-2), 455-467<br>Khaled, A, Pawliszyn, J.                                                                     |                           |        |
| 306  | VOCs<br>in water and air        | Application of Solid Phase Microextraction for Determination<br>of Volatile Halogenated Hydrocarbons in Air and Water<br>of an Indoor Swimming Pool<br>Fresenius' Environ. Bull. 5 (1+2): 55-60 (1996)<br>Czerwinski, J., Zygmunt, B., Namiensnik, J.               |                           |        |
| 307  | Pollution<br>in air             | A Case Study of Indoor Pollution by Chinese Cooking<br>Toxicol. Environ. Chem. 65 (1-4): 217-224 (1998)<br>Benfenati, E., Pierucci, P., Niego, A.                                                                                                                   |                           |        |
| 347  | VOCs                            | Nonequilibrium Quantitation of Volatiles in Air Stream by SPME<br><i>Anal. Chem.</i> Vol. 71, January 1, 1999, pg. 92-101                                                                                                                                           | 7µm, 30µm, 100µm          | GC-FID |

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|      | in air                        | Bartelt, R., Zilkowski, B.                                                                                                                                                                                                                                                                           | PDMS<br>27°C, 30 min<br>gas sampling                         |               |
| 2605 | Volatiles in atmosphere       | <b>High-molecular products analysis of VOC destruction in atmospheric pressure discharge</b><br><i>J. Phys., Conf. Ser. (UK) 63, #1, 6 (2007)</i><br><b>Grossmannova, H.; Ciganeck, M.; Krcma, F.</b>                                                                                                | <b>65µm CW/PDMS Car/DVB 30/50µm gas sampling</b>             | <b>GC-FID</b> |
| 544  | Volatiles in atmosphere       | The sampling and analysis of volatile organic compounds in the atmosphere<br>React. Hydrocarbons Atmos. (1999), 119-157<br>Boob, Academic, Coden: 67ERAQ<br>Cao, X, Hewitt, C.                                                                                                                       |                                                              |               |
| 851  | Toluene diisocyanate          | Determination of gaseous toluene diisocyanate by use of solid-phase microextraction with on-fibre derivatisation.<br><i>Fresenius' J. Anal. Chem. (2001), 369(6), 524-529</i><br>Nilsson, U.; Batlle, R.; Colmsjo, A.                                                                                | 65µm DVB/PDMS<br>60min.<br>dibutylamine derivative           | LC-MS-MS      |
| 752  | VOC, formaldehyde in air      | Field air analysis with SPME device<br><i>Analytica Chimica Acta 400 (1999) 153-162</i><br>Koziel, J., Jia, M., Khaled, A., Noah, J., Pawliszyn, J.                                                                                                                                                  | varied fibers<br>1-75 min<br>air samples                     | GC-FID        |
| 753  | VOC, formaldehyde in air      | Field Sampling and Determination of Formaldehyde in Indoor Air with SPME and On-Fiber Derivatization<br><i>Environ Sci Technol 2001, Vol 35, pg. 1481-1486</i><br>Koziel, J., Noah, J., Pawliszyn, J.                                                                                                | 65µm DVB/PDMS<br>10min. Headspace<br>PFBHA Derivative        | GC-FID        |
| 2702 | Aromatic VOCs in water        | <b>Field analysis of benzene, toluene, ethylbenzene and xylene in water by portable GC-micro-FID combined with headspace SPME</b><br><i>Talanta 69, #4, 894-899 (2006-06-15)</i><br><b>Ji, J.; Deng, C. H.; Shen, W. W.; Zhang, X. M.</b>                                                            | <b>65µm DVB/PDMS 1min. Headspace</b><br><br><b>sat. salt</b> | <b>GC-FID</b> |
| 755  | Aromatic VOCs in Indoor air   | Design of Validation of Portable SPME devices for rapid field air sampling and diffusion-based calibration<br><i>Anal. Chem. 2001,73(3), 481-486</i><br>Augusto, F., Koziel, J., Pawliszyn, J.                                                                                                       | 65µm DVB/PDMS<br>30 sec air sampling                         | GC-FID        |
| 759  | VOCs in Indoor air            | Fast field sampling/sample preparation and quantification of volatile organic compounds in indoor air by SPME and portable GC<br><i>Field Analytical Chem. And Tech 4(2-3): 73-84,2000</i><br>Jia, M., Koziel, J., Pawliszyn, J.                                                                     | 65µm DVB/PDMS<br>1min. Headspace                             | GC-FID        |
| 545  | Volatile organics in air      | Analysis of volatile organic compounds in the ambient air of Algiers by GC with a beta-cyclodextrine capillary column<br><i>J. Chromatogr A, 1999, 846(1+2), 287-293</i><br>Yassaa, N., Meklati, B., Cecinato, A.                                                                                    |                                                              |               |
| 984  | VOC's in air                  | Dynamic versus static sampling for quantitative analysis of VOC's in air.<br><i>J.Chromatogr. A (2002) 963(1-2), 49-56</i><br>Tuduri, L.; Desauziers, V.; Fanlo, J.L.                                                                                                                                | PDMS/carboxen                                                |               |
| 1062 | Volatile organics from steel. | Analysis of airborne volatile organic compounds of a steel industry by solid phase microextraction and gas chromatography/mass spectrometry.<br><i>Bulletin of Environmental Contamination and Toxicology (2003) 70 (5), 957-963.</i><br>de Lourdes Cardeal, Z.; de Carvalho, C. R.; Parreira, F. V. |                                                              | GC-MS         |
| 1070 | Hydrogen cyanide in air       | Solid phase microextraction with analysis by gas chromatography to determine short term hydrogen cyanide concentrations in a field setting.<br><i>Journal of Separation Science (2002) 25 (14), 917-921.</i><br>Smith, P. A.; Sheely, M. V.; Kluchinsky, T. A, Jr.                                   |                                                              | GC-NPD        |

Development of a quantification method for the analysis of malodorous sulphur compounds in gaseous industrial effluents by solid-phase microextraction and gas chromatography-pulsed flame photometric detection

|      |                                           |                                                                                                                                                                                                                                                                                                                                                                                           |                                                          |         |
|------|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|---------|
| 1114 | Malodorous sulphur compounds in effluents | <i>Journal of Chromatography A</i> (2003) 999 (1-2), 71-80.<br>Desauziers, Valerie; Fanlo, Jean-Louis; Lestremau, Francois; Roux, Jean-Claude                                                                                                                                                                                                                                             | PDMS/carboxen                                            | GC-PFPD |
| 1144 | Smoke plumes                              | Discrimination of combustion fuel sources using gas chromatography-planar field asymmetric-waveform ion mobility spectrometry<br><i>Journal of Separation Science</i> (2003) 26 (6-7), 585-593.<br>Eiceman, Gary A.; Funk, Paul A.; Hughs, S. Edgar; Miller, Raanan A.; Nazarov, Erkiyon G.; Tarassov, Alexander                                                                          |                                                          | GC-MS   |
| 1175 | VOCs in air                               | Potential of solid-phase microextraction fibers for the analysis of volatile organic compounds in air.<br><i>Journal of Chromatographic Science</i> (2001) 39(12), 521-529<br>Tuduri, Ludovic; Desauziers, Valerie; Fanlo, Jean Louis                                                                                                                                                     | Various fibers compared                                  |         |
| 1187 |                                           | Sampling and sample-preparation strategies based on solid-phase microextraction for analysis of indoor air.<br><i>Trends in Analytical Chemistry</i> (2002) 21 (12), 840-850.<br>Koziel, J. A.; Novak, I.                                                                                                                                                                                 |                                                          |         |
| 1194 | PAHs                                      | Screening direct analysis of PAHs in atmospheric particulate matter with SPME<br><i>Talanta</i> (2003) 60 (4), 687-693.<br>Vaz, Jorge Moreira                                                                                                                                                                                                                                             | PDMS                                                     |         |
| 2606 | PAHs in air                               | <b>Monitoring of PAHs in air by collection on XAD-2 adsorbent then microwave-assisted thermal desorption coupled with headspace SPME and GC with mass spectrometric detection.</b><br><i>Anal. Bioanal. Chem.</i> 387, #3, 999-1005 (2007-02)<br>Wei, M. C.; Chang, W. T.; Jen, J. F.                                                                                                     | 65µm PDMS/DVB headspace<br>35°C for 40 min.<br>sat. salt | GC-MS   |
| 1200 | Benzene in air                            | Determination of benzene at trace levels in air by a novel method based on solid phase microextraction gas chromatography/mass spectrometry.<br><i>Rapid Communications in Mass Spectrometry</i> (2001) 15(24), 2404-2408<br>Salvadori, Piero; Cuzzola, Angela; Pucci, Sergio; Raffaelli, Andrea; Saba, Alessandro                                                                        |                                                          | GC-ITMS |
| 1305 | Volatile aliphatic amines in air.         | Determination of volatile aliphatic amines in air by solid-phase microextraction coupled with gas chromatography with flame ionization detection<br><i>Journal of Chromatography, A</i> (2003) 1016 (1), 1-9.<br>Jastrzebska, Anna; Namiesnik, Jacek; Zygmunt, Bogdan                                                                                                                     |                                                          | GC-FID  |
| 1313 | Chemical warfare agents                   | Solid phase microextraction sampling and gas chromatography/mass spectrometry for field detection of the chemical warfare agent O-ethyl S-(2-diisopropylaminoethyl) methylphosphonothiolate (VX)<br><i>Journal of Separation Science</i> (2003) 26 (12-13), 1091-1096.<br>Betsinger, Geoffrey; Hook, Gary L.; Kimm, Gregory; Logan, Tom; Savage, Paul B.; Smith, Philip A.; Swift, Austin | Various                                                  | GC-MS   |
| 1334 | Odorant emissions from landfills.         | Characterisation of odorants emissions from landfills by SPME and GC/MS<br><i>Chemosphere</i> (2003) 51 (5), 357-368.<br>Davoli, E.; Gangai, M.L.; Morselli, L.; Tonelli, D.                                                                                                                                                                                                              | DVB/Carboxen/PDMS GC/MS                                  |         |
| 1342 |                                           | A simple calibration procedure for volatile organic compounds sampling in air with adsorptive solid-phase microextraction fibres.<br><i>Analyst</i> (2003) 128 (9), 1028-1032.<br>Tuduri, L.; Desauziers, V. *; Fanlo, J. L.                                                                                                                                                              | PDMS/CAR                                                 | GC-FID  |
|      |                                           | Screening for sarin in air and water by solid-phase microextraction-gas chromatography-mass spectrometry.                                                                                                                                                                                                                                                                                 |                                                          |         |

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|------|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|---------|
| 1373 | Sarin in air and water.            | Journal of Chromatographic Science (2001) 39(10), 420-424.<br>Schneider, J. F.; Boparai, A. S.; Reed, L. L.                                                                                                                                                                                                                                                                         |                                                   | GC-MS   |
| 1186 | Perfume oil in household products. | Determination of perfume oil in household products by headspace solid-phase microextraction and fast capillary gas chromatography.<br><i>Chromatographia</i> (2003) 57 (Supp), S199-S206.<br>Bothe, F.; Dettmer, K.; Engewald, W. *                                                                                                                                                 | Various                                           | FCGC    |
| 1141 | VOC's from irradiated mail.        | Volatile organic compounds produced during irradiation of mail.<br><i>AIHA Journal</i> (2003) 64 (2), 189-195.<br>Smith, Philip A.; Hakspiel, Shelly J.; Miller, Stephen; Sheely, Michael V.                                                                                                                                                                                        |                                                   |         |
| 1126 | Sulfur compounds                   | Evaluation of solid-phase microextraction for time-weighted average sampling of volatile sulfur compounds at ppb concentrations<br><i>Analytical Chemistry</i> (2003) 75 (11), 2626-2632.<br>Andersson, Fräs Annika T.; Desauziers, Valerie; Fanlo, Jean-Louis; Lestremieu, Francois                                                                                                | Carboxen/PDMS                                     |         |
| 1098 | Ethylene oxide                     | Determination of low-level residual ethylene oxide by using solid-phase microextraction and gas chromatography.<br><i>Journal of AOAC International</i> (2002) 85 (6), 1205-1209.<br>Ayoub, K.; Harris, L.; Thompson, B.                                                                                                                                                            |                                                   |         |
| 1447 | Volatile compounds in air          | Characterization of volatile effluents of livestock buildings by solid-phase microextraction<br><i>Int. J. Environ. Anal. Chem.</i> (2003) 83(10), 837-849<br>Begnaud, Frederic; Berdague, Jean-Louis; Peres, Christophe                                                                                                                                                            | 75um Carboxen PDMS                                | GC-MS   |
| 1476 | Isocyanates in air                 | Development of a personal isocyanate sampler based on DBA derivatization on solid-phase microextraction fibers.<br><i>Fresenius' Journal of Analytical Chemistry</i> (2001) 371(4), 514-518<br>Nilsson, Ulrika; Battle, Ramon; Colmsjo, Anders                                                                                                                                      | 65um PDMS/DVB, dibutylamine (DBA) derivative      | HPLC-MS |
| 1478 | Volatiles in air                   | Traditional sampling with laboratory analysis and solid phase microextraction sampling with field gas chromatography/mass spectrometry by military industrial hygienists.<br><i>AIHAJ</i> (2002) 63(3), 284-292<br>Thomas, Richard J.; Smith, Philip A.; Lee, Arthur P.; Kluchinsky, Timothy A., Jr.; Erickson, Richard P.; Savage, Paul B.; Stevens, Michael; Williams, Kenneth    |                                                   |         |
| 1479 | VOCs in air                        | Solid phase microextraction : Measurement of volatile organic compounds (VOCs) in Dhaka City air pollution.<br><i>Journal of Environmental Science and Health Part A Toxic-Hazardous Substances &amp; Environmental Engineering</i> (2002) A37(7), 1223-1239<br>Hussam, A.; Alauddin, M.; Bhattacharjee, M.; Bibi, H.; Chowdhury, D.; Khan, A. H.; Sultana, S.                      |                                                   | GC-MS   |
| 1523 | Glutaraldehyde in air              | Gas chromatographic determination of glutaraldehyde in the workplace atmosphere after derivatization with O-(2,3,4,5,6-pentafluorobenzyl)hydroxylamine on a solid-phase microextraction fibre.<br><i>Journal of Chromatography A</i> (2002) 955(1), 117-124<br>Pieraccini, Giuseppe; Bartolucci, Gianluca; Boccalon, Pierpaolo; Dugheri, Stefano; Focardi, Leonardo; Pacenti, Marco | On-fiber derivatization with PFBHA                | GC      |
| 1524 | Valeraldehyde in air (TWA)         | Time-weighted average sampling of airborne n-valeraldehyde by a solid-phase microextraction device.<br><i>Journal of Chromatography A</i> (2002) 954(1-2), 191-198<br>Tsai, S.-W.; Chang, T.-A.                                                                                                                                                                                     | 65um DVB PDMS, on-fiber derivatization with PFBHA | GC-FID  |
| 1543 | Nicotine in air                    | Trace analysis of nicotine in indoor air by a SPME method.<br><i>Bulletin of Environmental Contamination and Toxicology</i> (2002) 68(4), 485-489<br>Shuokui, H.; Huali, Y.; Jianfang, F.; Songting, G.                                                                                                                                                                             |                                                   |         |



