



المجلس الإسلامي الأمريكي للغذاء و التغذية

THE ISLAMIC FOOD AND NUTRITION COUNCIL OF AMERICA

IFANCA HALAL PRODUCT CERTIFICATE شهادة حلال

This is to certify that the following product(s) have been produced under the supervision of the Islamic Food and Nutrition Council of America (IFANCA). The production facility as well as component ingredients have been reviewed and approved. The product(s) are in compliance with the halal requirements under Islamic laws.

Date: **June 30, 2023**

Document #: **4739.15720.II230010**

Company Name & Address: **Sigma-Aldrich Corporation** 6000 N. Teutonia Avenue Milwaukee, Wisconsin 53209 USA

Plant Name & Address: **Aldrich Chemical Company, LLC** 5485 County Road V Sheboygan Falls, Wisconsin 53085 USA

| Product Name | Product Code | Halal-ID | Product Certificate # |
|--|--------------|----------|-----------------------|
| 1. (-)-ALPHA-PINENE 97%, FCC | W290203 | A22863 | HC-23SIZK01 |
| 2. (-)-BETA-PINENE 97%, FCC, FG | W290300 | A71020 | HC-23SIUY25 |
| 3. (-)-BORNYL ACETATE 95% | W408001 | A73150 | HC-23SIT936 |
| 4. (-)-b-PINENE NATURAL | W290315 | D12698 | HC-23SI8B27 |
| 5. (-)-CARVYL ACETATE MIXTURE OF CIS AND TRANS, 98%, FCC, FG | W225002 | B41519 | HC-23SI8428 |
| 6. (-)-ISOPULEGOL, 98% | W296236 | A94478 | HC-23SI7Q80 |
| 7. (+)-GAMMA-DECALACTONE NATURAL, 97%, FG | W236012 | B12978 | HC-23SI6B37 |
| 8. (+/-)-2-METHYLBUTYRIC ACID NATURAL, 98%, FG | W269514 | A75140 | HC-23SIPS53 |
| 9. (+/-)-4-METHYLOCTANOIC ACID 98%, FG | W357502 | B64707 | HC-23SIBP94 |
| 10. (+/-)-CITRONELLAL | W230707 | C42588 | HC-23SI7X04 |
| 11. (+/-)-TETRAHYDROFURFURYL PROPIONATE 96% | W305805 | A50087 | HC-23SIJ780 |

Muhammad Munir Chaudry

Muhammad Munir Chaudry, Ph.D.
President



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| 12. (±)-CITRONELLAL, NATURAL | W230715 | C49385 | HC-23SIE512 |
| 13. (1R)-(-)-MYRTENAL 97% | W339504 | A33489 | HC-23SIF974 |
| 14. (1R)-(+)-ALPHA-PINENE 97% | W290238 | B15454 | HC-23SIWH56 |
| 15. (1S)-(-)-VERBENONE 93% | W506907 | A28257 | HC-23SIZN35 |
| 16. (METHYLTHIO)METHYLPYRAZINE MIXTURE OF ISOMERS, 98% | W320803 | B12828 | HC-23SIOH35 |
| 17. (R)-(+)-LIMONENE | W263303 | C56642 | HC-23SIFM98 |
| 18. (S)-(-)-BETA-CITRONELLOL | W230920 | C29138 | HC-23SIBF62 |
| 19. (S)-(-)-PERILLALDEHYDE 92% | W355704 | A93532 | HC-23SI7W75 |
| 20. (S)-(-)-PERILLYL ALCOHOL 95% | W266418 | A88083 | HC-23SIMU40 |
| 21. 1-(2-THIENYL)-1-PROPANONE, 97%, FG | W559001 | B20753 | HC-23SIYF93 |
| 22. 1,2-DIMETHOXYBENZENE | W379905 | C29771 | HC-23SI5O51 |

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| 23. 1,3,5-UNDECATRIENE, MIXTURE OF 1,3(E),5(Z) AND 1,3(E),5(E) ISOMERS 70% | W379506 | A86821 | HC-23SIMD35 |
| 24. 1,3-DIMETHOXYBENZENE 98%, FG | W238503 | B32256 | HC-23SIFE68 |
| 25. 1,3-DIPHENYL-2-PROPANONE 98%, FG | W239704 | A90490 | HC-23SI6T54 |
| 26. 1,3-PROPANEDITHIOL 96% | W358800 | A21811 | HC-23SI1T95 |
| 27. 1,4-BUTANEDITHIOL | W520802 | C37191 | HC-23SI4J47 |
| 28. 1,4-CINEOLE 85% | W365807 | A55496 | HC-23SIUK11 |
| 29. 1,4-CINEOLE, =95%, FG | W365820 | A53755 | HC-23SIVL97 |
| 30. 1,4-DIMETHOXYBENZENE | W238600 | C39740 | HC-23SI3A05 |
| 31. 1,6-HEXANEDITHIOL 97%, FG | W349518 | A58733 | HC-23SIVA31 |
| 32. 10-Undecen-1-ol | W562125 | C29024 | HC-23SI6X55 |
| 33. 10-UNDECENAL 95%, FG, STABILIZED | W309508 | A26084 | HC-23SIXK14 |

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| 34. 1-DECANOL 98%, FCC, FG | W236500 | A75618 | HC-23SIPW54 |
| 35. 1-FURFURYLPIRROLE | W328400 | C29581 | HC-23SIKB23 |
| 36. 1-FURFURYLPIRROLE 98%, FG | W328405 | A74325 | HC-23SIQF47 |
| 37. 1-HEXEN-3-OL 98%, STABILIZED, FG | W360805 | B71790 | HC-23SI8J49 |
| 38. 1-METHYLNAPHTHALENE 95%, FG | W319309 | A67243 | HC-23SIGS93 |
| 39. 1-METHYLPIPERIDINE 98% | W510211 | B85066 | HC-23SIHD40 |
| 40. 1-OCTANOL 98%, FCC, FG | W280003 | B83624 | HC-23SI5827 |
| 41. 1-OCTEN-3-OL | W280523 | C35043 | HC-23SI1592 |
| 42. 1-OCTEN-3-OL 98%, FCC, FG | W280518 | B86284 | HC-23SIYL50 |
| 43. 1-OCTEN-3-ONE 50 WT. % IN 1-OCTEN-3-OL, FG | W351504 | B81043 | HC-23SIE510 |
| 44. 1-OCTEN-3-YL ACETATE, =97%, FCC, FG | W358207 | A47062 | HC-23SI8G61 |
| 45. 1-OCTEN-3-YL BUTYRATE | W361208 | C56644 | HC-23SIVJ69 |

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| 46. 1-PENTEN-3-OL 98%, FG | W358401 | B45151 | HC-23SIBR58 |
| 47. 1-PHENYL-1,2-PROPANEDIONE 98%, FG | W322601 | A60886 | HC-23SIPL46 |
| 48. 1-PROPANETHIOL, NATURAL (US), 98.0%, FG | W352117 | A55463 | HC-23SIVK09 |
| 49. 1-PROPANOL, NATURAL | W292826 | C45649 | HC-23SIDI28 |
| 50. 2-(1-METHYLPROPYL)THIAZOLE 98% | W337218 | B37190 | HC-23SI7902 |
| 51. 2-(METHYLTHIO)PYRAZINE, =98%, FG | W323130 | B82454 | HC-23SIVK18 |
| 52. 2,2'-(DITHIODIMETHYLENE)DIFURAN 96%, NATURAL, FG | W314620 | C87827 | HC-23SIDK53 |
| 53. 2,2-(DITHIODIMETHYLENE)DIFURAN 95%, FG | W314609 | A59841 | HC-23SIOD35 |
| 54. 2,2-(THIODIMETHYLENE)DIFURAN 98%, FG | W323802 | B86955 | HC-23SICR56 |
| 55. 2,3,5,6-TETRAMETHYLPYRAZINE 98%, FG | W323705 | B42043 | HC-23SI8Z31 |
| 56. 2,3,5,6-TETRAMETHYLPYRAZINE NATURAL, 98%, FG | W323713 | B65499 | HC-23SIG703 |
| 57. 2,3,5-TRIMETHYLPYRAZINE 99%, FCC, FG | W324418 | A40398 | HC-23SIDD21 |

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| 58. 2,3,5-TRIMETHYLPYRAZINE NATURAL, 95%, FG | W324426 | B40694 | HC-23SI8M22 |
| 59. 2,3-BUTANEDITHIOL 99%, FG | W347701 | B45527 | HC-23SIBR60 |
| 60. 2,3-DIETHYL-5-METHYLPYRAZINE | W333603 | C39750 | HC-23SIK888 |
| 61. 2,3-DIETHYLPYRAZINE | W313602 | C51538 | HC-23SI2U52 |
| 62. 2,3-DIMETHYL-5-(2-METHYLBUTYL)PYRAZINE | W530532 | C42603 | HC-23SI2806 |
| 63. 2,3-DIMETHYLPYRAZINE 95%, FCC, FG | W327107 | B48775 | HC-23SINP80 |
| 64. 2,3-HEPTANEDIONE 97%, FG | W254304 | B82696 | HC-23SI5922 |
| 65. 2,3-HEXANEDIONE 95%, FG | W255807 | B75248 | HC-23SI6M71 |
| 66. 2,3-HEXANEDIONE, NATURAL | W255801 | C41911 | HC-23SIDR52 |
| 67. 2,3-PENTANEDIONE 96%, FCC, FG | W284106 | A10792 | HC-23SI4C16 |
| 68. 2,3-PENTANEDIONE NATURAL, 96%, FG | W284114 | B27079 | HC-23SIEH43 |
| 69. 2,4,5-TRIMETHYLTHIAZOLE 98%, FG | W332518 | B73600 | HC-23SI3Y59 |

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| 70. 2,4-DIHYDROXYBENZOIC ACID 97% | W379808 | B18532 | HC-23SIX772 |
| 71. 2,4-DIMETHYL-5-ACETYLTHIAZOLE 97% | W326704 | B37306 | HC-23SI7503 |
| 72. 2,4-DODECADIENAL NATURAL (US) | W367000 | D23339 | HC-23SI8C75 |
| 73. 2,4-XYLENOL | W506206 | C56647 | HC-23SIRS71 |
| 74. 2,5-DIHYDROXY-1,4-DITHIANE, MIXTURE OF ISOMERS | W382604 | C49392 | HC-23SIP317 |
| 75. 2,5-DIMETHYL-2,5-DIHYDROXY-1,4-DITHIANE | W345001 | C49391 | HC-23SI5M32 |
| 76. 2,5-DIMETHYL-3-OXO-(2H)-FUR-4-YL BUTYRATE NATURAL | W397025 | D23342 | HC-23SIZD22 |
| 77. 2,5-DIMETHYL-4-METHOXY-3(2H)-FURANONE 97%, FG | W366404 | A19123 | HC-23SIAD75 |
| 78. 2,5-DIMETHYL-4-METHOXY-3(2H)-FURANONE, NATURAL, | W366412 | B25950 | HC-23SIC533 |
| 79. 2,5-DIMETHYLPYRAZINE 98%, FCC, FG | W327204 | A93107 | HC-23SI7873 |
| 80. 2,5-DIMETHYLTHIOPHENE 98% | W515507 | A55841 | HC-23SIUI14 |
| 81. 2,5-XYLENOL 99%, FG | W359505 | B45216 | HC-23SIBM59 |

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| 82. 2,6-DIMETHYLPYRAZIN, NATURAL | W327312 | C10273 | HC-23SITO82 |
| 83. 2,6,6-TRIMETHYL-1-CYCLOHEXENE-1-ACETALDEHYDE, 75% | W347418 | B63306 | HC-23SI3C82 |
| 84. 2,6-DIMETHOXYPHENOL 98%, FG | W313718 | A36534 | HC-23SITF93 |
| 85. 2,6-DIMETHOXYPHENOL, NATURAL, =96%, FG | W313726 | A69900 | HC-23SIJV19 |
| 86. 2,6-DIMETHYL-5-HEPTENAL FCC | W238902 | B14462 | HC-23SI5T46 |
| 87. 2,6-DIMETHYL-5-HEPTENAL, NATURAL MIXTURE OF ISOMERS | W238920 | C20181 | HC-23SIVD70 |
| 88. 2,6-DIMETHYL-5-HEPTENOL NATURAL | W478955 | D23356 | HC-23SI8929 |
| 89. 2,6-DIMETHYLBENZENETHIOL 95%, FG | W366609 | B58842 | HC-23SII451 |
| 90. 2,6-DIMETHYLPYRAZINE 98%, FG | W327301 | A48748 | HC-23SIHC72 |
| 91. 2,6-DIMETHYLPYRIDINE 99% | W354007 | B84767 | HC-23SI7Q38 |
| 92. 2,6-XYLENOL | W324906 | C53467 | HC-23SI4J46 |

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| 93. 2-AMINOACETOPHENONE 98% | W390607 | B62967 | HC-23SI3E79 |
| 94. 2-ACETYL-1-METHYLPYRROLE 98% | W318418 | B70685 | HC-23SI2436 |
| 95. 2-ACETYL-2-THIAZOLINE | W381718 | C37189 | HC-23SI8Z64 |
| 96. 2-ACETYL-3,5(6)-DIMETHYLPYRAZINE, MIXTURE OF ISOMERS 98% | W332704 | A34512 | HC-23SIFN80 |
| 97. 2-ACETYL-3,5(6)-DIMETHYLPYRAZINE, MIXTURE OF ISOMERS, =98%, FG | W332700 | B73495 | HC-23SI8556 |
| 98. 2-ACETYL-3-ETHYLPYRAZINE 98%, FG | W325007 | A41326 | HC-23SIDX24 |
| 99. 2-ACETYL-3-METHYLPYRAZINE 98%, FG | W396400 | A76622 | HC-23SIR765 |
| 100. 2-ACETYL-5-METHYLFURAN 98% | W360902 | B34338 | HC-23SIGY87 |
| 101. 2-ACETYLPYRAZINE 99%, FCC, FG | W312606 | A50484 | HC-23SIJC82 |
| 102. 2-ACETYLPYRAZINE, =98%, NATURAL, FG | W312612 | B38718 | HC-23SI7K11 |
| 103. 2-ACETYLPYRIDINE 99%, FG | W325104 | A11107 | HC-23SI3V18 |