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| 1528 | VOCs in air (dynamic sampling)           | Dynamic air sampling of volatile organic compounds using solid phase microextraction<br><i>Journal of Environmental Science and Health Part B Pesticides Food Contaminants and Agricultural Wastes (2002) B37(4) 365-378</i><br>Razote, Edna; Chobpattana, Wannee; Jeon, Ike; Maghirang, Ronaldo   | 75um Carboxen PDMS                                                | GC-MS         |
| 2674 | passive sampling                         | <b>Configurations and calibration methods for passive sampling techniques</b><br><i>J. Chromatogr. A 1168, #1-2, 226-235 (19 OCT 2007)</i><br>Ouyang, G.; Pawliszyn, J.                                                                                                                            |                                                                   |               |
| 2747 | Volatile organics in water               | <b>Compound-specific carbon isotope analysis of volatile organic compounds in water using solid-phase microextraction</b><br><i>J. CHROMATOGR. A 1163, #1-2, 260-268 (07 SEP 2007)</i><br>Palau, J.; Soler, A.; Teixidor, P.; Aravena, R.                                                          | 75um Carboxen headspace and immersion                             | GC-MS         |
| 2656 | Volatiles in water passive sampling      | <b>Time-weighted average water sampling with a diffusion-based SPME</b><br><i>J. Chromatogr. A 1138, #1-2, 42-46 (Jan 5 2007)</i><br>Alaee, Mehran; Ouyang, Gangfeng; Pawliszyn, Janusz; Zhao, Wennan                                                                                              | PDMS coatings                                                     | GC            |
| 2638 | Volatiles in water passive sampling      | <b>Time-weighted average water sampling in Lake Ontario with SPME passive samplers</b><br><i>Environ. Sci. Technol. 41, #11, 4026-4031 (Jun 1 2007)</i><br>Alaee, M.; Bragg, L.; Ouyang, G.; Pawliszyn, J.; Qin, Z.; Zhao, W.                                                                      | PDMS coatings                                                     | GC            |
| 1547 | Volatiles in air (passive sampling)      | Evaluation of indoor exposition to benzene, toluene, ethylbenzene, xylene, and styrene by passive sampling with a solid-phase microextraction device.<br><i>Journal of Chromatographic Science (2002) 40(3), 122-126</i><br>Cardeal, Zenilda de L.; de Carvalho, Ciomara R.; Parreira, Fabricio V. | 100um PDMS, 65um DVB PDMS                                         |               |
| 1388 | Perfumes                                 | Atmospheric lifetimes and fates of selected fragrance materials and volatile model compounds.<br><i>Environmental Science and Technology (2001) 35(18), 3595-3600.</i><br>Aschmann, S. M.; Arey, J.; Atkinson, R. *; Simonich, S. L                                                                | PDMS                                                              | GC-MS         |
| 2111 | Hydrocarbons in air                      | Measuring the effect of photocatalytic purifiers on indoor air hydrocarbons and carbonyl pollutants<br><i>J. Air Waste Manage. Assoc., 55, #1, 88-96</i><br>Disdier, Jean; Mas, Denis; Pichat, Pierre                                                                                              | 15 min sampling                                                   | GC            |
| 2112 | BTEX in air                              | Air sampling of aromatic hydrocarbons in the presence of ozone by SPME<br><i>J Chromatogr A, 1025, #1, 57-62</i><br>Xiong, G; Koziel, J.; Pawliszyn, J.                                                                                                                                            | 100µm PDMS headspace                                              | GC-FID, GC-MS |
| 2113 | PCBs in indoor air                       | Sampling and analysis of PCBs in indoor air by sorbent enrichment followed by headspace SPME and GC-MS<br><i>J. Chromatogr. A, 1072, #1, 99-106</i><br>Ares, S; Barro, R; Cela, R; Garcia-Jares, C; Llompart, M                                                                                    | headspace                                                         | GC-MS         |
| 2114 | Organo-phosphate triesters in air        | Air sampling of organophosphate triesters using SPME under non-equilibrium conditions.<br><i>Anal &amp; Bioanalytical Chem, 378, #7, 1847-1853</i><br>Isetun, S.; Nilsson, U.; Colmsjo, A.; Johansson, R.                                                                                          | 100µm PDMS<br>1 hr. sampling                                      | GC            |
| 2115 | Organo-phosphate triesters in Air        | Evaluation of SPME w/ PDMS for air sampling of gaseous organophosphate flame-retardants and plasticizers<br><i>Anal &amp; Bioanalytical Chem, 380, #2, 319-324</i><br>Isetun, Sindra; Nilsson, Ulrika; Colmsjo, Anders                                                                             | 100µm PDMS<br>8 hrs. sampling                                     | GC            |
| 2328 | Flame retardants & plasticizers in water | <b>Suitability of SPME for the determination of organophosphate flame retardants and plasticizers in water samples</b><br><i>J. Chromatogr. A 1108 #2, 158-165 (2006)</i><br>Calvo, F.; Cela, R.; Quintana, J.B.; Rodil, R.; Rodriguez, I.; Rubi, E.                                               | 65µm PDMS-DVB<br>Direct extraction<br>40 min @ 21°C<br>NaCl added | GC-NPD        |
| 2116 | Volatile sulfur compounds in air         | Investigation of artefact formation during analysis of volatile sulfur compounds "in air" using SPME<br><i>Chromatographiam 59, #9-10, 607-613</i><br>Lestremau, F.; Andersson, F.; Desauziers, V. *                                                                                               | 75µm Carboxen<br>direct air sample                                | GC            |
|      |                                          | Determination of benzene, toluene, ethylbenzene and                                                                                                                                                                                                                                                |                                                                   |               |

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| 2117                      | BTEX in air               | xylenes in air by SPME-GC-MS<br><i>Analytical &amp; Bioanalytical Chem</i> , 380, #5-6, 824-830<br>Tumbiolo, S.; Gal, J. -F.*; Maria, P. -C.; Zerbinati, O.                                                                                                  | 75µm Carboxen<br>30 min sampling                      | GC-MS             |
| 2174                      | BTEX in air               | <b>SPME sampling of BTEX before GC/MS analysis: Examples of outdoor and indoor air quality measurements in public and private sites</b><br><i>Annali di Chimica</i> 95, #11-12, 757-766 (2005)<br>Tumbiolo, S.; GAL, Jean-Francois; Maria, P.; Zerbinati, O. |                                                       | GC-MS             |
| 2118                      | Acetic acid in air        | Use of SPME for the detection of acetic acid by ion-trap<br>GC-MS and application to indoor levels in museums<br><i>J. Chromatogr. A</i> , 1067, #1-2, 331-336<br>Godoi, Ana F.L.; Van Grieken, Rene; Van Vaeck, Luc                                         |                                                       | GC-ITMS           |
| 2119                      | Chloro-benzenes in air    | Development of a sensitive methodology for the analysis of chlorobenzenes in air by combination of SPE and headspace SPME<br><i>J. Chromatogr. A</i> , 1045, #1-2, 189-196<br>Ares, S.; Barro, R.; Cela, R.; Garcia-Jares, C.; Llompart, M                   | 65µm PDMS-DVB<br>65µm CW<br>headspace                 | GC-MS<br>GC-ECD   |
| 2120                      | Sarin in Air              | Dynamic SPME for sampling of airborne sarin with GC-MS for rapid field detection and quantification<br><i>J. Sep. Sci.</i> , 27, #12, 1017-1022<br>Hook, G.; Lepage, C.; Miller, S.; Smith, P.                                                               | Direct sampling of air                                | GC-MS             |
| 2121                      | Sulfur compd in air       | Analysis of sulfur-containing compounds in ambient air using SPME-GC with pulsed FPD<br><i>Int. J. Environ. Anal. Chem.</i> , 84, #10, 749-760<br>Li, Kwong-Chi; Shooter, David                                                                              | direct sampling                                       | GC-FPD            |
| 2122                      | Aniline in air            | Determination of aniline in silica gel sorbent by one-step in situ microwave assisted desorption coupled to headspace SPME and GC-FID<br><i>Talanta</i> , 64, #3, 650-654<br>Jen, Jen-Fon; Shih, Ton-Sheng; Yan, Cheing-Tong                                 | 65µm PDMS-DVB<br>headspace<br>3 min extraction        | GC-FID            |
| 2123                      | Propylene glycol in air   | Propylene glycol vapor contamination in controlled environment growth chambers: Toxicity to corn and soybean plants<br><i>J. Environ. Sci. Health Part B</i> , 40, #3, 443-448<br>McConnell, Laura; Niu, Genhua; Reddy, Vangimalla R.                        | headspace                                             | MD-GC-MS          |
| <b>Theory / Technique</b> |                           |                                                                                                                                                                                                                                                              |                                                       |                   |
| 856                       | Volatiles in water        | An automated method for the determination of some volatile organic compounds in water samples after extraction by SPME and CGC-ECD analysis<br><i>Rev. Port. Farm (2000) 50(4) 141-149</i><br>Cunha, E.; Goncalves, C.; Alpendurada, M. F.                   | (Portuguese)                                          | GC-ECD            |
| 2                         | VOCs, BTEX, PAHs in water | Solid Phase MicroExtraction with Thermal Desorption Using Fused Silica Optical Fibers<br><i>Anal. Chem.</i> 62: 2145-2148 (1990)<br>Arthur, C., Pawliszyn, J.                                                                                                | 56µm PDMS<br>2 min<br>stirring, salt added            | GC-FID,<br>GC-ECD |
| 5                         | BTEX in water             | Solid Phase MicroExtraction: An Attractive Alternative<br><i>Environmental Lab.</i> 11, Dec/Jan 1992/1993 pp 10-15<br>Arthur, C., Killam, L., Chai, M., Buchholdz, K., Potter, D., Zhang, Z., Pawliszyn, J.                                                  | 100µm PDMS<br>14 min<br>stirring<br>salt added        | GC-FID            |
| 9                         | BTEX in water             | Automation and Optimization of Solid Phase MicroExtraction<br><i>Anal. Chem.</i> 64: 1960-1966 (1992)<br>Arthur, C., Killam, L., Buchholz, K., Pawliszyn, J.                                                                                                 | 56µm & 100µm PDMS<br>2-40 min<br>stirring, salt added | GC-FID            |
| 2392                      | PAHs in water             | <b>Automation of solid-phase microextraction on a 96-well plate format</b><br><i>J. Chromatogr.</i> , A 1149, #2, 127-137 (2007-05-18)<br>Hutchinson, J. P.; Setkova, L.; Pawliszyn, J.                                                                      | PDMS fibers                                           |                   |
| 2446                      | Review article            | <b>Strategies for interfacing SPME with liquid chromatography</b><br><i>J. Chromatogr.</i> , A 1152, #1-2, 2-13 (2007-06-08)<br>Lord, H. L.                                                                                                                  |                                                       |                   |
|                           |                           | <b>Automation of solid-phase microextraction</b>                                                                                                                                                                                                             |                                                       |                   |

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| 2337 | Review article                                        | <i>J. Sep. Sci.</i> 28 #15, 2010-2022 (2005)<br>Chen, Y.; Hutchinson, J.; Linton, C.; Lord, H.; O'Reilly, J.; Pawliszyn, Janusz; Setkova, Lucie; Wang, Qing                                                                       |                                                                                                     | GC & LC |
| 820  | Jasmine plant<br>beer                                 | A versatile Robotic Arm for Static headspace<br>sampling with SPME<br><i>LC-GC Europe, April 2001, 215-222</i><br>Pham-Tuan, H., Vercammen, J., Sandara, P.                                                                       | 85µm Polyacrylate<br>30min.<br>headspace                                                            | GC-MSN  |
| 12   | BTEX<br>in water                                      | Solventless Injection Technique for Microcolumn Separations<br><i>J. Microcolumn Sep.</i> 5: 51-56 (1993)<br>Arthur, C., Chai, M., Pawliszyn, J.                                                                                  | 100µm PDMS                                                                                          | GC-MS   |
| 13   | BTEX, PAHs<br>in water                                | Headspace Solid Phase MicroExtraction<br><i>Anal. Chem.</i> 65(14): 1843-1852 (1993)<br>Zhang, Z., Pawliszyn, J.                                                                                                                  | 56µm PDMS<br>1-5 min<br>headspace                                                                   | GC-FID  |
| 16   | Nitroaromatics<br>in water                            | Practical Use of Automated Solid Phase Extraction<br><i>Amer. Lab. Nov. Vol. 25, 1993, p18-24</i><br>Berg, J.                                                                                                                     | 100µm PDMS<br>1-20 min<br>immersion                                                                 | GC-FID  |
| 17   | Toluene<br>in water                                   | On-Line Monitoring of Flowing Samples Using SPME-GC<br><i>Anal. Chim. Acta</i> 284: 265-273 (1993)<br>Motlagh, S., Pawliszyn, J.                                                                                                  | 56µm PDMS<br>20 min<br>immersion, stirring                                                          | GC-FID  |
| 21   | Phenols<br>in water and air                           | Optimization of Solid Phase MicroExtraction (SPME) Conditions<br>for Phenol Analysis<br><i>Anal. Chem.</i> 66: 160-167 (1994)<br><br>Buchholz, K., Pawliszyn, J.                                                                  | 85µm polyacrylate<br>40 min<br><br>immersion & headspace<br>pH 2, salt added<br>acetate derivatives | GC-MS   |
| 204  | Phenols                                               | Determination of Phenols by Solid-Phase Microextraction<br><i>J. Chromatogr. A</i> 767: 171-175 (1997)<br>Bartak, P., Cap, L.                                                                                                     |                                                                                                     |         |
| 391  | Phenols, PAHs<br>in water                             | SPME for Determining the Binding State of Organic Pollutants<br>in Contaminated Water Rich in Hujic Organic Matter<br><i>J. Chromatogr. A</i> , 816 (1998) 159-167<br>Porschmann, J., Kopinke, F., Pawliszyn, J.                  | 7µm PDMS<br>50°C, 90-180 min<br>headspace, stirring                                                 | GC-MS   |
| 24   | PAHs<br>in soil and water                             | Silica-Fiber microextraction for Laser Desorption Ion Trap<br><br>Mass Spectrometry<br><i>Anal. Chem.</i> 66: 1897-1901 (1994)<br>Cisper, M., Earl, W., Nogar, N., Hemberger, P.                                                  | Trimethylsilyl coated fiber MS<br>3 min                                                             |         |
| 27   | PAHs<br>in water                                      | Solid Phase microextraction Coupled to HPLC<br><i>Anal. Chem.</i> 67: 2530-2533 (1995)<br>Chen, J., Pawliszyn, J.                                                                                                                 | 15µm PDMS<br>6-60 min<br>immersion                                                                  | HPLC-UV |
| 222  |                                                       | Potential Applications of Coupled SPME-HPLC<br><i>LaborPraxis</i> 20 (11): 66-68, 71 (1996)<br>Haag, I.                                                                                                                           |                                                                                                     | HPLC    |
| 33   | Fatty acids, PAHs,<br>pesticides in<br>methanol/water | Solvent-free Sample Introduction for Supercritical Fluid<br>Chromatography Using Polymer Coated Fibers<br><i>J. Microcolumn Res.</i> 42: 1925-1930 (1994)<br>Hirat, Y., Pawliszyn, J.                                             | 15µm PDMS,<br>85µm polyacrylate<br>5 min<br>immersion                                               | GC-FID  |
| 35   | BTEX<br>in water                                      | Headspace SPME vs. Purge & Trap for the Determination of<br>Substituted Benzenes in Water<br><i>J. Chromatogr. Sci.</i> 32(8): 317-322 (1994)<br>MacGillivray, B.<br><br>Quantitative Extraction Using an Internally Cooled Solid | 100µm PDMS<br>40°C, 50 min<br>headspace<br>stirring, salt                                           | GC-FID  |