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| 104. 2-ACETYLTHIAZOLE 99%, FG | W332801 | B77857 | HC-23SI3U89 |
| 105. 2-ACETYLTHIOPHENE 98%, FG | W503509 | B18491 | HC-23SIXE71 |
| 106. 2-BUTANONE 99.5%, FCC, FG | W217018 | A13055 | HC-23SI4333 |
| 107. 2-BUTANONE, NATURAL, =99%, FG | W217012 | A27689 | HC-23SIZ529 |
| 108. 2-BUTYL-2-OCTENAL NATURAL (US) | W461655 | D23350 | HC-23SIR235 |
| 109. 2-ETHOXYTHIAZOLE 99% | W334006 | A49784 | HC-23SIHV77 |
| 110. 2-ETHYL-1-HEXANOL 99%, FG | W315109 | B19988 | HC-23SIWB86 |
| 111. 2-ETHYL-2-HEXENAL MIXTURE OF ISOMERS, NATURAL (US) | W461216 | D23349 | HC-23SI9F50 |
| 112. 2-ETHYL-3(5 OR 6)-DIMETHYLPYRAZINE, MIXTURE OF ISOMERS 95%, FG | W314900 | B86821 | HC-23SIYT54 |
| 113. 2-ETHYL-3-METHOXYPYRAZINE | W514403 | C47745 | HC-23SI1M21 |
| 114. 2-ETHYL-3-METHYLPYRAZINE 98%, FCC, FG | W315508 | A96299 | HC-23SIJW94 |

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| 115. 2-ETHYL-4-METHYL-1,3-DITHIOLANE | W487012 | D23358 | HC-23SIIY46 |
| 116. 2-ETHYL-4-METHYLTHIAZOLE 98%, FG | W368008 | A49565 | HC-23SIH376 |
| 117. 2-ETHYLBENZENETHIOL | W334502 | C36288 | HC-23SI6T56 |
| 118. 2-ETHYLBUTYRIC ACID | W242918 | C39741 | HC-23SINP78 |
| 119. 2-ETHYLFENCHOL 97%, FCC | W349100 | B46801 | HC-23SIN871 |
| 120. 2-ETHYLFURAN 99% | W367303 | A12155 | HC-23SI2V23 |
| 121. 2-ETHYLHEXYL ACETATE 99% | W514705 | B17664 | HC-23SIVS67 |
| 122. 2-ETHYLHEXYL SALICYLATE 99% | W514500 | B56275 | HC-23SIRU36 |
| 123. 2-ETHYLPYRAZINE 98%, FG | W328103 | A88364 | HC-23SIMJ42 |
| 124. 2-ETHYLPYRIDINE | W800025 | C10279 | HC-23SI4E45 |
| 125. 2-FURANMETHANETHIOL FORMATE 97%, FG | W315818 | B51565 | HC-23SIOV04 |
| 126. 2-FURYL METHYL KETONE 99%, FG | W316318 | B59323 | HC-23SIH952 |

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Date: June 30, 2023

Document #: 4739.15720.II230010

Company Name & Address: **Sigma-Aldrich Corporation** 6000 N. Teutonia Avenue Milwaukee, Wisconsin 53209 USA

Plant Name & Address: **Aldrich Chemical Company, LLC** 5485 County Road V Sheboygan Falls, Wisconsin 53085 USA

| Product Name | Product Code | Halal-ID | Product Certificate # |
|---|--------------|----------|-----------------------|
| 127. 2-FURYL METHYL KETONE, NATURAL (US) | W316315 | C29501 | HC-23SI7M67 |
| 128. 2-HEPTANOL =97% | W328804 | C29585 | HC-23SI AK64 |
| 129. 2-HEPTANOL 97% | W328800 | B23068 | HC-23SI1P10 |
| 130. 2-HEPTANONE 98%, FCC, FG | W254401 | A70465 | HC-23SIHY22 |
| 131. 2-HEPTANONE, NATURAL | W254430 | C20187 | HC-23SIUB04 |
| 132. 2-HEXYL-2-DECENAL MIXTURE OF CIS AND TRANS | W478601 | D23354 | HC-23SIF276 |
| 133. 2-HEXYL-2-DECENAL NATURAL (US), MIXTURE OF CIS AND TRANS, ST | W478620 | D23355 | HC-23SIJK61 |
| 134. 2-ISOBUTYL-3-METHOXYPIRAZINE 99%, FG | W313203 | A45006 | HC-23SI4L44 |
| 135. 2-ISOBUTYL-3-METHYLPYRAZINE 99%, FG | W313300 | A71869 | HC-23SITL32 |
| 136. 2-ISOBUTYLTHIAZOLE 99%, FG | W313408 | B53627 | HC-23SIP118 |
| 137. 2-ISOPROPYL-4-METHYLTHIAZOLE 98%, FG | W355518 | B72748 | HC-23SIBG51 |

Muhammad Munir Chaudry

Muhammad Munir Chaudry, Ph.D.
President



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|---|--------------|----------|-----------------------|
| 138. 2-ISOPROPYL-5-METHYL-2-HEXENAL 95%, FG | W340618 | B68527 | HC-23SI8Z20 |
| 139. 2-Isopropyl-N,2,3-trimethylbutyramide | W380423 | C29811 | HC-23SIPT19 |
| 140. 2-ISOPROPYLPHENOL | W346101 | C44273 | HC-23SI8762 |
| 141. 2-MERCAPTO-3-BUTANOL MIXTURE OF ISOMERS, 97%, FG | W350206 | B24057 | HC-23SIZO20 |
| 142. 2-MERCAPTOPROPIONIC ACID 95% | W318000 | A34205 | HC-23SIG977 |
| 143. 2-METHOXY-3-(1-METHYLPROPYL)PYRAZINE 98%, FG | W343307 | B66331 | HC-23SI4U06 |
| 144. 2-METHOXY-3(5 OR 6)-ISOPROPYLPYRAZINE | W335809 | C29623 | HC-23SI9X43 |
| 145. 2-METHOXY-3(5 OR 6)-ISOPROPYLPYRAZINE 98% | W335800 | A12615 | HC-23SI3Z28 |
| 146. 2-METHOXY-3-METHYLPYRAZINE 99%, FCC, FG | W318302 | B20615 | HC-23SIY091 |
| 147. 2-METHOXY-4-METHYLPHENOL 98%, FG | W267104 | B41333 | HC-23SI8K25 |
| 148. 2-Methoxy-4-Methylphenol, Natural | W267112 | C41912 | HC-23SI8K23 |
| 149. 2-METHOXY-4-VINYLPHENOL 98% | W267511 | B83657 | HC-23SIFH29 |

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|---|--------------|----------|-----------------------|
| 150. 2-METHOXYCINNAMALDEHYDE, NATURAL | W318101 | C36287 | HC-23SIQL08 |
| 151. 2-METHOXYPYRAZINE 99%, FCC, FG | W330205 | A49297 | HC-23SIHS75 |
| 152. 2-METHOXYTHIOPHENOL 97%, FG | W415901 | A23042 | HC-23SI3C02 |
| 153. 2-METHYL-1-BUTANETHIOL | W330302 | C44270 | HC-23SIS125 |
| 154. 2-METHYL-1-BUTANOL 99%, FG | W399809 | A95844 | HC-23SIJZ92 |
| 155. 2-METHYL-1-BUTANOL NATURAL, 99%, FG | W399817 | A61564 | HC-23SIOF49 |
| 156. 2-METHYL-1-PROPANETHIOL 95%, FG | W387401 | B76710 | HC-23SICE82 |
| 157. 2-METHYL-2-PENTENAL 97%, FG | W319406 | A95368 | HC-23SIJ888 |
| 158. 2-METHYL-3(5 OR 6)-ETHOXYPYRAZINE MIXTURE OF ISOMERS, 99% | W356905 | B87037 | HC-23SICF58 |
| 159. 2-METHYL-3-(P-ISOPROPYLPHENYL)PROPIONALDEHYDE 95%, FCC, FG | W274305 | A77909 | HC-23SIT579 |
| 160. 2-METHYL-3-FURANTHIOL 95%, FG | W318809 | B38394 | HC-23SI7M09 |

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|--|--------------|----------|-----------------------|
| 161. 2-METHYL-3-FURANTHIOL ACETATE, 98%, FG | W397301 | B23066 | HC-23SI1W09 |
| 162. 2-METHYL-3-METHYLTHIOFURAN 98%, FG | W394904 | A63206 | HC-23SIGH67 |
| 163. 2-METHYL-3-TETRAHYDROFURANTHIOL MIXTURE OF CIS AND TRANS, 97%, FG | W378704 | A67853 | HC-23SIFB01 |
| 164. 2-METHYL-4-PENTENOIC ACID 98%, FG | W351105 | B32706 | HC-23SIF873 |
| 165. 2-METHYL-4-PROPYL-1,3-OXATHIANE, MIXTURE OF CIS AND TRANS 98%, FG | W357804 | B57071 | HC-23SII842 |
| 166. 2-METHYLANISOLE | W268003 | C39746 | HC-23SIW687 |
| 167. 2-METHYLBUTYL 2-METHYLBUTYRATE 95%, FG | W335908 | B32536 | HC-23SIF372 |
| 168. 2-METHYLBUTYL ACETATE 99%, FG | W364401 | B33601 | HC-23SIHJ81 |
| 169. 2-METHYLBUTYL ACETATE NATURAL, FG | W364428 | B56841 | HC-23SIIIE41 |
| 170. 2-METHYLBUTYL ISOVALERATE 98%, FCC, FG | W350605 | A68101 | HC-23SIJA03 |
| 171. 2-METHYLBUTYL ISOVALERATE NATURAL, 98%, FCC, FG | W350613 | B25411 | HC-23SICG31 |

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| 172. 2-METHYLBUTYRALDEHYDE 95%, FG | W269107 | A57208 | HC-23SIWI21 |
| 173. 2-METHYLBUTYRIC ACID 98%, FG | W269506 | A64485 | HC-23SI8573 |
| 174. 2-METHYLFURAN 98%, STABILIZED WITH BHT | W417901 | A60349 | HC-23SIO240 |
| 175. 2-METHYLFURAN, =99%, FG | W417920 | A96434 | HC-23SIIN98 |
| 176. 2-METHYLHEPTANOIC ACID 97% | W270601 | A14556 | HC-23SI4Q43 |
| 177. 2-METHYLHEXANOIC ACID 99%, FG | W319104 | B43142 | HC-23SIAX41 |
| 178. 2-METHYLPENTANOIC ACID 98%, FCC, FG | W275409 | A21136 | HC-23SI1E90 |
| 179. 2-METHYLPYRAZINE 99%, FCC, FG | W330906 | A22559 | HC-23SIZ599 |
| 180. 2-METHYLTETRAHYDROFURAN-3-ONE 97%, FG | W337307 | A81039 | HC-23SIUK97 |
| 181. 2-METHYLTETRAHYDROFURAN-3-ONE, NATURAL, =97%, FG | W337330 | A34674 | HC-23SIF582 |
| 182. 2-NONANONE NATURAL, 97%, FCC, FG | W278513 | B36831 | HC-23SI7G98 |

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| 183. 2-NONANONE, FG | W278505 | C87826 | HC-23SIGP90 |
| 184. 2-OCTANOL 97% | W280100 | A64637 | HC-23SI8V77 |
| 185. 2-OCTANONE | W280208 | C39749 | HC-23SIU494 |
| 186. 2-OCTANONE, NATURAL | W280220 | C20189 | HC-23SIDB56 |
| 187. 2-OCTYL-2-DODECENAL MIXTURE OF CIS AND TRANS | W478515 | D23353 | HC-23SI5E29 |
| 188. 2-PENTADECANONE 98%, FG | W372404 | B70945 | HC-23SI4O39 |
| 189. 2-PENTANOL 98%, FG | W331600 | B11229 | HC-23SIMD28 |
| 190. 2-PENTANONE | W284203 | C42593 | HC-23SI1A15 |
| 191. 2-PENTYLFURAN 98%, FG | W331708 | B67187 | HC-23SI8R13 |
| 192. 2-PHENYL-1-PROPANOL | W273201 | C39747 | HC-23SI3P77 |
| 193. 2-PHENYL-2-BUTENAL, MIXTURE OF CIS AND TRANS 97%, FG | W322407 | A97023 | HC-23SIL204 |

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|--|--------------|----------|-----------------------|
| 194. 2-PHENYL-2-BUTENAL, MIXTURE OF CIS AND TRANS, 97%, FG | W322400 | B61433 | HC-23SIJ767 |
| 195. 2-PHENYLETHYL ISOTHIOCYANATE 99%, FG | W401404 | A24941 | HC-23SIYD09 |
| 196. 2-PHENYLPROPIONALDEHYDE 95%, FCC, FG | W288608 | A57918 | HC-23SIW925 |
| 197. 2-PROPANETHIOL NATURAL (US) | W389755 | D23341 | HC-23SIHX54 |
| 198. 2-PROPYLPYRAZINE | W396103 | C29792 | HC-23SI6B50 |
| 199. 2-THIENYL DISULFIDE 95% | W332305 | A34305 | HC-23SIG278 |
| 200. 2-THIOPHENETHIOL 90% | W306207 | A42146 | HC-23SI5Q33 |
| 201. 2-TRIDECANONE 96%, FG | W338818 | B20816 | HC-23SIYW94 |
| 202. 2-TRIDECANONE NATURAL | W338820 | D12706 | HC-23SIGY89 |
| 203. 2-UNDECANOL | W324604 | C49389 | HC-23SIA242 |
| 204. 2-UNDECANONE 98%, FCC, FG | W309303 | B64325 | HC-23SIKB91 |