|      |                                            |                                                                                                                                                                                                                                                                                               |                                                          |                        |
|------|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|------------------------|
| 38   | BTEX<br>in water                           | Phase MicroExtraction Device<br>Anal. Chem. 67(1): 34-43 (1995)<br>Zang, Z., Pawliszyn, J.                                                                                                                                                                                                    | 50µm PDMS<br>22-80°C, 2-5 min<br>headspace               | GC-MS                  |
| 43   | Organophosphorus<br>pesticides<br>in water | Element-Selective Detection of Pesticides by Gas<br>Chromatography Atomic Emission Detection<br>and Solid Phase MicroExtraction<br>J. Chromatogr. 683: 175-183 (1994)<br>Eisert, R., Levser, K., Winsch, G.                                                                                   | 100µm PDMS<br>20 min<br>immersion                        | GC-AED                 |
| 44   | BTEX<br>in water                           | Solid-Phase Microextraction: A Solvent-Free Alternative for<br>for Sample Preparation<br>Anal. Chem. 66(17): 844A-853A (1994)<br>Zang, Z., Yang, M., Pawliszyn, J.                                                                                                                            | polyacrylate, PDMS<br>immersion, salt                    | GC-FID                 |
| 45   | BTEX<br>in water and air                   | New Solvent-Free Sample Preparation Techniques<br>ES & T 28 (13): 569A-574A (1994)<br>Boyd-Boland, A., Chai, M., Luo, Y., Zhand, Z. Yang., M.,<br>Pawliszyn, J.                                                                                                                               | Various fibers and<br>extraction conditions              | GC-FID, E1858<br>GC-MS |
| 213  |                                            | A New Separation and Extraction Method -- Solid-Phase<br>Microextraction<br>Sepu (Chinese) 15 (2): 118-119 (1997)<br>Liu, J.                                                                                                                                                                  |                                                          |                        |
| 56   |                                            | SPME<br>GIT Fachz. Lab. 39: 325-362 (1995)<br>Popp, P.                                                                                                                                                                                                                                        |                                                          |                        |
| 2761 | Organics in<br>gases, liquid,<br>solids    | <b>Sample-introduction systems coupled to ion-mobility spectrometry<br/>equipment for determining compounds<br/>present in gaseous, liquid and solid samples</b><br>TrAC Trends Anal. Chem. 27, #2, 139-150, (Feb. 2008)<br><i>Arce, L.; Garrido-Delgado, R.; Menendez, M.; Valcarcel, M.</i> |                                                          | IMS                    |
| 57   | BTEX<br>in water                           | Sample Introduction Approaches for Solid Phase<br>MicroExtraction-Rapid GC<br>Anal. Chem. 67: 3265-3274 (1995)<br>Gorecki, T., Pawliszyn, J.                                                                                                                                                  |                                                          | GC-FID                 |
| 58   | BTEX<br>in water                           | Solid Phase MicroExtraction/Isothermal GC for Rapid<br>Analysis of Complex Organic Samples<br>J.High Res.Chromatogr. 18 (2): 161-166 (1995)<br>Gorecki, T., Pawliszyn, J.                                                                                                                     | 15µm PDMS<br>2 min<br>headspace, stirring                | GC-FID                 |
| 2659 | Semivolatiles<br>in water                  | <b>Examination of analyte partitioning to monocationic and dicationic<br/>imidazolium-based ionic liquid aggregates using SPME-GC</b><br><i>J. Chromatogr. A 1148, #1, 92-99 (Apr 27 2007)</i><br>Anderson, Jared L.; Baltazar, Quinner Q.; Pino, Veronica                                    |                                                          |                        |
| 2626 | Semivolatiles<br>in water                  | <b>Estimating the octanol-water partition coefficients of NPAHs and PAHs<br/>by SPME and gas chromatography-ion trap detector</b><br><i>Analytical Letters 40, #2, 307-319 (JAN 2007)</i><br>Wang, Yiru; Wang, Yonghong                                                                       | immersion, stirring                                      | GC-MS                  |
| 59   | Semivolatiles<br>in water                  | SPME as a Method for Estimating the Octanol Water Partition<br>Coefficient<br>Anal. Chem. 68: 130-133 (1996)<br>Dean, J., Tomlinson, W., Makovskaya, V., Cumming, R.,<br>Hetheridge, M., Comber, M.                                                                                           | 85µm polyacrylate<br>min to 20 hr<br>immersion, stirring | GC-FID                 |
| 546  | PAHs<br>in water and<br>octanol-water      | Solubility and partitioning studies with PAHs using an<br>optimized SPME procedure<br>Fresenius' J. Anal. Chem. (1999), 363(4), 426-428<br>Paschke, A., Popp, P., Schueuermann, G.                                                                                                            | 100µm SPME<br>stirred                                    | GC-MS                  |
| 728  | PAHs<br>in waste water                     | Determination of PAHs in waste water by off-line coupling<br>SPME with column liquid chromatography<br><i>J. Chromatogr. A, 897(2000) 153-159</i>                                                                                                                                             | 100µm PDMS<br>60 min                                     | HPLC<br>fluorescence   |

|      |                                                       |                                                                                                                                                                                                                                                                         |                                                            |                       |
|------|-------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|-----------------------|
| 547  | Pesticides in water                                   | Extracted amounts by SPME: a realistic approach to the partition coefficient K.<br>J. Chromatogr. Sci. 1999, 37(8), 277-282<br>Urruty, L., Montury, M                                                                                                                   |                                                            |                       |
| 548  | Volatiles in water                                    | Determination of Henry's law coefficient by combination of the equilibrium partitioning in closed systems and SPME techniques<br>J. Chromatogr. A., (1999), 830(2), 353-363<br>Dewulf, J., Van Langenhove, H., Everaert, P                                              | 100µm PDMS<br>30 min @ varied temp.                        | GC-FID                |
| 237  | Organics in water and air                             | Partitioning of Organic Chemicals to Polyacrylate-Coated Solid-Phase Microextraction Fibers: Kinetic Behavior and Quantitative Structure-Property Relationships<br>Anal. Chem. 68: 4458-4462 (1996)<br>Vaes, W., Hamwik, C., Ramos, E., Verhaar, H., Hermens, J.        | 85µm polyacrylate immersion stirring                       | GC-FID, -ECD<br>GC-MS |
| 84   |                                                       | Solid Phase Microextracting Using Fused-Silica Fibers Coated with Graphitized Carbon Black<br>Chromatographia 41: 678-684 (1995)<br>Mangani, R., Cenciarini, R.                                                                                                         |                                                            |                       |
| 88   | Overview                                              | New Direction in Sample Preparation for Analysis of Organic Compounds<br>Trends Anal. Chem. 14 (3): 113-122 (1995)<br>Pawliszyn, J.                                                                                                                                     | Multiple applications                                      |                       |
| 121  | Eugenol, 2,4-dimethylphenol, 2-phenylethanol in water | Solid Phase Microextraction for Quantitative Analysis in Nonequilibrium Situations<br>Anal. Chem. 69: 1230-1236 (1997)<br>Ali, J.                                                                                                                                       | 85µm polyacrylate 1-160 min immersion, stirring salt added | GC-MS                 |
| 360  | 2-Octanol in water                                    | SPME in Headspace Analysis, Dynamics in Non-Steady State Mass Transfer<br>Anal. Chem., 70: 4822-4826, (1998)<br>Ali, J.                                                                                                                                                 | 85µm polyacrylate, 100µm PDMS headspace                    | GC-MS                 |
| 2623 | Volatiles from Malaysian durians                      | <b>Analysis of volatile compounds from Malaysian durians (<i>Durio zibethinus</i>) using headspace SPME coupled to fast GC-MS</b><br><i>J. Food Compos. Anal. (UK) 20, #1, 31-44 (Feb. 2007)</i><br>Nazimah, S.; Chin, S.; Quek, S.; Man, Y.; Rahman, R.; Hashim, D. M. | headspace                                                  | GC-MS                 |
| 2637 | Volatiles from citrus fruit                           | <b>Characterization of volatile compounds in selected citrus fruits from Asia. Part I: freshly-squeezed juice</b><br><i>Flavour and Fragrance J. 22, #3, 228-232 (MAY-JUN 2007)</i><br>Dharmawan, Jorry; Kasapis, Stefan; Curran, Philip; Johnson, Jeffrey R.           | headspace                                                  | GC-MS                 |
| 2725 | Volatiles from tropical fruit                         | <b>Postharvest survey of volatile compounds in five tropical fruits using headspace-solid phase microextraction (HS-SPME).</b><br><i>HortScience 42, #2, 309-314 (2007)</i><br>Natta Laohakunjit; Orapin Kerdchoechuen; Matta, F.; Silva, J.; Holmes, W.                | headspace sat. salt                                        | GC-MS                 |
| 2556 | Volatiles from tropical fruit                         | <b>Screening of Tropical Fruit Volatile Compounds Using SPME Fibers and Internally Cooled SPME Fiber</b><br><i>J. Agric. Food Chem. 54, #23, 8688-8696 (2006-11-15)</i><br>Carasek, E.; Pawliszyn, J.                                                                   | PDMS coating                                               | GC-MS                 |
| 214  | Strawberries and apples in fruit homogenate           | Solid-Phase Microextraction: Artifact Formation and Its Avoidance<br>Chromatographia 46: 63-66 (1997)<br>Verhoeven, H., Beuerle, T., Schwab, W.                                                                                                                         | 85µm polyacrylate 30 sec immersion                         | GC-MS                 |
| 2518 | Isophorone in food samples                            | <b>Determination of isophorone in food samples by SPME-GC-MS</b><br><i>J Chromatography A 1155, #1, 100-104 (2007)</i><br>Kataoka, H.; Terada, Y.; Inoue, R.; Mitani, K.                                                                                                | 65µm PDMS/DVB 60°C, 45 min headspace                       | GC/MS                 |

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|------|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|-----------------|
| 2327 | Organics from PET coating                           | Study of barrier properties and chemical resistance of recycled PET coated with amorphous carbon through a plasma enhanced chemical vapour deposition (PECVD) process<br><i>Food Additives and Contaminants</i> 23 #1, 100-106 (2006)<br>Cruz, S. A.; Zanin, M.; Nerin, C.; De Moraes, M. A. B.                                                                                        | headspace                                                                                  | GC/MS           |
| 139  | McReynolds probes in methanol                       | Studying Activity Coefficients of Probe Solutes in Selected Liquid Polymer Coatings Using SPME<br><i>J. Phys. Chem.</i> 100: 17648 (1996)<br>Zhang, Z., Pawliszyn, J.                                                                                                                                                                                                                  | 7µm PDMS<br>25-100°C, 15 min<br>headspace                                                  | GC-FID          |
| 729  | Lidocane from water                                 | Multiple solid phase microextraction<br><i>J. Chromatogr. A.</i> (2000) 878, 27-33<br>Koster, E., de Jong, G.                                                                                                                                                                                                                                                                          | 100µm PDMS<br>45min                                                                        | HPLC            |
| 939  |                                                     | Fibers coated with molecularly imprinted polymers for SPME<br><i>Anal. Chem</i> (2001) 73(13) 3140-3145<br>Koster, E; Crescenzi, C; den Hoedt, W; Ensing, K; de Jong, G                                                                                                                                                                                                                |                                                                                            |                 |
| 579  | BTEX and solvents in water                          | Study of polymer coatings for solid-phase microextraction<br><i>Sepu. Jan</i> 1999; 17(1): 10-13<br>Zhang,-DN; Wu,-CY; Ai,-F                                                                                                                                                                                                                                                           | 88µm PDMS                                                                                  |                 |
| 148  | Maillard reaction products in water                 | A Study of the Behavior of Maillard Reaction Products Analyzed by SPME-GC-Mass Selective Detection<br><i>J. Chromatogr. Sci.</i> 34: 213 (1996)<br>Coleman III, W.<br><br>A Study of the Behavior of Polar and Nonpolar SPME Fibers                                                                                                                                                    | 100µm PDMS<br>5 min<br>immersion<br>stirring                                               | GC-MS           |
| 207  | Alkyl & alkoxy aroma & flavor compounds in water    | <i>J. Chromatogr. Sci.</i> 35 (6): 245-258 (1997)<br>Coleman, W.                                                                                                                                                                                                                                                                                                                       | 100µm PDMS<br>5 min<br>immersion &<br>headspace<br>stirring, salt added                    | GC-MSD          |
| 730  | Inorganic anions in water                           | SPME of inorganic anions based on polypyrrole film<br><i>Analyst (Cambridge, UK)</i> , 2000, 125(3), 391-394<br>Wu, J., Yu, Z, Lord, H., Pawliszyn, J.                                                                                                                                                                                                                                 | Polypyrrole film                                                                           | Ion Chrom.      |
| 764  | Volatile organics PAHs, amines in water/air mixture | Preparation and application of polypyrrole films in SPME<br><i>J. Chromatogr. A</i> (2001) 909(1) 37-52<br>Wu, J., Pawliszyn, J.                                                                                                                                                                                                                                                       | Polypyrrole film In-tube<br>20min.<br>headspave                                            | GC-FID<br>LC-UV |
| 163  | Mercury, mercury compounds in water                 | SPME Combined with Electrochemistry<br><i>Anal. Commun.</i> 33(10): 361-364 (1996)<br>Guo, F., Gorecki, T., Irish, D., Pawliszyn, J.                                                                                                                                                                                                                                                   | 10µm gold on carbon steel electrode<br>5 min<br>gas phase sampling<br>stirring, KNO3 added | GC-MS           |
| 182  |                                                     | Use of SPME with Ion Mobility Spectrometry<br><i>Anal. Lett.</i> 30 (7): 20-22 (1997)<br>Orzechowska, G., Poziomek, E., Tersol, V.                                                                                                                                                                                                                                                     |                                                                                            | GC-MS           |
| 2610 | VOCs in seawater                                    | Occurrence of volatile organic compounds (VOCs) in Liverpool Bay, Irish Sea<br><i>Mar. Pollut. Bull.</i> 54, #11, 1742-1753<br>Bravo-Linares, C.M.; Loyola-Sepulveda, R.H.; Mudge, S.M                                                                                                                                                                                                 | headspace                                                                                  | GC-MS           |
| 228  | VOCs in seawater                                    | SPME of Volatile Organic Compounds. Estimation of the Sorption Equilibrium from the Kovats Index Effect of Salinity and Humic Acids and the Study of the Kinetics by the Development of an "Agitated/Static Layer" Model<br><i>J. Chromatogr. A</i> 761: 205-217 (1997)<br>Dewulf, J., Everaert, M., Van-Langenhove, H.<br><br>Determination of squalene in seawater by SPME-GC-MS and | 100µm PDMS<br>45 min<br>immersion<br>stirring<br>salt added                                | GC-FID          |