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|--|--------------|----------|-----------------------|
| 205. 2-UNDECANONE NATURAL | W309311 | D12699 | HC-23SI5M30 |
| 206. 2-Undecen-1-Ol | W406801 | A99884 | HC-23SIM320 |
| 207. 3-(METHYLTHIO)-1-HEXANOL | W343803 | C44272 | HC-23SIAT77 |
| 208. 3-(METHYLTHIO)-1-HEXANOL NATURAL | W343847 | D23337 | HC-23SIO560 |
| 209. 3-(METHYLTHIO)-1-PROPANOL 98%, FG | W341509 | A16595 | HC-23SI9Z56 |
| 210. 3-(METHYLTHIO)BUTANAL 96%, FG | W337404 | B35350 | HC-23SIGN93 |
| 211. 3-(METHYLTHIO)HEXYL ACETATE 97%, FG | W378917 | B23379 | HC-23SI1J13 |
| 212. 3-(METHYLTHIO)PROPYL ISOTHIOCYANATE 98%, FG | W331201 | A32483 | HC-23SIE869 |
| 213. 3,4-DIMETHYL-1,2-CYCLOPENTADIONE 97% | W326801 | B59475 | HC-23SIHC55 |
| 214. 3,4-HEXANEDIONE 90% | W316814 | A55482 | HC-23SIUP10 |
| 215. 3,4-XYLENOL | W359602 | C51542 | HC-23SIQ783 |
| 216. 3,5,5-TRIMETHYLHEXANAL 95%, FG | W352403 | A12153 | HC-23SI3622 |

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|--|--------------|----------|-----------------------|
| 217. 3,5-DIMETHYL-1,2-CYCLOPENTADIONE 97% | W326909 | B87368 | HC-23SIB262 |
| 218. 3,7-DIMETHYL-6-OCTENOIC ACID, NATURAL | W314220 | C56643 | HC-23SIQ586 |
| 219. 3-ACETYL-2,5-DIMETHYLFURAN 99%, FCC, FG | W339105 | A19960 | HC-23SIAE82 |
| 220. 3-ACETYL-2,5-DIMETHYLTHIOPHENE, 99% | W352705 | A91560 | HC-23SI5B63 |
| 221. 3-ACETILPYRIDINE 98%, FG | W342408 | A27288 | HC-23SIZR23 |
| 222. 3-BUTYLIDENEPHTHALIDE MIXTURE OF CIS AND TRANS ISOMERS, 96%, FG | W333301 | B67772 | HC-23SI5M17 |
| 223. 3-DECANONE 97% | W396605 | A12275 | HC-23SI3N25 |
| 224. 3-DECEN-2-ONE PREDOMINANTLY TRANS, 97% | W353205 | A65269 | HC-23SIGW82 |
| 225. 3-ETHYL-2-HYDROXY-2-CYCLOPENTEN-1-ONE SOLUTION 50 WT. % IN PROPYLENE GLYCOL | W315214 | B60245 | HC-23SIKR58 |
| 226. 3-ETHYL-2-HYDROXY-2-CYCLOPENTEN-1-ONE, 97% | W315206 | B63717 | HC-23SIDB87 |
| 227. 3-ETHILPYRIDINE 98%, FG | W339407 | B78025 | HC-23SIYZ91 |

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|---|--------------|----------|-----------------------|
| 228. 3-HEPTANONE 96% | W254509 | A58782 | HC-23SIVA32 |
| 229. 3-HEPYL ACETATE, NATURAL | W398000 | B92007 | HC-23SI2J43 |
| 230. 3-MERCAPTO-2-BUTANONE 80% | W329800 | A86367 | HC-23SIMP31 |
| 231. 3-MERCAPTOHEXYL ACETATE, =98%, FG | W385101 | A55178 | HC-23SIV506 |
| 232. 3-METHYL-1,2-CYCLOHEXANEDIONE 98%, FG | W330507 | B67604 | HC-23SI1316 |
| 233. 3-METHYL-1-PENTANOL 99%, FG | W376205 | B16258 | HC-23SIVB60 |
| 234. 3-METHYL-2-BUTANETHIOL 98% | W330418 | A63580 | HC-23SIGM69 |
| 235. 3-Methyl-2-Butenal | W364620 | B43996 | HC-23SI9F48 |
| 236. 3-METHYL-2-CYCLOHEXENONE 98% | W336009 | A56162 | HC-23SIX118 |
| 237. 3-METHYLBUTYL 2-METHYLBUTANOATE 98% | W350508 | B83812 | HC-23SI5231 |
| 238. 3-METHYLBUTYL 2-METHYLBUTANOATE NATURAL, 70% 3-METHYLBUTYL 2-METHYLBUTANOATE BASIS | W350516 | A21185 | HC-23SI1Z91 |

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| 239. 3-Methylpentanoic acid =98%, FG | W343706 | C14972 | HC-23SIB307 |
| 240. 3-METHYLPENTANOIC ACID 98%, FG | W343706 | A86485 | HC-23SIMK32 |
| 241. 3-NONANONE, 96%, FG | W344001 | B43695 | HC-23SI9V46 |
| 242. 3-OCTANOL 97%, FCC, FG | W358118 | B64741 | HC-23SIBB96 |
| 243. 3-OCTANOL NATURAL, 97%, FCC, FG | W358126 | A82290 | HC-23SIUI03 |
| 244. 3-OCTANONE 98%, FG | W280305 | B10421 | HC-23SIMV23 |
| 245. 3-OCTYL ACETATE 98%, FCC, FG | W358304 | B53781 | HC-23SIPP20 |
| 246. 3-OCTYL ACETATE, NATURAL (US) | W358315 | C45653 | HC-23SIR188 |
| 247. 3-PENTEN-2-ONE | W341720 | C29651 | HC-23SINM63 |
| 248. 3-PENTEN-2-ONE 70% | W341703 | A38242 | HC-23SIPI08 |
| 249. 3-PHENYLPROPIONIC ACID 99%, FG | W288918 | B25199 | HC-23SIDE27 |
| 250. 3-PHENYLPROPYL ISOBUTYRATE 98%, FG | W289302 | B64394 | HC-23SICZ93 |