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| 840  | Squalene<br>in seawater                             | the concentration variation of squalene in redtide seawater.<br><i>Fenxi Huaxue (2000) 28(11) 1326-1330</i><br>Zhao, M. Q.; Li, G. K.; Luan, T. G.; Zhang, Z. X.                                                                                                                                      | 100µm PDMS<br>45 min<br>immersion<br>stirring               | GC-MS        |
| 165  | Triazines, organic<br>pesticides<br>in sewage water | Development of a Prototype System for Quasi-Continuous<br>Analysis of Organic Contaminants in Surface or Sewage<br>Water Based on In-Line Coupling of SPME to GC<br><i>J. Chromatogr. A 737 (1): 59-65 (1996)</i><br>Eisert, R., Levsen, K.                                                           | 85µm polyacrylate<br>10 min<br>300mL/min flow               | GC-ECD, -FID |
| 166  | Pesticides<br>in water                              | Design of Automated SPME for Trace Analysis of<br>Organic Compounds in Aqueous Samples<br><i>J. Chromatogr. A 776: 293-303 (1997)</i><br>Eisert, R., Pawliszyn, J.                                                                                                                                    | 100µm PDMS<br>30 min<br>stirring                            | GC-FID       |
| 184  | BTEX,<br>pesticides<br>in water                     | Sample Preparation for GC with SPE & SPME<br><i>Chromatogr. 37: 205-236 (1997)</i><br>Penton, Z.                                                                                                                                                                                                      | 100µm PDMS<br>2-20 min<br>immersion, stirring<br>salt added | GC-FID       |
| 236  | Aromatic<br>hydrocarbons<br>in water                | Porous-Layer Solid-Phase Microextraction Using Silica<br>Bonded Phase<br><i>Anal. Chem. 69: 190-195 (1997)</i><br>Liu, Y., Shen, Y., Lee, M.                                                                                                                                                          | 30µm C8 silica bonded<br>metal fiber<br>20 min<br>stirring  | GC-FID       |
| 189  | PAHs in<br>water extract                            | High Temperature Water Extraction Combined with SPME<br><i>Anal. Commun. 33: 421-424 (1996)</i><br>Daimon, H., Pawliszyn, J.                                                                                                                                                                          | 30µm PDMS<br>70 min<br>stirring                             | GC-FID       |
| 220  | C6-C11 hydrocarbons<br>in water                     | Initial Bandwidth Resulting from Splitless and Solid-Phase<br>Microextraction Gas Chromatographic Injections<br><i>J. High Res. Chromatogr. 20 (2): 77-80 (1997)</i><br>Snow, N., Okeyo, P.                                                                                                           | 100µm PDMS<br>10 min<br>immersion<br>stirring               | GC-FID       |
| 138  | PAHs in<br>water                                    | Optimizing Split/Splitless Injection Port Parameters for SPME<br><i>J. Chromatogr. A 740 (1): 139-145 (1996)</i><br>Langenfeld, J., Hawthorne, S., Miller, D.                                                                                                                                         | 7µm & 100µm PDMS<br>5 hr<br>immersion, stirring             | GC-FID       |
| 211  | Nitro musk compounds<br>in cosmetic products        | Nitro Musks in Cosmetic Products: Determination by<br>Headspace SPME and GC with Atomic Emission Detection:<br>Dynamics of Organic Compound Extraction from Water,<br>Using Liquid-Coated Fused Silica Fibers<br><i>Chromatographia 45: 138-144 (1997)</i><br>Struppe, C., Schaefer, B., Engewald, W. | 100µm PDMS<br>1-60 min<br>headspace                         | GC-AID       |
| 243  |                                                     | Dynamics of Organic Compound Extraction from Water, Using<br>Liquid-Coated Fused Silica Fibers<br><i>Anal. Chem. 66: 1186-1199 (1994)</i><br>Arthur, C., Pawliszyn, J.                                                                                                                                |                                                             |              |
| 437  | Review                                              | SPME and Its Utilization in Environmental Analysis<br><i>Chem. Listy (1998), 92(8), 633-642</i><br>Sedlakova, J., Matisova, E., Slezackova, M.                                                                                                                                                        |                                                             |              |
| 2592 | Review articles                                     | <b>New materials in sorptive extraction techniques for polar compounds</b><br><b><i>J. CHROMATOGR. A 1152, #1-2, 14-31 (08 JUN 2007)</i></b><br><b>Fontanals, N.; Marce, R. M.; Borrull, F.</b>                                                                                                       |                                                             |              |
| 549  | Review of 52 refs.                                  | Trends in SPME for determining organic pollutants in<br>environmental samples<br><i>Trends Anal. Chem. 1999, 18(8), 557-568</i><br>Penalver, A., Pocurull, E., Borrull, F., Marce, R.                                                                                                                 | Varied                                                      |              |
| 550  | Proceeding of Extech                                | Advances in Extraction Technology: A report from Extech '99<br>LC-GC Current Trends and development in Sample Prep,<br>Sept. 1999, Vol. 17., No. 90, S25-S30                                                                                                                                          | Varied                                                      |              |

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|      | Lord, H., Pawliszyn, J.                          |                                                                                                                                                                                                                                                |                                                             |                   |
| 551  | Overview of SPME                                 | Sample Preparation for GC with SPE and SPME<br>Advances in Chromatography, Vol. 37, 1966, 205-236<br>Book chapter by M. Dekker, New York, 1996<br>Penton, Z.                                                                                   |                                                             |                   |
| 244  |                                                  | Solid Phase Microextraction -- A Unique Tool for<br>Chemical Measurements<br>Can. J. Chem. 74: 1297-1308 (1996)<br>Gorecki, T., Boyd-Boland, A., Zhang, Z., Pawliszyn, J.                                                                      |                                                             |                   |
| 245  |                                                  | Solvent Free Sample Preparation Techniques Based on Fiber<br>and Polymer Technologies<br>Environ. Sci. Technol. 28: 569A-574A (1994)<br>Boyd-Boland, A., Chai, M., Luo, Y., Zhang, Z., Yang, M.,<br>Gorecki, T., Pawliszyn, J.                 |                                                             |                   |
| 246  | BTEX,<br>pesticides<br>in water                  | Solid Phase Microextraction<br>Tech. Aquat. Toxicol. 459-477 (1996)<br>Webster, G., Sarna, L., Graham, K.                                                                                                                                      | 100µm PDMS<br>10-30 min<br>immersion<br>stirring            | GC-FID, -ECD      |
| 247  |                                                  | Solid Phase Microextraction Technique for Gas<br>Chromatography<br>Huaxue 54 (3): 119 (1996)<br>Huang, S.                                                                                                                                      | overview<br>article                                         |                   |
| 248  | BTEX,<br>pesticides<br>in water                  | Sample Preparation for Gas Chromatography with SPE<br>and SPME<br>Adv. Chromatogr. (N.Y.) 37: 205-236 (1997)<br>Penton, Z.                                                                                                                     | 100µm PDMS<br>2-20 min<br>immersion, stirring<br>salt added | GC-FID            |
| 249  | BTEX,<br>pesticides<br>in water                  | Solid Phase Microextraction-SPME, State of the Art<br>Chromatography Kaiser, O. (Ed.) Incom, Dusseldorf,<br>pp153-166 (1997)<br>Kern, H., Penton, Z.                                                                                           | 100µm PDMS<br>2-20 min<br>immersion, stirring               | GC-FID            |
| 2493 | Contaminants<br>in SPME process                  | <b>Potential sources of background contaminants in<br/>solid phase extraction and microextraction</b><br><b><i>J Separation Sci.</i> 30, #7, 1029-1036 (MAY 2007)</b><br><b>Stiles, R.; Yang, III; Lippincott, R.; Murphy, E.; Buckley, B.</b> | 70µm CW/DVB                                                 |                   |
| 250  | Reference book                                   | Solid Phase Microextraction: Theory and Practice<br>VCH, New York, 275pp (1997)<br>Pawliszyn, J.                                                                                                                                               | various fibers<br>and conditions                            |                   |
| 731  | Reference book                                   | Applications of Solid Phase Microextraction<br><br>Edited by Janusz Pawliszyn<br>RSC Chromatography Monographs                                                                                                                                 | 35 applications<br>described                                |                   |
| 732  | Overview                                         | Theory of solid phase microextraction<br><i>J. Chromatogr. Sci.</i> (2000), 38(7), 270-278<br>Pawliszyn, J.                                                                                                                                    |                                                             |                   |
| 733  |                                                  | Researchers are giving SPME a second look<br><br><i>R&amp;D Magazine, February 1999, 44-45</i>                                                                                                                                                 | 30:50<br>Carboxen/DVB/PDMS<br>headspace                     | GC-FID            |
| 251  | Overview                                         | Sample Preparation and Solid-Phase Extraction<br>LC-GC 15: 1106, 1108, 1110-1113, 1116-1117 (1997)<br>Majors, R., Raynie, D.                                                                                                                   | no fibers or<br>conditions shown                            |                   |
| 252  | Formaldehyde,<br>surfactants in<br>air and water | Recent Advances in Solid Phase Microextraction<br>LC-GC May Supplement, ppS41-S46 (1998)<br>Lord, H., Pawliszyn, J.                                                                                                                            | 65µm PDMS/DVB,<br>Carbowax/TPR fiber<br>varied conditions   | GC-MS,<br>HPLC-UV |



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| 2494 | VOCs in air and water matrices         | Sample preparation for the analysis of volatile organic compounds in air and water matrices<br><i>J. Chromatogr. A</i> 1153, #1-2, 130-144 (JUN 15 2007)<br>Demeestere, Kristof; Dewulf, Jo; De Witte, Bavo; Van Langenhove, H.                      | review article                                                                       |                  |
| 2495 | Review article sample handling methods | Sample handling strategies for the determination of persistent trace organic contaminants from biota samples<br><i>ANAL. CHIM. ACTA</i> 590, #1, 1-16 (02 MAY 2007)<br>Fidalgo-Used, N.; Blanco-Gonzalez, E.; Sanz-Medel, A.                         |                                                                                      |                  |
| 255  | Thiophenes in water                    | Application of SPME/GC-MS to Characterize Metabolites in the Biodesulfurization of Organosulfur Model Compounds in Gitumen<br><i>Environ. Sci. Technol.</i> 32 (3): 421-426 (1998)<br>MacPherson, T., et al.                                         | 85µm polyacrylate<br>20 min<br>immersion<br>pH 2                                     | GC-MS            |
| 256  |                                        | Construction of an Interface for SPME-PC-SFC<br><i>J. High Resolut. Chromatogr.</i> 34 (10): 275-277 (1997)<br>Medvedovici, A., Sandar, P.<br><br>Automated In-Tube SPME Coupled to HPLC                                                             |                                                                                      |                  |
| 257  | Phenylurea pesticides in water         | <i>Anal. Chem.</i> , Vol. 69, No. 16, August 15, 1997, 3140-3147<br>Eisert, R., Pawliszyn, J.                                                                                                                                                        | Omegawax 250<br>25µL, 10 flush cycles                                                | HPLC-UV, 245nm   |
| 258  | PAHs in water                          | Effect of Heating the Interface on Chromatographic Performance of SPME Coupled to HPLC<br><i>Anal. Commun.</i> 34 (11): 365-369 (1997)<br>Daimon, H., Pawliszyn, J.                                                                                  | 100µm PDMS<br>60 min<br>immersion<br>heat desorb 22-180°C                            | HPLC-UV, 254nm   |
| 259  | PAHs in water                          | Effect of Heating the Interface on Chromatographic Performance of SPME Coupled to HPLC<br><i>Analyst (Cambridge)</i> 122 (11): 365-369 (1997)<br>Daimon, H., Pawliszyn, J.                                                                           | 100µm PDMS<br>60 min<br>immersion<br>heat desorb 22-180°C                            | HPLC-UV, 254nm   |
| 2181 | Heated interface for HPLC              | Development of an improved heated interface for coupling SPME to high-performance liquid chromatography<br><i>J. Chromatogr. A</i> , 1105, #1-2, 208-212 (2006)<br>Alves, C.; Contadori, A.; Fernandes, C.; Lancas, F.; Neto, A. Santos; R., Jose C. |                                                                                      |                  |
| 260  | Hg (II) ion in water                   | SPME Combined with HPLC for the Determination of Metal Ions Using Crown Ether as Selective Extracting Reagent<br><i>J. Microcolumn Sep.</i> 167-173 (1998)<br>Jia, C., Luo, Y., Pawliszyn, J.                                                        | polypropylene hallow fiber, 30 min<br>immersion<br>derivative:<br>dibenzo-18-crown-6 | HPLC-UV, 254nm   |
| 734  | Dopamine in biological matrix          | Analysis of biogenic amines by SPME and HPLC with electrochemical detection<br><i>J. Chromatogr. A</i> , (2000) 873, 396<br>Auger, J., Boulay, R., Jaillais, B., Delion-Vancassel, S.                                                                | Carbowax-TPR                                                                         | HPLC electrochem |
| 368  | Aromatic amines in wastewater          | SPME Coupled with HPLC for the Determination of Aromatic Amines<br><i>Anal. Chem.</i> , Vol. 71, No. 2, January 15, 1999, 310-316<br>Wu, Y., Huang, S.<br><br>Automated In-Tube SPME Coupled to HPLC                                                 | 50µm Carbowax/TPR,<br>65µm PDMS/DVB,<br>30 min or 20 min<br>Na2SO4 buffer added      | HPLC-UV, 280nm   |
| 407  | Phenylurea pesticides in water         | <i>Anal. Chem.</i> , Vol. 69, No. 16, August 15, 1997, 3141-3147<br>Eisert, R., Pawliszyn, J.                                                                                                                                                        | Omegawax 250<br>25µL, 10 flush cycles                                                | UV, 245nm        |
| 2695 | Pesticides in apple samples            | Headspace SPME in pesticide residues analysis: 2. Apple samples.<br><i>Pesticidi i Fitomedicina</i> 22, #2, 173-176 (2007)<br>Durovic, R.; Milinovic, J.; Markovic, M.; Markovic, D.                                                                 | 100µm PDMS<br>60 min @ 60°C<br>headspace                                             | GC-MS            |

|      |                                           |                                                                                                                                                                                                                                                    |                                                                                    |        |
|------|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------|
| 2177 | Carbamate pesticides                      | Behaviour of carbamate pesticides in GC and their determination with SPE and SPME as preconcentration steps<br><i>J SepSci. 28, #16, 2130-2138 (2005)</i><br>Carabias-Martinez, R.; Garcia-Hermida, C.; Rodriguez-Gonzalez, E.; Ruano-Miguel, Luis | 85µm polyacrylate                                                                  | GC-MS  |
| 735  | Carbamate pesticides in water             | Automated in-tube SPME-HPLC for Carbamate pesticide analysis<br><i>J. Chromatogr. A, (2000) 873(1), 137-147</i><br>Gou, Y., Eisert, R., Pawliszyn, J.                                                                                              | Intube capillaries                                                                 | HPLC   |
| 736  | Carbamate pesticides in water             | In-tube SPME coupled to capillary LC for Carbamate analysis in water samples<br><i>Anal. Chem. 2000, 72(13), 2774-2779</i><br>Gou, Y., Pawliszyn, J.                                                                                               | Intube capillaries                                                                 | HPLC   |
| 737  | Carbamate pesticides in water             | On-line coupling of in-tube SPME to HPLC for analysis of carbamates in water samples: comparison of two commercially available autosampler<br><i>J. Microcolumn Sep. (2000), 12(3), 125-134</i><br>Gou, Y., Tragas, C., Lord, H., Pawliszyn, J.    | Intube capillaries                                                                 | HPLC   |
| 789  |                                           | Development of effective sample pretreatment by in-tube SPME and its application<br><i>Chromatography (2000) 21(4), 276-279</i><br>Kataoka, Hiroyuki; Wu, Jingcun; Lord, Heather L.; Pawliszyn, J.                                                 | Intube capillaries                                                                 |        |
| 810  |                                           | Sample preparation technique using fiber-in-tube SPME<br><i>Chromatography (2000), 21(4), 284-285</i><br>Jinno, K; Kawazoe, M; Saito, Y; Hayashida, M                                                                                              |                                                                                    |        |
| 571  | 175 references review                     | On-line combination of aqueous-sample preparation and capillary gas chromatography<br><i>J-Chromatogr.-A. 21 May 1999; 842(1-2): 391-426</i><br>Louter,-AJH; Vreuls,-RJJ; Brinkman,-UAT                                                            | various references of SPME & SPE                                                   |        |
| 552  |                                           | Solid phase microextraction turned inside out<br><i>Che. Aust. 1999, 66(6), 9-11</i><br>Tan, D., Marriott, P., Lee,H., Morrison, P.                                                                                                                | Intube capillaries                                                                 |        |
| 412  |                                           | Solventless Analytical Separation Method -- SPME/Microcolumn LC<br><i>Chromatography (1998), 19(2), 6063</i><br>Jinno, K.                                                                                                                          |                                                                                    | HPLC   |
| 261  | Fatty acid methyl esters in air and water | Derivatization/SPME: New Approach to Polar Analytes<br><i>Anal. Chem. 69(2): 196-205 (1997)</i><br>Pan, L., Pawliszyn, J.                                                                                                                          | 85µm polyacrylate<br>2 hr<br>headspace, pH 6<br>derivative: 1-pyrenyl-diazomethane | GC-FID |
| 819  | Formaldehyde                              | Solid phase analytical derivatization: enhancement of sensitivity and selectivity of analysis<br><i>J.Chromatogr. A., 843, 19-27</i><br>Rosenfeld, J.                                                                                              | On-fiber derivatization                                                            |        |
| 553  | 9 references                              | New Gas chromatographic approach to polar compounds by derivatization-SPME<br><i>Bunseki, 1999 (7), 595-597</i><br>Takauchi, M.                                                                                                                    | Japanese                                                                           |        |
| 262  | Alcohol and ketones in water              | Strategies for the Analysis of Polar Solvents in Liquid Matrixes<br><i>Anal. Chem. 70 (1): 19-27 (1998)</i><br>Gorecki, T., Martos, P., Pawliszyn, J.                                                                                              | Nafion fiber<br>10 min<br>headspace, stirring                                      | GC-ECD |
|      |                                           | Absorption of hydrophobic compounds into the                                                                                                                                                                                                       |                                                                                    |        |

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|------|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------|
| 738  | Phenanthrene, PCB pentachlorobenzene in water | poly(dimethylsiloxane) coating of SPME fibers: high partition coefficients and fluorescence microscopy images<br><i>Anal. Chem.</i> (2000) 72(3), 459-464<br>Mayer, P., Vaes, W., Hermens, J.                                | 7µm PDMS<br>10min                                                                 | GC-MS                             |
| 739  | Hydrophobic compounds (PCBs) in water         | Nonequilibrium SPME for determination of the freely dissolved concentration of hydrophobic organic compounds: matrix effects and limitations<br><i>Anal. Chem</i> 2000, 72(13), 2802-2808<br>Oomen, A., Mayer, P., Tolls, J. | 7µm PDMS<br>0.5-60min @ 37°C                                                      | GC-ECD                            |
| 263  | nC8 to nC14, neat                             | Methodological Aspects of Headspace SPME. Application J. High Resolut. Chromatogr. 20 (4): 217-221 (1997)<br>Schafer, B. Hennig, P., Engewald, W.                                                                            | various fibers<br>80°C, 5 min<br>headspace                                        | GC-FID                            |
| 264  | Phenol, alcohols in water                     | Headspace SPME. Dynamics and Quantitative Analysis Before Reaching a Partition Equilibrium<br><i>Anal. Chem.</i> 69 (16): 3260-3266 (1997)<br>Ali, J.                                                                        | 85µm polyacrylate<br>1-80 min at 25°C,<br>1-40 min at 80°C<br>headspace, stirring | GC-MS                             |
| 413  | Tetraethyllead in water                       | SPME as a Sample Introduction Technique for Radio Frequency Glow Discharge MS<br><i>Anal. Commun.</i> (1997), 34(10), 275-277<br>Gorecki, T., Belkin, M., Caruso, J., Pawliszyn, J.                                          | 30µm PDMS<br>5 min<br>headspace, stirred                                          | radio frequency glow discharge MS |
| 265  |                                               | Effect of Sample Volume on Quantitative Analysis by SPME, Part 1 - Theoretical Considerations<br><i>Analyst</i> (Cambridge) 122 (10): 1079-1086 (1997)<br>Gorecki, T., Pawliszyn, J.                                         |                                                                                   |                                   |
| 2835 | Theory                                        | <b>Steady-state diffusion regime in solid-phase microextraction kinetics</b><br><i>Anal Chim Acta</i> 609, #1, 113-119 (Feb 18 2008)<br>ter Laak, Thomas L.; van Leeuwen, Herman P.; Benhabib, Karim                         |                                                                                   |                                   |
| 740  | Theory                                        | Kinetics of SPE and SPME in thin adsorbent layer with saturated sorption isotherm<br><i>J.Chromatogr. A</i> (2000) 873(1), 39-51<br>Emenov, S., Koziel, J., Pawliszyn, J.                                                    |                                                                                   |                                   |
| 769  | BTEX from water                               | The use of polymeric fullerenes as a new coating for SPME<br><i>Chromatographia</i> (2000) 52(11/12), 803-809<br>Xiao, C.; Liu, Z. ; Wang, Z.; Wu, C.; Han, H.                                                               | headspace                                                                         | GC-FID                            |
| 266  | Organics in water                             | SPME as a Tool to Determine Membrane/Water Partition Coefficients and Bioavailable Concentrations in vitro Systems<br><i>Chem. Res. Toxicol.</i> 10 (10): 1067-1072 (1997)<br>Vae, W., et al.                                | 85µm polyacrylate<br>9-17 min<br>immersion, stirring                              | GC-FID                            |
| 267  | PAHs, phenols, anilines in water              | Sol-Gel Coating Technology for the Preparation of SPME Fibers of Enhanced Thermal Stability<br><i>Anal. Chem.</i> 69 (19): 3889-3898 (1997)<br>Chong, S. et al.                                                              | Solgel coating<br>30 min<br>stirring                                              | GC-FID                            |
| 2231 | Metallic species                              | <b>A review on SPME- HPLC as a novel tool for the analysis of toxic metal ions</b><br><i>Talanta</i> 68 #3, 842-849 (2006)<br>Kaur, Varinder; Malik, Ashok Kumar; Verma, Neelam                                              | review article                                                                    | HPLC                              |
| 2150 | Organometallic                                | <b>Applications of SPME for the determination of metallic and organometallic species</b><br><i>J. Sep. Sci.</i> , 29, #3, 333-345 (2006)<br>Kaur, Varinder; Malik, Ashok Kumar; Verma, Neelam                                | headspace<br>NaBEt <sub>4</sub> derivatives                                       | GC-FID                            |
| 2615 | Co(II), Ni(II), Pd(II)                        | <b>A new method for simultaneous determination of Co(II), Ni(II) and Pd(II) as morpholine-4-carbodithioate complex by SPME-HPLC-UV system</b><br>Ambient temperature, unless otherwise indicated.                            |                                                                                   | HPLC-UV                           |

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|------|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|--------------|
|      | in water                                        | <i>Talanta</i> 73, #3, 425-430 (Sep 30 2007)<br>Kaur, Varinder; Malik, Ashok Kumar                                                                                                                                                                                                   |                                                                 |              |
| 2491 | Co(II), Ni(II), Pd(II)<br>in water              | A new approach for simultaneous determination of Co(II), Ni(II), Cu(II), and Pd(II) using 2-thiophenylaldehyde-3-thiosemicarbazone (TPTS) as reagent by SPME-HPLC<br><i>Anal Chim Acta</i> 603, #1, 44-50 (2007 Nov 5)<br>Kaur, Varinder; Aulakh, Jatinder Singh; Malik, Ashok Kumar | PDMS fiber<br>TPTS derivative                                   | HPLC-UV      |
| 911  | Organometalics                                  | Development of new SPME fibers by sol-gel technology for SPME-HPLC determination of organometals<br><i>Analytica Chimica Acta</i> 1999, 402(1-2) 67-69<br>Gabatu, T., Sutton, K., Caruso, J.                                                                                         | Solgel coatings                                                 | HPLC         |
| 741  | BTEX, herbicides<br>in water                    | High-performance polyethylene glycol-coated SPME fibers using sol-gel technology<br><i>J. Chromatogr. A</i> 893 (2000) 157-168<br>Wang, Z., Xiao, C., Wu, C., Han, H.                                                                                                                | PAG sol-gel fiber<br>30°C, headspace<br>salt added, pH adjusted |              |
| 554  |                                                 | Sol-gel method for the preparation of SPME fibers<br><i>Anal. Lett.</i> , 1999, 32(8), 1675-1681<br>Zhou, Z., Wang, Z., Qu, C., Zhan, W., Xu, Y.                                                                                                                                     | Solgel coatings                                                 |              |
| 268  | BTEX<br>in soil                                 | Field-Portable SPME/Fast GC for Trace Analysis<br><i>Field Anal. Chem. Technol.</i> 1 (5): 277-284 (1997)<br>Gorecki, T., Pawliszyn, J.                                                                                                                                              | 30µm PDMS<br>2 min,<br>headspace, stirring                      | GC-FID, -PID |
| 555  |                                                 | Optimization of the SPME device design for field applications<br><i>Fresenius' J. Anal. Chem.</i> 1999, 364(7), 610-616<br>Muller, L., Gorecki, T., Pawliszyn, J.                                                                                                                    | varied coatings                                                 |              |
| 742  | Equipment design                                | Fiber Conditioners for SPME: Design, Testing, and application<br><i>J. High Resol. Chromatogr.</i> 2000, 23(4) 343-347<br>Koziel, J., Shurmur, B., Pawliszyn, J.                                                                                                                     |                                                                 |              |
| 948  | Organic pollutants<br>environmental<br>matrices | SPME- a convenient tool for the determination of organic pollutants in environmental matrices<br><i>Anal Chem</i> (2001) 31(1), 1-18<br>Zygmunt, B.; Jastrzebska, A.; Namiesnik, J.                                                                                                  | review article                                                  |              |
| 269  | Organics in<br>air and water                    | New Trends in SPME<br><i>Crate. Rev. Anal. Chem.</i> 27 (2): 103-135 (1997)<br>Eisert, R., Pawliszyn, J.                                                                                                                                                                             | various fibers<br>and conditions                                | GC, HPLC     |
| 556  | Review of technique                             | Solid Phase Microextraction<br><i>TrAC, Trends Anal. Chem.</i> (1999), 18(4), 272-282<br>Prosen, H., Zupancic-Kralj, L.,                                                                                                                                                             |                                                                 |              |
| 806  | Review of technique                             | Solid-phase microextraction (SPME) with direct detection a new analytical dimension<br><i>Mitt. Lebensmittelunters. Hyg</i> (2000) 91(6), 690-699<br>Luisier, J; Villettaz, J; Azodanlou, R; Amado, R                                                                                |                                                                 | GC           |
| 270  | C6-C16 hydrocarbons<br>in water                 | Optimizing SPME-GC Injections<br><i>LC-GC</i> 15 (12): 1130-1136 (1997)<br>Okeyo, P., Snow, N.                                                                                                                                                                                       | 7µm, 30µm, 100µm<br>PDMS<br>10 min<br>stirring                  | GC-FID       |
| 403  | PAHs<br>in water                                | Theoretical and Practical Comparison of SPME and Liquid-Liquid Extraction with Large Volume Injection for Analysis of Aqueous Samples by GC<br>Book chapter<br>Snow, N.                                                                                                              | overview<br>article                                             | GC-FID       |
| 2313 | 1,4-hydroxy-                                    | Rate constants for the reactions of OH radicals with a series of 1,4-hydroxyketones                                                                                                                                                                                                  | headspace                                                       | GC-FID       |

| ketones                                          | <i>J Photochemistry and Photobiology B:176 #1-3, 143-148 (2006)</i><br>Baker, Jillian; Arey, Janet; Atkinson, Roger                                                                                                                                                                  | hydroxylamine<br>derivatives                                                    |          |  |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|----------|--|
| 743 Semivolatiles<br>in water                    | Use of bench top photochemical reactor and SPME<br>to measure semivolatile organic compound-hydroxyl<br>radical rate constants<br><i>Environ. Toxicol. Chem</i> 2000, 19(7), 1705-1710<br>Bernhard, M., Simonich., S.                                                                |                                                                                 |          |  |
| 271 PCBs<br>in water                             | Adsorption versus Absorption of Polychlorinated Biphenyls<br>onto SPME Coatings<br><i>Anal. Chem.</i> 70 (9): 1866-1869 (1998)<br>Yang, Y., Hawthorne, S., Miller, D., Liu, Y., Lee, M.                                                                                              | 100µm & 7µm PDMS<br>5 hr<br>stirring                                            | GC-ECD   |  |
| 744 PCBs<br>in water                             | Response to comments on adsorption versus absorption<br>of polychlorinated biphenyls onto SPME coatings<br><i>Anal. Chem.</i> 72 (3): 642-6643 (2000)<br>Yang, Y., Hawthorne, S., Miller, D., Liu, Y., Lee, M.                                                                       | 100µm PDMS<br>5 hr<br>stirring                                                  | GC-ECD   |  |
| 817 Aroclor 1254                                 | Application of SPME-GC-MS to characterize intermediate<br>in a joint solar-microbial process for total mineralization<br>of Aroclor 1254<br><i>J.Chromatogr A</i> 873 (2000) 53-61<br>Rhofer, C., Hawari, J.                                                                         | 85µm polyacrylate<br>40min.<br>stirring<br>2pH w/H <sub>3</sub> PO <sub>4</sub> | GC-MS    |  |
| 2168 Review article                              | <b>Atomic spectrometry update. Clinical and biological materials,<br/>foods and beverages</b><br><i>J Anal At Spectrom</i> 21, #4, 439-491 (2006)<br>Branch, S.; Day, .; Patriarca, M.; Taylor, A.; White, M.                                                                        |                                                                                 |          |  |
| 745 Review article                               | Evolution of solid phase microextracton technology<br><i>J. Chromatogr. A</i> 885(2000) 153-193<br>Lord, H., Pawliszyn, J.                                                                                                                                                           | various                                                                         |          |  |
| 2488 Review article                              | <b>Recent developments in headspace microextraction techniques for the<br/>analysis of environmental contaminants in different matrices</b><br><i>J. Chromatogr. A</i> 1152, #1-2, 70-96 (JUN 8 2007)<br>Lambropoulou, D.; Konstantinou, Ioannis K.; Albanis, Triantafyllos A.       |                                                                                 |          |  |
| 2505 Off-gassing<br>products from<br>siloxanes   | Thermal degradation in a trimodal poly(dimethylsiloxane) network<br>studied bymultiple quantum NMR<br><i>J Phys Chem B</i> 111, #45, 12977-12984 (Nov 15 2007)<br>Alviso, C.; Chinn, S.; Giuliani, J.; Gjersing, E.; Herberg, J.; Jones, T.;<br>Maxwell, R.; Pearson, M.; Wilson, T. | headspace                                                                       | GC-MS    |  |
| 2667 Standarization<br>method                    | Equilibrium in-fiber standardization method for determination of<br>sample volume by solid phase microextraction<br><i>Analyst</i> 132, #5, 425-30 (2007 May)<br>Niri, Vadoud H; Pawliszyn, Janusz                                                                                   | PDMS fiber<br>headspace                                                         | GC-MS    |  |
| 557 Benzene,<br>4-methylpentan-2-one<br>in water | Theory of analyte extraction by selected porous polymer<br>SPME fibers<br><i>Analyst</i> (Cambridge, UK) (1999), 124(5), 643-649<br>Gorecki, T., Yu, Z., Pawliszyn, J.                                                                                                               | PDMS/DVB, CW/DVB                                                                |          |  |
| 2390 VOCs from<br>water, pump oil                | SPME-GC-TOFMS utilized for the evaluation of the new-generation<br>super elastic fiber assemblies.<br><i>Anal. Chim. Acta</i> 581, #2, 221-231 (2007-01-09)<br>Setkova, L.; Risticvic, S.; Linton, C.; Ouyang, G. ; Bragg, L.; Pawliszyn, J.                                         | headspace                                                                       | GC-TOFMS |  |
| 558 Organics<br>in solvents                      | New SPME fibers, Not only for aqueous systems<br><i>LaborPraxis</i> (1999), 23(3), 30-32, 34<br>Haag, Ingo                                                                                                                                                                           | PDMS/Carboxen/DVB<br>Nafion                                                     |          |  |
| 573 BTEX in<br>Methanol                          | New coating surfaces of fibers for SPME<br><i>J-Microcolumn-Sep.</i> May 1999; 11(5): 377-383<br>Ligor,-M; Scibiorek,-M; Buszewski,-B<br><br>SPME application in GC/olfactometry dilution analysis                                                                                   | evaluation of various<br>coatings                                               |          |  |