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| 251. 3-PROPYLIDENEPHTHALIDE MIXTURE OF CIS AND TRANS ISOMERS, 96%, FG | W295205 | A48552 | HC-23SIHC70 |
| 252. 4-(4-HYDROXYPHENYL)-2-BUTANONE | W258806 | C45647 | HC-23SI3A57 |
| 253. 4-(4-HYDROXYPHENYL)-2-BUTANONE NATURAL, 98%, FCC, FG | W258814 | A10777 | HC-23SI7E15 |
| 254. 4-(4-METHOXYPHENYL)-2-BUTANONE 98%, FCC, FG | W267201 | A61469 | HC-23SIPM48 |
| 255. 4-(P-ACETOXYPHENYL)-2-BUTANONE 96% | W365203 | A38054 | HC-23SIMIT07 |
| 256. 4,5,6,7-TETRAHYDRO-3,6-DIMETHYLBENZOFURAN 95% | W323500 | A57066 | HC-23SIWP20 |
| 257. 4,5-DIHYDRO-3(2H)-THIOPHENONE 98%, FG | W326607 | A75633 | HC-23SIPX55 |
| 258. 4,5-DIMETHYL-3-HYDROXY-2,5-DIHYDROFURAN-2-ONE 97%, FG | W363405 | A91784 | HC-23SI7T66 |
| 259. 4,5-DIMETHYL-3-HYDROXY-2,5-DIHYDROFURAN-2-ONE SOLUTION 10 WT. % IN PROPYLENE GLYCOL | W363413 | B60888 | HC-23SIJU62 |

Muhammad Munir Chaudry

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Date: **June 30, 2023**

Document #: **4739.15720.II230010**

Company Name & Address: **Sigma-Aldrich Corporation** 6000 N. Teutonia Avenue Milwaukee, Wisconsin 53209 USA

Plant Name & Address: **Aldrich Chemical Company, LLC** 5485 County Road V Sheboygan Falls, Wisconsin 53085 USA

| Product Name | Product Code | Halal-ID | Product Certificate # |
|---|--------------|----------|-----------------------|
| 260. 4,5-DIMETHYL-3-HYDROXY-2,5-DIHYDROFURAN-2-ONE SOLUTION 3 WT. % IN PROPYLENE GLYCOL | W363421 | B73980 | HC-23SI3N63 |
| 261. 4-METHYLACETOPHENONE 95%, FCC, FG | W267708 | B41438 | HC-23SI8G26 |
| 262. 4-ACETOXY-2,5-DIMETHYL-3(2H)FURANONE 95%, FG | W379700 | A86680 | HC-23SIMI34 |
| 263. 4-ACETOXY-2,5-DIMETHYL-3(2H)FURANONE, NATURAL (US) | W379715 | C53469 | HC-23SIOF36 |
| 264. 4-ALLYL-2,6-DIMETHOXYPHENOL | W365505 | C29017 | HC-23SI1G87 |
| 265. 4-ALLYLANISOLE | W241105 | C56640 | HC-23SIS689 |
| 266. 4-CARVOMENTHENOL | W224820 | C35047 | HC-23SI8W78 |
| 267. 4-CARVOMENTHENOL 92%, FCC | W224847 | A37234 | HC-23SIEY01 |
| 268. 4-ETHYLGUAIACOL 98%, FCC, FG | W243604 | B28989 | HC-23SIEI51 |
| 269. 4-ETHYLGUAIACOL, NATURAL | W243615 | C36281 | HC-23SIO398 |
| 270. 4-ETHYLOCTANOIC ACID 98%, FG | W380008 | A41478 | HC-23SI6S28 |

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|--|--------------|----------|-----------------------|
| 271. 4-ETHYLPHENOL 98%, FG | W315605 | B60919 | HC-23SIJN63 |
| 272. 4-HEPTANONE | W254606 | C39745 | HC-23SIZC16 |
| 273. 4-HEXEN-1-OL 96%, FG | W343005 | A65247 | HC-23SIH381 |
| 274. 4-HEXEN-3-ONE 92% | W335207 | B63508 | HC-23SI3T85 |
| 275. 4-HYDROXY-2,5-DIMETHYL-3(2H)-FURANONE 98%, FCC, FG | W317403 | B21711 | HC-23SIYB04 |
| 276. 4-HYDROXY-2,5-DIMETHYL-3(2H)-FURANONE NATURAL, =98%, FG | W317454 | B18667 | HC-23SIX774 |
| 277. 4-HYDROXY-2,5-DIMETHYL-3(2H)-FURANONE SOLUTION 10 WT. % IN PROPYLENE GLYCOL | W317411 | A66917 | HC-23SIE791 |
| 278. 4-Hydroxy-4-Methyl-7-cis-Decenoic Acid L-Lactone | W393713 | C41924 | HC-23SIJT89 |
| 279. 4-HYDROXY-5-METHYL-3-FURANONE 97%, FG | W363501 | A88716 | HC-23SILS43 |
| 280. 4-HYDROXYBENZALDEHYDE 97%, FG | W398403 | B77103 | HC-23SI3C87 |
| 281. 4-HYDROXYBUTANOIC ACID LACTONE | W329118 | C37188 | HC-23SICM38 |

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|---|--------------|----------|-----------------------|
| 282. 4-METHYL-1-PHENYL-2-PENTANONE 95%, FG | W274003 | B60061 | HC-23SIH956 |
| 283. 4-METHYL-2-PHENYL-2-PENTENAL, MIXTURE OF CIS AND TRANS 88%, STABILIZED | W320005 | B45864 | HC-23SIBK61 |
| 284. 4-METHYL-5-THIAZOLEETHANOL ACETATE 98%, FG | W320501 | B80093 | HC-23SIF602 |
| 285. 4-METHYL-5-THIAZOLEETHANOL FG | W320404 | A45808 | HC-23SI4849 |
| 286. 4-METHYL-5-VINYLTIAZOLE 97%, FG | W331309 | A77976 | HC-23SITZ80 |
| 287. 4-METHYLANISOLE 99%, FCC, FG | W268100 | A76428 | HC-23SIR763 |
| 288. 4-METHYLNONANOIC ACID 97% | W357405 | A22044 | HC-23SI1M97 |
| 289. 4-METHYLPENTANOIC ACID 98%, FCC, FG | W346306 | A46644 | HC-23SI5U55 |
| 290. 4-METHYLPENTYL 4-METHYLVALERATE | W474900 | C29023 | HC-23SIK427 |
| 291. 4-METHYLTHIAZOLE 98%, FG | W371602 | A89840 | HC-23SI6451 |
| 292. 4-METHYLTHIO-4-METHYL-2-PENTANONE 98%, FG | W337609 | B12522 | HC-23SILW33 |