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| 589  | Coffee sample                          | J-Agric-Food-Chem. Apr 1999; 47(4): 1616-1618<br>Deibler,-KD; Acree,-TE; Lavin,-EH                                                                                                                                                                            | PDMS fibers<br>15 min<br>headspace                             | GC-FID           |
| 355  | Terbutryn in water                     | SPME with Rotation of the Microfiber<br>Anal. Chem 1998, 70, 3981-3982<br>Geppert, H.                                                                                                                                                                         | 30µm PDMS<br>immersion<br>stirring                             | GC-FID           |
| 409  | Organics in water                      | Partitioning of Organic Chemicals to Polyacrylate-Coated SPME Fibers: Kinetic Behavior and Quantitative Structure Property Relationship<br>Anal. Chem. 68: 4458-4462 (1996)<br>Vaes, W., Harnwijk, C., Urreatazazu, R., Verhaar, H.                           | 85µm polyacrylate<br>35 min<br>immersion<br>stirring<br>pH 7.5 | GC-FID, -ECD, MS |
| 408  | Methylmercury iodide in soil and water | Application of Isotope Dilution to Ion Trap GC-MS<br>Anal. Chem 71, No. 2, Jan. 15, 1999, pg. 483-488<br>Barshick, C., Barshick, E., Walsch, E., Vance, M., Britt, P.                                                                                         | 65µm PDMS/DVB<br>5 min<br>immersion<br>stirring                | GC-MS            |
| 2748 | Anatoxin-a in water                    | <b>Improved conditions for the application of SPME prior to HPLC-FLD analysis of anatoxin-a.</b><br><b><i>J Separation Sci.</i> 30, #15, 2522-2528 (2007)</b><br><b>Rellán, S.; Gago-Martínez, A.</b>                                                         | <b>NBD-F derivative</b><br><b>Various fibers</b>               | <b>HPLC-FLD</b>  |
| 974  | Anatoxin-a in aqueous samples          | Analysis of anatoxin-a in aqueous samples by SPME using on fibre derivitization<br><i>J.Chromatogr. A</i> (2002) 963(1-2), 295-302<br>Namera, A.; So, A.; Pawliszyn, J.                                                                                       |                                                                | HPLC             |
| 987  | Polychlorinated biphenyls              | Photolysis of polychlorinated biphenyls by SPME<br><i>J.Chromatogr. A</i> (2002) 963(1-2), 37-47<br><br>Lores, M.; Llompart, M.; Gonzalez-Garcia, R.; Gonzalez-Barreiro, C.; Cela, R.                                                                         |                                                                |                  |
| 994  | Germanium                              | Comparison of chloride- and hydride-generation for quantitation of germanium by headspace SPME inductively coupled plasma-mass spectrometry.<br><i>Analytical and Bioanalytical Chemistry</i> (2002) 373(8), 849-855<br>Guo, X.M.; Mester, Z.; Sturgeon, r.e. |                                                                | ICP TOF MS       |
| 995  |                                        | Sample preparation in chromatography for long dash concentration, purification and filtration: guide to choice of equipment.<br><i>Laboratorio 2000</i> (2002) 16 (6), 34-50<br>Polesello, A.                                                                 |                                                                |                  |
| 1008 |                                        | The development of selective and biocompatible coatings for solid phase microextraction<br><i>Journal of Separation Science</i> (2003) 26 (3-4), 251-260.<br>Mullett, Wayne M.; Pawliszyn, Janusz                                                             |                                                                |                  |
| 1010 |                                        | Rearrangement of p -menthane terpenes by Carboxen during HS-SPME.<br><i>Journal of Separation Science</i> (2002) 25 (10-11), 685-690.<br>Zabaras, D.; Wyllie, S. G.                                                                                           | 75µm Carboxen                                                  | GC-MS            |
| 1030 | Review                                 | Headspace analysis in modern gas chromatography.<br><i>Trends in Analytical Chemistry</i> (2002) 21 (9-10), 608-617.<br>Snow, N. H.; Slack, G. C.                                                                                                             |                                                                |                  |
| 1045 |                                        | Time-weighted average passive sampling with a Solid-Phase Microextraction device<br><i>Analytical Chemistry</i> (2003) 75 (9), 2004-2010.<br>Chen, Yong; Pawliszyn, Janusz                                                                                    | Various                                                        |                  |
| 1061 | Review article                         | Research progress in solid-phase microextraction.<br><i>Fenxi Kexue Xuebao</i> (2002) 18 (5), 429-435.<br>Chen, M.; Yuan, D. X.; Xu, P. X.; Chang, D. H.                                                                                                      |                                                                |                  |

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| 1075 | High concentration SPME       | Extending the solid-phase microextraction technique to high analyte concentrations: measurements and thermodynamic analysis.<br><i>Analytical Chemistry</i> (2002) 74(5), 1031-1037<br>Gill, K.; Brown, W. A.                                                                                                                      |                                                        |        |
| 2897 | Flavors from custard desserts | <b>Interactions between flavour release and rheological properties in model custard desserts:</b><br><b>Effect of starch concentration and milk fat</b><br><b>Food Chemistry 108, #4, 1183-1191 (JUN 15 2008)</b><br>Kersiene, M.; Adams, An; Dubra, A. De Kimpe, N.; Leskauskaite, D.                                             | headspace                                              | GC/MS  |
| 2309 | Flavors from milk protein     | <b>Properties of oregano (<i>Origanum vulgare</i> L.), citronella (<i>Cymbopogon nardus</i> G.) and marjoram (<i>Majorana hortensis</i> L.) flavors encapsulated into milk protein-based matrices</b><br><b>Food Res. Int. 39 #4, 413-425 (2006)</b><br>Baranauskiene, R.; Dewettinck, K.; Venskutonis, P.; Verhe, R.              | 65µm PDMS/DVB<br>85µm polyacrylate headspace<br>10 min | GC/MS  |
| 1102 | Static and dynamic sampling   | Comparison of different methods: static and dynamic headspace and solid-phase microextraction for the measurement of interactions between milk proteins and flavour compounds with an application to emulsions.<br><i>Journal of Agricultural and Food Chemistry</i> (2002) 50(6), 1497-1501<br>Fabre, M.; Aubry, V.; Guichard, E. |                                                        |        |
| 1117 |                               | On-site calibration method based on stepwise solid-phase microextraction<br><i>Journal of Chromatography A</i> (2003) 999 (1-2), 43-50.<br>Chen, Yong; Pawliszyn, Janusz; Xiong, Guohua                                                                                                                                            | 75 µm Carboxen/PDMS                                    |        |
| 1118 |                               | Solid-phase microextraction fibre-water distribution constants of more hydrophobic organic compounds and their correlations with octanol-water partition coefficients<br><i>Journal of Chromatography A</i> (2003) 999 (1-2), 35-42.<br>Paschke, A.; Popp, P.                                                                      | Various                                                |        |
| 1134 | VOCs                          | Optimization of solid-phase microextraction of volatiles.<br><i>Journal of Chromatography, A</i> (2002) 960(1-2), 159-164<br>Matisova, E.; Medved apostrophe ova, M.; Vraniakova, J.; Simon, P.                                                                                                                                    |                                                        |        |
| 1203 |                               | Anodized zinc wire as a solid-phase microextraction fiber.<br><i>Chromatographia</i> (2003) 57 (11-12), 799-804.<br>Djozan, D.; Abdollahi, L.                                                                                                                                                                                      |                                                        | GC     |
| 1229 |                               | Monolithic silica column for in-tube solid-phase microextraction coupled to high-performance liquid chromatography.<br><i>Journal of Chromatography, A</i> (2003) 985 (1-2), 351-357.<br>Shintani, Y.; Zhou, X. J.; Furuno, M.; Minakuchi, H.; Nakanishi, K.                                                                       |                                                        | HPLC   |
| 1230 | PAH's in water                | Thin-film microextraction.<br><i>Analytical Chemistry</i> (2003) 75 (4), 1002-1010.<br>Bruheim, I.; Liu, X. C.; Pawliszyn, J. *                                                                                                                                                                                                    |                                                        | GC-MS  |
| 1245 | Review                        | Coupling solid-phase microextraction to liquid chromatography. A review.<br><i>Analytical and Bioanalytical Chemistry</i> (2003) 375 (1), 73-80.<br>Zambonin, C. G.                                                                                                                                                                |                                                        |        |
| 1277 |                               | A new solid-phase microextraction adsorbent of polyphenylethylene-butyl acrylate and its application.<br><i>Fenxi Shiyanshi</i> (2003) 22 (3, 1-4.)<br>Shen, S. C.; Wang, W. B.; An, H.                                                                                                                                            |                                                        | GC-FID |
| 1288 |                               | Copper sulfide wire as a selective fiber in solid-phase microextraction.<br><i>Chromatographia</i> (2003) 58 (3-4), 221-224.<br>Djozan, D.; Amir-Zehni, M.                                                                                                                                                                         |                                                        | GC-FID |
| 1303 |                               | CE in a nonuniform capillary modulated by a cylindrical insert, and zone-narrowing effects during sample injection.<br><i>Analytical Chemistry</i> (2003) 75 (14), 3656-3659.<br>Stoyanov, A. V.; Liu, Z.; Pawliszyn, J. *                                                                                                         |                                                        | CE     |

|      |                                                |                                                                                                                                                                                                                                                                                                                              |                                  |
|------|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| 1304 |                                                | Styrene-butyl acrylate copolymer as solid-phase microextraction adsorbent and its applications.<br><i>Sepu (2003) 21 (3), 285-287.</i><br>Xue, H. Y.; Shen, S. C.*; Wang, W. B.; An, H.                                                                                                                                      | Styrene-butyl acrylate copolymer |
| 1353 | Aliphatic alcohols, BTEX                       | Anodized aluminium wire as a solid-phase microextraction fibre.<br><i>Analytical Chemistry (2001) 73(16), 4054-4058.</i><br>Djozan, D.; Assadi, Y.; Haddadi, S. H.                                                                                                                                                           | GC                               |
| 1393 | Phenols                                        | Solid-phase microextraction using fused-silica fibers coated with sol-gel-derived hydroxy-crown ether.<br><i>Analytical Chemistry (2001) 73(11), 2429-2436.</i><br>Zeng, Z. R.; Qiu, W. L.; Huang, Z. F.                                                                                                                     |                                  |
| 1433 | GC tools                                       | Tools simplify GC analysis of trace components<br><i>Research and Development (2001) 43(8), 36-39.</i><br>Marsill, R.                                                                                                                                                                                                        | GC                               |
| 1492 | Field sampling with SPME                       | Solid-phase microextraction ( SPME ) for rapid field sampling and analysis by gas chromatography-mass spectrometry (GC-MS).<br><i>Trends in Analytical Chemistry (2002) 21(8), 534-543</i><br>Smith, Philip A.; Hall, Tara; Hook, Gary L.; Kimm, Gregory L.                                                                  | GC-MS                            |
| 1498 | Headspace sampling                             | Headspace sampling: Critical part in evaluating true gas phase concentrations.<br><i>Abstracts of Papers American Chemical Society (2002) 224(1-2), AGFD 72</i><br>Zehentbauer, Gerhard N.; Eddy, Cindy L.; Pelfrey, Christa S.; Rodriguez, Pete A.                                                                          |                                  |
| 1515 | Use of SPME with complex environmental samples | Theoretical considerations on the use of solid-phase microextraction with complex environmental samples.<br><i>Environmental Science &amp; Technology (2002) 36(15), 3385-3392</i><br>Zeng, Eddy Y.; Noblet, James A.                                                                                                        |                                  |
| 1051 | Organometallic arsenobetaine                   | Electrochemical control of solid phase micro-extraction: conducting polymer coated film material applicable for preconcentration/analysis of neutral species.<br><i>Talanta (2002) 58 (4), 739-745.</i><br>Yates, B. J.; Temsamani, K. R.; Ceylan, O.; Oztemiz, S.; Gbatu, T. P.; LaRue, R. A.; Tamer, U.; Mark, H. B., Jr.* | HPLC-ICP/MS                      |
| 1073 |                                                | Helical sorbent for fast sorption and desorption in solid-phase microextraction-gas chromatographic analysis.<br><i>Analytical Chemistry (2002) 74 (21), 5501-5506.</i><br>Ciucanu, I.                                                                                                                                       | PDMS GC                          |
| 1078 |                                                | Systematic error in automated in-tube solid-phase microextraction<br><i>Journal of Chromatography A (2003) 995 (1-2), 1-10.</i><br>Raghani, Anil R.; Schultz, Kristin N.                                                                                                                                                     |                                  |
| 1097 |                                                | Flow-sampling system for solid-phase microextraction in situ.<br><i>Fenxi Huaxue (2002) 30 (11), 1394-1398.</i><br>Xu, D. Y.; Liu, M.; Liang, Y. L.; Liu, H. W.; Yin, B. Z.*                                                                                                                                                 |                                  |
| 1115 | Organotin                                      | Physico-chemical approach to study organotin sorption-desorption during solid-phase microextraction<br><i>Journal of Chromatography A (2003) 999 (1-2), 61-70.</i><br>Aguerre, Sandrine; Lespes, Gaetane; Potin-Gautier, Martine                                                                                             |                                  |
| 1124 |                                                | High extraction efficiency solid-phase microextraction fibers coated with open crown ether stationary phase using sol-gel technique<br><i>Analytica Chimica Acta (2003) 486 (1), 63-72.</i><br>Yun, Lei                                                                                                                      | Various                          |



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|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------|
| 1125 | A gas sample pre-concentration device based on solid phase microextraction (SPME) and temperature programmed desorption (TPD)<br><i>Instrumentation Science and Technology</i> (2003) 31 (2), 155-164.<br>Basile, Franco                                                                                                                          | Various       |          |
| 1136 | Ethylene oxide<br>Determination of ethylene oxide by solid-phase microextraction device with on-fiber derivatization.<br><i>Journal of Chromatography, A</i> (2003) 991 (1), 1-11.<br>Tsai, S. W.; Wu, K. K.                                                                                                                                      | Carboxen/PDMS | GC-MS    |
| 1137 | Amines<br>Modified copper wire as solid-phase microextraction fibre, selective extraction of some amines.<br><i>Chromatographia</i> (2002) 56 (9-10), 611-616.<br>Djozan, D.; Assadi, Y.; Karim-Nezhad, G.                                                                                                                                        |               | GC       |
| 1143 | Modified headspace-SPME-GC device for sampling volatile compounds in acidic medium<br><i>Journal of Separation Science</i> (2003) 26 (6-7), 624-628.<br>Araujo, W.A.; Cappelaro, E.A.; Lacerda, C.A.; Lancas, Fernando M.                                                                                                                         |               | GC-FPD   |
| 1157 | Hydroxyfullerene as a novel coating for solid-phase microextraction fibre with sol-gel technology.<br><i>Journal of Chromatography, A</i> (2002) 978 (1-2), 37-48.<br>Yu, J. X.; Dong, L.; Wu, C. Y.*; Wu, L.; Xing, J.                                                                                                                           |               | GC-ECD   |
| 1212 | Novel benzo-15-crown-5 sol-gel coating for solid-phase microextraction<br><i>Journal of Chromatography A</i> (2003) 1005 (1-2), 1-12.<br>Peng, Jiagang; Wang, Danhua; Wu, Caiying; Xing, Jun                                                                                                                                                      |               | GC       |
| 1214 | New high-performance cryofocalizer injector for in-tube solid-phase microextraction and headspace capillary gas chromatographic applications.<br><i>Journal of Chromatography, A</i> (2003) 985 (1-2), 67-78.<br>Nardi, L.                                                                                                                        |               |          |
| 1247 | Electrochemically assisted solid phase micro-extraction using L-dopa imprinted conducting polymer electrode fibers: Structural aspects.<br><i>Abstracts of Papers American Chemical Society</i> (2003) 225 (1-2), anyl 98.<br>Schmiesing, Carla S.; Brooks, Elwood E.; Galal, Ahmed; LaRue, Rebecca A.; Mark, Harry B., Jr.; Temsamani, Khalid R. |               |          |
| 1259 | Patterns in the precision of quantitative data from multicomponent gas chromatographic or gas chromatographic-mass spectrometric analysis<br><i>Journal of Chromatography, A</i> (2003) 1008 (1), 105-114.<br>Garcia, M.A.; Martinez-Castro, I.; Sanz, J.; Soria, A.C.                                                                            |               | GC-MS    |
| 1270 | Solid-phase microextraction from small volumes of sample in a glass capillary.<br><i>Journal of Chromatography, A</i> (2003) 988 (1), 25-32.<br>Zhu, P. L.; Liu, C. L.; Liu, M. C.                                                                                                                                                                |               |          |
| 1281 | Hydroxycarbonyl products of the reactions of selected diols with the OH radical<br><i>Journal of Physical Chemistry A</i> (2003) 107 (32), 6200-6205.<br>Arey, Janet; Atkinson, Roger; Bethel, Heidi L.                                                                                                                                           |               | GC-FID   |
| 1329 | A comparison of alkyl derivatization methods for speciation of mercury based on solid phase microextraction gas chromatography with furnace atomization plasma emission spectrometry detection<br><i>Journal of Analytical Atomic Spectrometry</i> (2003) 18 (8), 902-909.<br>Grinberg, P.; Campos, R. C.; Mester, Z.; Sturgeon, R. E.*           | PDMS          | GC-FAPES |
| 1332 | Spectroscopic Studies of Sorbing Fibers Using Combined Elements with Multiple Attenuated Total Internal Reflection<br><i>Optics and Spectroscopy</i> (2000) 89 (3), 413-417.<br>Bobasheva, A.S.; Enikeeva, A.G.; Malinin, I.V.; Mamedov, R.K.; Stolyarov, B.V.; Volchek, B.Z.                                                                     |               |          |
|      | Negligible depletion solid-phase microextraction with radiolabeled analytes to study free concentrations and protein binding: An example with <sup>3</sup> H estradiol                                                                                                                                                                            |               |          |

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|------|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|---------|
| 1337 |                                            | <i>Analytical Chemistry</i> (2003) 74 (23), 5993-5997.<br>Algra, Jon; Heringa, Minne B.; Hermenst, Joop L. M.; Pastor, Dolors; Vaes, Wouter H. J.                                                                                                             |                         |         |
| 1341 |                                            | Solid phase micro-extraction in a miniature ion-trap mass spectrometer.<br><i>Analyst</i> (2003) 128 (9), 1119-1122.                                                                                                                                          | PDMS                    |         |
|      |                                            | Riter, L. S.; Meurer, E. C.; Cotte-Rodriguez, I.; Eberlin, M. N.; Cooks, R. G.*                                                                                                                                                                               |                         |         |
| 1350 | Aromatic amines                            | Solid-phase microextraction of monocyclic aromatic amines using novel fibres coated with crown ether.<br><i>Journal of Chromatography, A</i> (2001) 934(1-2), 51-57.<br>Zeng, Z. R.; Qiu, W. L.; Yang, M.; Wei, X. A.; Huang, Z. F.; Li, F.                   | Various                 | GC      |
| 2664 | Nitrate esters in water                    | <b>Determination of nitrate esters in water samples: comparison of efficiency of solid-phase extraction and SPME</b><br><i>J Chromatogr A</i> 1174, #1/2, 13-19 (2007)<br>Jezova, V.; Skladal, J.; Eisner, A.; Bajero, P.; Ventura, K. Pedersen-Bjergaard, S. | 65µm PDMS/DVB           | HPLC-UV |
|      |                                            | Measurement of octanol-air partition coefficients using solid-phase microextraction ( SPME ): Application to hydroxy alkyl nitrates.                                                                                                                          |                         |         |
| 1400 | Hydroxy alkyl nitrates.                    | <i>Atmospheric Environment</i> (2001) 35(33), 5843-5854.<br>Rudich, Yinon; Shragina, Lea; Treves, Keren                                                                                                                                                       |                         |         |
|      |                                            | Application of low-temperature glassy carbon films in solid-phase microextraction                                                                                                                                                                             |                         |         |
| 1429 | Aromatic hydrocarbons                      | <i>Anal. Chem.</i> (2001) 73(24), 5841-5851.<br>Giardina, M.; Olesik, S.V.                                                                                                                                                                                    |                         | GC-FID  |
| 1430 |                                            | Atomic spectrometry update. Industrial analysis: Metals, chemicals and advanced materials<br><i>J Anal At Spectrom</i> (2001) 16(12), 1446-1469.<br>Fairman, B.; Goodall, P.; Hinds, M.W.; Nelms, S.M.; Penny, D.M.                                           |                         | ICP-MS  |
| 1435 | VOC's                                      | Application of the polysilicone fullerene coating for solid-phase microextraction in the determination of semi-volatile compounds<br><i>Journal of Chromatography A</i> (2001) 927(1-2), 121-130.<br>Han, S.; Wang, Z.; Wu, C.; Xiao, C.; Xing, J.            | PDMS                    | GC-FID  |
| 1507 | Aliphatic carboxylic acids                 | Solid-phase microextraction and on-line methylation gas chromatography for aliphatic carboxylic acids.<br><i>Analytical and Bioanalytical Chemistry</i> (2002) 373(1-2), 64-69<br>Danielson, Neil D.; Cho, Seong R.; Liu, Yaqian                              | Various fibers compared | GC-MS   |
| 1502 | VOCs from asphalt                          | Effect of masking agents on the emission of VOCs from asphalt.<br><i>Abstracts of Papers American Chemical Society</i> (2002) 223(1-2), CHED 451<br>Smith, Crystal; Hardee, John                                                                              |                         |         |
| 2213 | Impurities in caprolactam                  | <b>Determination of impurities in industrial caprolactam produced from toluene by SPME and GC-MS</b><br><i>J. Appl. Polym. Sci.</i> 100 #4, 3141-3144 (2006)<br>Li, Na; Zou, Jiankai                                                                          |                         | GC-MS   |
| 1227 | BTEX                                       | Capillary extractors for left dbI quote negligible depletion right dbI quote sampling of benzene, toluene, ethylbenzene and xylenes by in-tube solid-phase microextraction.<br><i>Journal of Chromatography, A</i> (2003) 985 (1-2), 85-91.<br>Nardi, L.      |                         |         |
| 1099 | Chlorohydrocarbon in dry cleaning fabrics. | Method for determining chlorohydrocarbon residues in dry cleaning fabrics with gas chromatography-mass spectrometry.<br><i>Sepu</i> (2002) 20 (6), 573-576.<br>Chen, J.                                                                                       | 100 um PDMS             | GC-MS   |

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|--------|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|------------------------------------|
| 1257   | Formic acid                             | Quantitation of formate by solid-phase microextraction and gas chromatography mass spectrometry utilizing a " 13 C"formate internal standard.<br><i>Journal of Chromatography, A (2003) 986 (2), 313-317.</i><br>Kim, J. K.; Shiraishi, T.; Fukusaki, E.; Kobayashi, A. * |                    | GC-EIMS                            |
| Review |                                         | Before the injection - Modern methods of sample preparation for separation techniques                                                                                                                                                                                     |                    |                                    |
| 1119   | Review article                          | <i>Journal of Chromatography A (2003) 1000 (1-2), 3-27.</i><br>Smith, Roger M.                                                                                                                                                                                            |                    |                                    |
| 1269   | Review                                  | Derivatization - solid-phase microextraction techniques and its application to analysis of organic compounds.<br><i>Fenxi Huaxue (2003) 31 (4), 496-500.</i><br>Luan, T. G.; Zhang, Z. X.                                                                                 |                    |                                    |
| 1371   | Review                                  | A field guide to instrumentation: modern sample preparation methodology. 1. Automated SPE.<br>Inside Laboratory Management (2001) 5(5), 14-18.<br>Sherma, J.; Larkin, J. D.; Larkin, F. H.                                                                                |                    |                                    |
| 2310   | volatile organic                        | <b>A new thermal desorption SPME system for hand-held ion mobility spectrometry</b><br><i>Anal. Chim. Acta 559 #2, 159-165 (2006)</i><br>Grigoriev, A.; Liu, Xinyu; Lynds, Paul; Nacson, S.; Pawliszyn, J.                                                                | headspace          | GC/MS                              |
| 2124   | BTX solvents in water                   | Thermal desorption SPME inlet for differential mobility spectrometry<br><i>Appl Spectrosc, 59, #6, 754-762</i><br>De Harrington, Peter B.; Rainsberg, Matthew R.                                                                                                          |                    | differential mobility spectrometry |
| 2125   | pesticides various matrices             | A review on SPME-HPLC analysis of pesticides<br><i>Crit. Rev. Anal. Chem., 35, #1,71-85</i><br>Aulakh, J.; Kaur, V; Malik, A.; Schmitt-Kopplin, P                                                                                                                         | in-tube            | HPLC                               |
| 2399   | PAH standards in water                  | <b>Kinetic Calibration Using Dominant Pre-equilibrium Desorption for On-Site and in Vivo Sampling by Solid-Phase Microextractio</b><br><i>Anal Chem 80. #2, 481-90 (2008 Jan 15)</i><br>Zhou, Simon Ningsun; Zhao, Wennan; Pawliszyn, Janusz                              |                    |                                    |
| 2427   | Carbamate pesticide                     | <b>On-fiber standardization technique for solid-coated SPME</b><br><i>Anal. Chem. 79, #3, 1221-1230 (2007-02-01)</i><br>Zhou, S. N. S.; Zhang, X.; Ouyang, G. F.; Es-haghi, A.; Pawliszyn, J.                                                                             | 50µm Carbowax/TPR, |                                    |
| 2398   | Pre-loaded standard on fiber            | <b>Preparation and application of in-fibre internal standardization SPME</b><br><i>Analyst (Cambridge, U. K.) 132, #3, 256-261 (2007-03-15)</i><br>Zhao, W. N.; Ouyang, G. F.; Pawliszyn, J.                                                                              | headspace          | GC                                 |
| 2183   | PAH standards in water                  | <b>Flow-through system for the generation of standard aqueous solution of polycyclic aromatic hydrocarbons</b><br><i>J. Chromatogr. A, 1105, #1-2,176-179 (2006)</i><br>Chen, Yong; Ouyang, Gangfeng; Pawliszyn, Janusz                                                   |                    |                                    |
| 2126   | Volatiles & seimivolatiles in air       | System for the generation of standard gas mixtures of volatile and semi-volatile organic compounds fo calibrations of SPME and other sampling devices<br><i>J Chromatogr A, 1025, #1, 3-9</i><br>Koziel, Jacek; Martos, Perry.; Pawliszyn, J                              | headspace          | GC                                 |
| 2191   | Sulfur compd from Maillard reaction     | <b>Origin of carbons in sulfur-containing aroma compounds from the Maillard reaction of xylose, cysteine and thiamine</b><br><i>Food Sci. Technol. 40, #8, 1309-1315 (Oct. 2007)</i><br>Cerny, C.                                                                         | headspace          | GC-MS                              |
| 2127   | Sulfur compd from Maillard reaction     | Small alpha -Mercaptoketone formation during the Maillard reaction of cysteine and C13 ribose<br><i>J Agrl Food Chem, 52, #4, 958-961</i><br>Cerny, C.; Davidek, T. *                                                                                                     | headspace          | GC-MS                              |
| 2163   | Volatiles from D-fructose and L-alanine | <b>Role of the solvent glycerol in the Maillard reaction of D-fructose and L-alanine</b><br><i>J Ag Food Chem, 54, #2, 574-577 (2006)</i><br>Cerny, Christoph; Guntz-Dubini, Renee                                                                                        | headspace 130 C    | GC-MS                              |