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| 293. 4-OXOISOPHORONE 98%, FG | W342106 | A20374 | HC-23SI1W85 |
| 294. 4-PENTENOIC ACID 98%, FG | W284300 | A84180 | HC-23SILO19 |
| 295. 4-PROPYLPHENOL 97%, FG | W364908 | A82170 | HC-23SIUI02 |
| 296. 4-VINYLPHENOL SOLUTION 10 WT. % IN PROPYLENE GLYCOL, FG | W373923 | A83184 | HC-23SITC09 |
| 297. 5-(HYDROXYMETHYL)FURFURAL 99%, FG | W501808 | B55566 | HC-23SIRU29 |
| 298. 5,6,7,8-TETRAHYDROQUINOXALINE 97%, FG | W332100 | B80753 | HC-23SIFN06 |
| 299. 5-ETHYL-3-HYDROXY-4-METHYL-2(5H)-FURANONE 97%, FG | W315303 | A65181 | HC-23SIH880 |
| 300. 5-ETHYL-4-HYDROXY-2-METHYL-3(2H)-FURANONE NATURAL (US) | W362320 | D23338 | HC-23SI6Z52 |
| 301. 5-ETHYL-4-HYDROXY-2-METHYL-3(2H)-FURANONE, MIXTURE OF ISOMERS 96%, FG | W362301 | A93955 | HC-23SI7W77 |

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|---|--------------|----------|-----------------------|
| 302. 5H-5-METHYL-6,7-DIHYDROCYCLOPENTA[B]PYRAZINE 97%, FG | W330604 | A17336 | HC-23SI8H61 |
| 303. 5-METHYL-2-HEPTEN-4-ONE, PREDOMINANTLY TRANS 98%, FG | W376108 | B49980 | HC-23SIPL91 |
| 304. 5-Methyl-2-Phenyl-2-Hexenal | W319912 | B15662 | HC-23SIVD58 |
| 305. 5-METHYL-2-PHENYL-2-HEXENAL 96%, FG | W319902 | A29924 | HC-23SI1N50 |
| 306. 5-METHYL-2-THIOPHENECARBOXALDEHYDE FG | W320900 | B81687 | HC-23SIE115 |
| 307. 5-METHYLFURFURAL 98%, FG | W270202 | A76901 | HC-23SIR467 |
| 308. 5-METHYLQUINOXALINE 99%, FG | W320307 | B26238 | HC-23SICX36 |
| 309. 6,10-DIMETHYL-5,9-UNDECADIEN-2-ONE 97% | W354201 | A94816 | HC-23SIKX84 |
| 310. 6-AMYL-ALPHA-PYRONE 96%, FG | W369608 | B55311 | HC-23SIUV28 |
| 311. 6-METHOXY-2,6-DIMETHYLHEPTANAL, STABILIZED | W474505 | D23352 | HC-23SISD88 |
| 312. 6-METHYL-5-HEPTEN-2-OL NATURAL | W488401 | D23359 | HC-23SI6749 |

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|--------------------------------------|--------------|----------|-----------------------|
| 313. 6-METHYL-5-HEPTEN-2-ONE | W270709 | C45648 | HC-23SIEM59 |
| 314. 6-METHYLCOUMARIN 99%, FCC, FG | W269905 | A36047 | HC-23SISQ91 |
| 315. 6-METHYLQUINOLINE 98%, FG | W274402 | A54652 | HC-23SIVJ01 |
| 316. 9-DECENOIC ACID 95%, FG | W366005 | B10710 | HC-23SIMO26 |
| 317. a-ANGELICA LACTONE NATURAL (US) | W329355 | D12704 | HC-23SIVZ64 |
| 318. ACETAL 98%, FG | W200204 | B70987 | HC-23SI2Q40 |
| 319. ACETAL NATURAL, FG, 97% | W200220 | B34607 | HC-23SIGI91 |
| 320. Acetaldehyde | W200303 | C41907 | HC-23SIXZ78 |
| 321. ACETALDEHYDE NATURAL, 99%, FG | W200336 | B18915 | HC-23SIXZ76 |
| 322. ACETANISOLE 98%, FCC, FG | W200506 | B49309 | HC-23SIPW87 |
| 323. ACETIC ACID 99.5%, FCC, FG | W200611 | B34313 | HC-23SIG186 |
| 324. ACETIC ACID NATURAL, 99.5%, FG | W200603 | A29395 | HC-23SI2N45 |

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|---|--------------|----------|-----------------------|
| 325. ACETOIN 96%, FCC, FG | W200808 | A10626 | HC-23SI3W12 |
| 326. ACETOIN ACETATE, NATURAL | W352623 | C20195 | HC-23SIZ334 |
| 327. ACETOIN NATURAL, 95%, FG | W200832 | A38631 | HC-23SIPI10 |
| 328. ACETONE | W332607 | D12705 | HC-23SIE170 |
| 329. ACETOPHENONE 98%, FCC, FG | W200905 | B16594 | HC-23SIVZ63 |
| 330. ACETOVANILLONE | W508454 | C44278 | HC-23SILC11 |
| 331. Alginic Acid | W800014 | B95987 | HC-23SIMI37 |
| 332. Allyl Butyrate | W202118 | C32914 | HC-23SI6N49 |
| 333. ALLYL CYCLOHEXANEPROPIONATE 98%, FCC, FG | W202606 | B87203 | HC-23SIZ560 |
| 334. ALLYL DISULFIDE 80%, FG | W202800 | A99044 | HC-23SIKT14 |
| 335. ALLYL HEPTANOATE 97%, FCC, FG | W203106 | B65198 | HC-23SICQ99 |
| 336. Allyl Heptanoate Natural | W203111 | C32915 | HC-23SIV703 |

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| Product Name | Product Code | Halal-ID | Product Certificate # |
|--|--------------|----------|-----------------------|
| 337. ALLYL HEXANOATE 98%, FCC, FG | W203203 | A27383 | HC-23SI1Z24 |
| 338. ALLYL HEXANOATE NATURAL, 98%, FCC, FG | W203211 | A21869 | HC-23SIZX96 |
| 339. ALLYL ISOTHIOCYANATE 93%, FCC | W203408 | A18451 | HC-23SIBH71 |
| 340. ALLYL PHENOXYACETATE, 99% | W203807 | B71339 | HC-23SIEL47 |
| 341. ALLYL SULFIDE 97%, FG | W204218 | B67430 | HC-23SI8214 |
| 342. ALLYL-ALPHA-IONONE, 65% | W203300 | B38974 | HC-23SI9515 |
| 343. ALMOND OIL, BITTER, NATURAL | W204600 | C37172 | HC-23SI6K49 |
| 344. ALMOND OIL, SWEET, CERTIFIED ORGANIC (NOP) | W530119 | B71078 | HC-23SI2U41 |
| 345. ALPHA,ALPHA-DIMETHYLPHENETHYL ACETATE 98%, FCC | W239208 | A87965 | HC-23SIM439 |
| 346. ALPHA,ALPHA-DIMETHYLPHENETHYL BUTYRATE 95%, FCC, FG | W239402 | B82829 | HC-23SI6J23 |
| 347. ALPHA-AMYL CINNAMALDEHYDE, MIXTURE OF CIS AND TRANS, 97%, FG | W206105 | A77069 | HC-23SIRZ68 |