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|------|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|--------------|
| 2128 | Review                            | SPME based on polypyrrole films with different counter ions<br><i>Anal. Chim. Acta</i> , 520, #1-2, 257-264<br>Pawliszyn, Janusz; Wu, Jingcun                                                                                                   | polypyrrole                                   |              |
| 2129 | Review                            | Coupling of dynamic headspace sampling and SPME<br><i>Chromatographia</i> , 60, #11-12, 687-691<br>Silva, R. C.; Aguiar, P. M. S.; Augusto, F. *                                                                                                | headspace                                     | GC           |
| 2130 | organics from water               | Extraction techniques<br><i>Anal. Bioanal. Chem.</i> , 372, #1, 39-40<br>Camel, Valerie                                                                                                                                                         | comparison w/SFE, microwave, pressure solvent | GC           |
| 2188 | Methyl benzoate from mold samples | <b>Methyl benzoate as a marker for the detection of mold in indoor building materials</b><br><b><i>J. Sep. Sci.</i>, 28, #18, 2517-2525 (2005)</b><br><b>Wady, Loay; Parkinson, Don-Roger; Pawliszyn, Janusz</b>                                | headspace                                     | GC-MS        |
| 2131 | Odors from aging material         | Study on the method of SPME-GC-MS to quantify organic gas component.<br><i>Zhipu Xuebao</i> , 25, Suppl, 97-98<br>Yang, X. L.; Qin, J. Y.; Kang, B.                                                                                             |                                               | GC/MS        |
| 2132 | Review                            | Solid-phase microextraction field sampler<br><i>Anal. Chem.</i> , 76, #22, 6823-6828<br>Chen, Yong; Pawliszyn, Janusz                                                                                                                           | field sampling                                |              |
| 2133 | BTEX in water                     | Kinetics and the on-site application of standards in a solid-phase microextraction fiber<br><i>Anal. Chem.</i> , 76, #19, 5807-5815<br>Chen, Yong; Pawliszyn, Janusz                                                                            | preloaded fiber                               | GC           |
| 2134 | Review                            | Modelling SPME data from kinetic measurements in complex samples.<br><i>Analyst (Cambridge, U. K.)</i> , 129, #11, 1137-1142<br>van Eijkeren, J. C. H.; Heringa, M. B.; Hermens, J. L. M.                                                       |                                               | GC           |
| 2135 | Review                            | Modern extraction techniques.<br><i>Analytical Chemistry</i> , 76, #16, 4659-4664<br>Raynie, D. E.                                                                                                                                              |                                               | GC           |
| 2136 | Polar analytes                    | Derivatization and solid-phase microextraction<br><i>TrAC Trends Anal. Chem.</i> , 23, #8, 553-561<br>Martinez, Jairo R.; Stashenko, Elena E.                                                                                                   | review article                                | GC           |
| 2137 | Review                            | The relationship between elimination rates and partition coefficients<br><i>Chemosphere</i> , 57, #8, 745-753<br>Jager, T.; Kooi, B.W.; Kooijman, S.A.L.M.                                                                                      |                                               | GC           |
| 2138 | PAHs                              | SPME coupled to GC-MS for determining PAH-micelle partition coefficients.<br><i>Anal Chem</i> , 76, #15, 4572-4578<br>Pino, V.; Ayala, J. H.; Gonzalez, V.; Afonso, A.                                                                          |                                               | GC-MS        |
| 2139 | Aromatic standard on fiber        | Equilibrium in-fibre standardisation technique for SPME<br><i>J. Chromatogr. A</i> , 1072, #1, 13-17<br>Chen, Y.; O'Reilly, J.; Pawliszyn, Janusz; Wang, Y                                                                                      | headspace                                     | GC-FID       |
| 2140 | Review                            | Coupling spme to liquid chromatography. A review<br><i>Anal. Bioanal. Chem.</i> , 375, #1, 73-80<br>Zambonin, Carlo G.                                                                                                                          |                                               | HPLC         |
| 2141 | Peptides from tryptic digests     | Approaches for coupling SPME to nanospray<br><i>J. Chromatogr. A</i> , 1067, #1-2, 197-205<br>Dartiguenave, C; Gu, Yu; Lubda, D; Musteata, F; Pawliszyn, Janusz; Waldron, Karen; Walles, Markus                                                 | Restrictive access coated fibers              | MS-nanospray |
| 2142 | Terpene & ketones in air          | Experimental determination and calculation of distribution coefficients between air and fiber with PDMS coating for some groups of organic compounds<br><i>J. Chromatogr. A</i> , 1077, #2, 195-201<br>Isidorov, Valery A.; Vinogorova, Vera T. | PDMS fibers                                   | GC           |
| 2143 | Review of extraction techniques   | A survey on high-concentration-capability headspace sampling techniques in the analysis of flavors and fragrances.<br><i>J Chrom Sci</i> , 42, #8, 402-409<br>Bicchi, C.; Cordero, C.; Rubiolo, P.                                              | headspace                                     | GC-MS        |

## SPME Literature

| Literature No.                         | Title                                                                                                                             |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| <b>Biochemical / Food and Beverage</b> |                                                                                                                                   |
| T195869                                | Solid Phase Microextraction: Solventless Sample Preparation for Monitoring Flavor Compounds by Capillary Gas Chromatography (AYM) |
| T196901                                | Solid Phase Microextraction/Capillary GC Analysis of Drugs, Alcohols, and Organic Solvents in Biological Fluids (AYY)             |
| T396110                                | SPME Reduces Extraction Time in HPLC Analyses of Food Antioxidants and Preservatives                                              |
| T397140                                | Analysis of Fat Soluble Vitamins from Tablets, Using SPME/HPLC (BKK)                                                              |
| T398147                                | Solid Phase Microextraction of Odors in Drinking Water, for Analysis by GC-MS (BRG)                                               |
| <b>Pharmaceutical</b>                  |                                                                                                                                   |
| T394062                                | Monitor Organic Volatile Impurities (OVIs) in Pharmaceutical Products, Using Solid Phase Microextraction/Capillary GC (AQX)       |
| <b>Forensic</b>                        |                                                                                                                                   |
| T196901                                | Solid Phase Microextraction/Capillary GC Analysis of Drugs, Alcohols, and Organic Solvents in Biological Fluids (AYY)             |
| T198922                                | SPME/GC for Forensic Applications: Explosives, Fire Debris, and Drugs of Abuse (BQS)                                              |
| T394061                                | Solid Phase Microextraction/Capillary GC: Rapid, Sensitive Detection of Gasoline in Fire Debris (AQW)                             |
| T396098                                | SPME / HPLC Interface Combines Fast Sample Extraction with Efficient Analysis for Explosives (ASE)                                |
| <b>Environmental</b>                   |                                                                                                                                   |
| T394006                                | Solid Phase Microextraction of Semivolatile Compounds in US EPA Method 625 (AOH)                                                  |
| T394011                                | Solid Phase Microextraction of Volatile Compounds in US EPA Method 524.4 (AOM)                                                    |
| T394017                                | Polyacrylate Film Fiber for Solid Phase Microextraction of Polar Semivolatiles from Water (AOS)                                   |
| T394056                                | Fast Analysis of Volatile Organic Compounds by Solid Phase Microextraction/Capillary GC (AQL)                                     |
| T394058                                | Fast Screening for Chlorinated Pesticides by Solid Phase Microextraction/Capillary GC (AQN)                                       |
| T395081                                | Monitor BTEX Compounds and Fuels in Water, Using Solid Phase Microextraction and Capillary GC (ARO)                               |
| T395085                                | Solid Phase Microextraction/Capillary GC Analysis of Nitrogen-Containing Herbicides in Water (ARS)                                |
| T396094                                | Solid Phase Microextraction of Organophosphate Insecticides and Analysis by Capillary GC/MS (ASB)                                 |
| T396099                                | SPME / HPLC: A Rapid and Sensitive Analysis of Polynuclear Aromatic Hydrocarbons in Water (ASF)                                   |
| T396106                                | Analysis of Surfactants in Water by SPME/HPLC                                                                                     |
| T397121                                | Solid Phase Microextraction for HPLC Analysis of Carbamate and Urea Pesticides (BGU)                                              |
| T397141                                | Air Sampling of VOCs Using SPME for Analysis by Capillary GC (BKF)                                                                |
| T397143                                | Field Sampling for Pesticides, Using Solid Phase Microextraction/Capillary GC (BJT)                                               |
| T398147                                | Solid Phase Microextraction of Odors in Drinking Water, for Analysis by GC/MS (BRG)                                               |
| <b>Lab Hints and Selection Guides</b>  |                                                                                                                                   |
| T101928                                | SPME Troubleshooting Guide (EDV)                                                                                                  |
| T101929                                | Guide to Quantitation with SPME (EDW)                                                                                             |
| T198923                                | Solid Phase Microextraction: Theory and Optimization of Conditions (BQT)                                                          |
| T396098                                | SPME / HPLC Interface Combines Fast Sample Extraction with Efficient Analysis for Explosives (ASE)                                |
| T496037                                | Solid Phase Microextraction Sampling Stand (AWS)                                                                                  |
| T496049                                | SPME / HPLC Interface (AWV)                                                                                                       |
| T497105                                | SPME Portable Field Sampler with Carboxen/PDMS Fiber (BIZ)                                                                        |
| T497174                                | SPME Portable Field Sampler with 100 µm PDMS Fiber (BKL)                                                                          |

## Free Supelco Literature

To obtain any of the free literature listed above, to see a complete list of Supelco literature, or to see any new Supelco products, use one of the following methods. Some literature is available electronically only.

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- **Contact Our Order Processing Department**  
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Fax 800-447-3044 (US only) or 814-359-3044

## Ordering Information:

|                                                       |                                  |                            | Sampling and Analysis Mode   |                                  |                                  |                                |                |
|-------------------------------------------------------|----------------------------------|----------------------------|------------------------------|----------------------------------|----------------------------------|--------------------------------|----------------|
|                                                       | Fiber Core/<br>Assembly Type     | Hub<br>Description         | Manual Holder<br>(w/ spring) |                                  | Autosampler<br>(w/o spring)      |                                |                |
|                                                       |                                  |                            | 23 Ga*                       | 24 Ga*                           | 23 Ga*                           | 24 Ga*                         |                |
| <b>Carboxen/Polydimethylsiloxane</b>                  |                                  |                            |                              |                                  |                                  |                                |                |
| 75 µm Carboxen/PDMS                                   | Fused Silica/SS                  | Black/plain                | <b>57344-U</b>               | <b>57318</b>                     | <b>57343-U</b>                   | <b>57319</b>                   |                |
| 85 µm Carboxen/PDMS                                   | Metal alloy/Metal alloy**        | Lt. Blue/plain             |                              | <b>57334-U</b>                   |                                  | <b>57906-U</b>                 |                |
| 85 µm Carboxen/PDMS                                   | Stableflex/SS                    | Lt. Blue/plain             |                              |                                  |                                  | <b>57295-U</b>                 | <b>57335-U</b> |
| <b>Polydimethylsiloxane (PDMS)</b>                    |                                  |                            |                              |                                  |                                  |                                |                |
| 7 µm PDMS                                             | Metal alloy/Metal alloy**        | Green/plain                |                              | <b>57302</b>                     | <b>57919-U</b>                   | <b>57303</b>                   |                |
| 7 µm PDMS                                             | Fused Silica/SS                  | Green/plain                |                              |                                  | <b>57291-U</b>                   |                                |                |
| 30 µm PDMS                                            | Metal alloy/Metal alloy**        | Yellow/plain               |                              |                                  | <b>57922-U</b>                   |                                |                |
| 30 µm PDMS                                            | Fused Silica/SS                  | Yellow/plain               | <b>57308</b>                 | <b>57308</b>                     | <b>57289-U</b>                   | <b>57309</b>                   |                |
| 100 µm PDMS                                           | Metal alloy/Metal alloy**        | Red/plain                  |                              |                                  | <b>57298-U</b>                   |                                |                |
| 100 µm PDMS                                           | Fused Silica/SS                  | Red/plain                  |                              |                                  | <b>57341-U</b>                   |                                |                |
| <b>Polydimethylsiloxane/Divinylbenzene (PDMS/DVB)</b> |                                  |                            |                              |                                  |                                  |                                |                |
| 60 µm PDMS/DVB                                        | Stableflex/SS                    | Brown/notched              | <b>57346-U</b>               | <b>57310-U</b><br><b>57326-U</b> |                                  | <b>57317</b>                   |                |
| 65 µm PDMS/DVB                                        | Metal alloy/Metal alloy**        | Blue/plain                 |                              |                                  | <b>57902-U</b>                   | <b>57311</b><br><b>57327-U</b> |                |
| 65 µm PDMS/DVB                                        | Fused Silica/SS                  | Blue/plain                 |                              |                                  | <b>57345-U</b>                   |                                |                |
| 65 µm PDMS/DVB                                        | Stableflex/SS                    | Pink/plain                 |                              |                                  | <b>57293-U</b>                   |                                |                |
| <b>Polyacrylate</b>                                   |                                  |                            |                              |                                  |                                  |                                |                |
| 85 µm Polyacrylate                                    | Fused Silica/SS                  | White/plain                |                              | <b>57304</b>                     | <b>57294-U</b>                   | <b>57305</b>                   |                |
| <b>Divinylbenzene/Carboxen/Polydimethylsiloxane</b>   |                                  |                            |                              |                                  |                                  |                                |                |
| 50/30 µm DVB/CAR/PDMS                                 | Metal alloy/Metal alloy (1 cm)** | Gray/plain<br>Gray/notched | Gray/plain<br>Gray/notched   | <b>57328-U</b><br><b>57348-U</b> | <b>57298-U</b><br><b>57299-U</b> | <b>57912-U</b>                 |                |
| 50/30 µm DVB/CAR/PDMS                                 | Metal alloy/Metal alloy (2 cm)** |                            |                              |                                  |                                  | <b>57914-U</b>                 |                |
| 50/30 µm DVB/CAR/PDMS                                 | Stableflex/SS (1 cm)             |                            |                              |                                  |                                  | <b>57329-U</b>                 |                |
| 50/30 µm DVB/CAR/PDMS                                 | Stableflex/SS (2 cm)             |                            |                              |                                  |                                  |                                |                |
| <b>Polyethylene Glycol (PEG)</b>                      |                                  |                            |                              |                                  |                                  |                                |                |
| 60 µm PEG                                             | Metal alloy/SS                   | Purple/plain               | <b>57355-U</b>               |                                  | <b>57354-U</b>                   |                                |                |

\* Ga - Needle gauge.

\*\* Metal alloy fiber assemblies are provided 1/pk.

## Fiber Assortment Kits

| Name           | Description of Fiber Coatings (1 ea.)                   | Recommended Use | Manual         | Automated/HPLC<br>Std.<br>Needle | 23 Ga.<br>Needle |
|----------------|---------------------------------------------------------|-----------------|----------------|----------------------------------|------------------|
| Kit # 1        | 85 µm polyacrylate, 100 µm PDMS, 7 µm PDMS              | GC              | <b>57306</b>   | <b>57307</b>                     | <b>57285-U</b>   |
| Kit # 2        | 75 µm Carboxen/PDMS, 65 µm PDMS/DVB, 85 µm polyacrylate | GC              | <b>57320-U</b> | <b>57321-U</b>                   | <b>57286-U</b>   |
| Kit # 3        | 60 µm PDMS/DVB, 85 µm polyacrylate, 100 µm PDMS         | HPLC            | —              | <b>57323-U</b>                   | —                |
| Kit # 4        | 100 µm PDMS, 65 µm PDMS/DVB, 75 µm Carboxen/PDMS        | GC              | <b>57324-U</b> | <b>57325-U</b>                   | <b>57287-U</b>   |
| StableFlex Kit | 65 µm PDMS/DVB, 50/30 µm DVB/Carboxen/PDMS              | GC              | <b>57550-U</b> | <b>57551-U</b>                   | —                |
| Kit # 5        | 100 µm PDMS, 65 µm PDMS/DVB, 85 µm Carboxen/PDMS        | GC              | <b>57324-U</b> | <b>57325-U</b>                   | <b>57287-U</b>   |
|                | 50/30 µm DVB/Carboxen/PDMS                              | GC              |                |                                  | <b>57362-U</b>   |

## SPME Fiber Holders

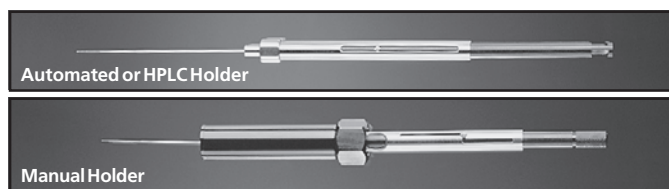
The holder protects the coated fiber, and controls exposure of the fiber during analyte adsorption and desorption. The holder is reusable indefinitely and accepts the replaceable fiber assembly. First time users must order both a holder and a fiber assembly.

### Fiber Holder for Manual Sampling

An adjustable depth guide positions the fiber for sampling and for correct placement in the heated zone of the GC injection port. The fiber can be locked in the exposed position.

### Fiber Holder for Automated Sampling or HPLC Analysis

Use this fiber holder with a Varian 8100/8200 AutoSampler or with our SPME/HPLC interface. An SPME upgrade kit is necessary for operation with the Varian AutoSampler – contact Varian Instrument Division for information concerning system requirements.



995-0125

### Fiber Holder for CTC, Gerstel, and Thermo Autosamplers<sup>▲</sup>

Use this holder with SPME fiber assemblies that are designed for automated sampling.

| Description                               | Cat. No.       |
|-------------------------------------------|----------------|
| <b>Fiber Holder</b>                       |                |
| For Manual Sampling                       | <b>57330-U</b> |
| For Varian Autosampler or HPLC Analysis   | <b>57331</b>   |
| For CTC, Gerstel, and Thermo Autosamplers | <b>57347-U</b> |

▲ Autosamplers distributed by Varian, Leap, Gerstel, and Thermo.

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