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|---|--------------|----------|-----------------------|
| 348. ALPHA-ANGELICA LACTONE 98%, FG | W329304 | A77798 | HC-23SIT277 |
| 349. ALPHA-HEXYLCINNAMALDEHYDE | W256900 | C56641 | HC-23SIKZ83 |
| 350. ALPHA-IONONE 90% | W259403 | A14963 | HC-23SI4346 |
| 351. ALPHA-IONONE NATURAL, 84% | W259411 | B11046 | HC-23SIMK27 |
| 352. ALPHA-ISOMETHYL IONONE | W271410 | C29323 | HC-23SI7501 |
| 353. ALPHA-METHYLBENZYL ACETATE 98%, FCC, FG | W268402 | A29216 | HC-23SI2K42 |
| 354. ALPHA-METHYLBENZYL ALCOHOL 99%, FCC | W268518 | B26424 | HC-23SICT37 |
| 355. ALPHA-METHYLCINNAMALDEHYDE | W269700 | C51536 | HC-23SI6Q51 |
| 356. ALPHA-PHELLANDRENE | W285609 | A96339 | HC-23SIJU95 |
| 357. ALPHA-PHELLANDRENE, NATURAL | W285611 | C37185 | HC-23SI4517 |
| 358. ALPHA-TERPINENE 89%, FCC, FG | W355801 | B85422 | HC-23SIHB43 |
| 359. ALPHA-TERPINEOL MIXTURE OF ISOMERS, 96%, FCC, FG | W304506 | B36081 | HC-23SI8196 |

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|--|--------------|----------|-----------------------|
| 360. ALPHA-TERPINEOL NATURAL, 96%, FCC, FG | W304522 | A97018 | HC-23SIL903 |
| 361. ALPHA-TERPINYL ACETATE, 95%, FG | W304799 | B30622 | HC-23SIFP63 |
| 362. AMMONIUM SULFIDE SOLUTION 20 WT. % IN H2O | W205303 | A31891 | HC-23SID964 |
| 363. AMYL ACETATE | W504009 | C44277 | HC-23SI1K83 |
| 364. AMYL BUTYRATE MIXTURE OF ISOMERS, 98%, FG | W205915 | B21391 | HC-23SIYN01 |
| 365. AMYL FORMATE 95%, FG | W206806 | A31867 | HC-23SIEF63 |
| 366. AMYL HEXANOATE 98%, FG | W207403 | A58167 | HC-23SIW526 |
| 367. AMYRIS OIL | W517100 | B49175 | HC-23SIM386 |
| 368. ANETHOL, NATURAL | W208620 | C10278 | HC-23SIF771 |
| 369. ANISOLE | W209708 | C29070 | HC-23SIRO70 |
| 370. ANISYL ACETATE 97%, FCC, FG | W209805 | B44025 | HC-23SI9K49 |
| 371. ANISYL ACETATE, NATURAL | W209890 | C20177 | HC-23SIOE96 |

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| 372. ANISYL ALCOHOL 98%, FCC, FG | W209902 | A17532 | HC-23SIBM65 |
| 373. ANISYL ALCOHOL NATURAL, 98%, FG | W209910 | A54743 | HC-23SIVC02 |
| 374. ANISYL FORMATE 90%, FCC, FG | W210102 | A75097 | HC-23SIQW52 |
| 375. ANISYL PHENYLACETATE | W374008 | C54819 | HC-23SI7614 |
| 376. ANISYL PROPIONATE 98%, FG | W210218 | A52782 | HC-23SIIM92 |
| 377. AVOCADO OIL, CERTIFIED ORGANIC (NOP) | W530127 | A30477 | HC-23SI1E54 |
| 378. BASIL OIL, METHYL CHAVICOL TYPE, CERTIFIED ORGANIC (NOP) | W530131 | B62257 | HC-23SII173 |
| 379. B-DAMASCONE | W324300 | C35054 | HC-23SIIF49 |
| 380. BENZALDEHYDE 98%, FG, FCC | W212709 | B21085 | HC-23SIYT96 |
| 381. BENZALDEHYDE DIMETHYL ACETAL | W212806 | C54812 | HC-23SIGT95 |
| 382. BENZALDEHYDE NATURAL, 98%, FCC, FG | W212717 | B84402 | HC-23SI7K36 |

Muhammad Munir Chaudry

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Date: June 30, 2023

Document #: 4739.15720.II230010

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Plant Name & Address: **Aldrich Chemical Company, LLC** 5485 County Road V Sheboygan Falls, Wisconsin 53085 USA

| Product Name | Product Code | Halal-ID | Product Certificate # |
|--|--------------|----------|-----------------------|
| 383. BENZOIC ACID 99.5%, FCC, FG | W213101 | B19125 | HC-23SIXV77 |
| 384. BENZOIC ACID, NATURAL | W213128 | C35035 | HC-23SIQ840 |
| 385. BENZYL ACETATE 99%, FCC, FG | W213500 | B79837 | HC-23SIUL99 |
| 386. BENZYL ACETATE NATURAL, 99%, FCC, FG | W213519 | B40499 | HC-23SI9I21 |
| 387. BENZYL ALCOHOL 99%, FCC, FG | W213705 | A30474 | HC-23SI1N53 |
| 388. BENZYL ALCOHOL NATURAL, 98%, FG | W213713 | B29827 | HC-23SID457 |
| 389. BENZYL BENZOATE 99%, FCC | W213802 | B49509 | HC-23SIP188 |
| 390. BENZYL BENZOATE NATURAL, 99%, FCC, FG | W213810 | B16051 | HC-23SIVI59 |
| 391. BENZYL BUTYRATE 98%, FCC, FG | W214000 | B69641 | HC-23SI4M31 |
| 392. BENZYL BUTYRATE NATURAL, 98%, FCC | W214019 | A29284 | HC-23SI2U44 |
| 393. BENZYL CINNAMATE 98% | W214205 | B46260 | HC-23SIB466 |
| 394. BENZYL DISULFIDE 98% | W361704 | A55831 | HC-23SIUN13 |

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|--|--------------|----------|-----------------------|
| 395. BENZYL ETHER | W237108 | C39739 | HC-23SI6B50 |
| 396. BENZYL FORMATE | W214507 | C39734 | HC-23SIEH57 |
| 397. BENZYL FORMATE, NATURAL | W214520 | C20178 | HC-23SI5M36 |
| 398. BENZYL ISOBUTYRATE 97%, FCC, FG | W214108 | A25888 | HC-23SIXL13 |
| 399. Benzyl phenylacetate =98%, FCC, FG | W214906 | C16103 | HC-23SIIT45 |
| 400. BENZYL PROPIONATE | W215000 | C45645 | HC-23SI4L59 |
| 401. BENZYL SALICYLATE | W215104 | C35041 | HC-23SIN351 |
| 402. BENZYLIDENEACETONE 98%, FG | W288101 | A37837 | HC-23SIEI05 |
| 403. BERGAMOT OIL, ITALIAN | W215309 | C47737 | HC-23SIKV82 |
| 404. BETA IONONE PREDOMINANTLY TRANS, 97%, FCC, FG | W259500 | C87822 | HC-23SI7L79 |
| 405. BETA-ALANINE | W325201 | C49390 | HC-23SIF175 |
| 406. BETA-CARYOPHYLLENE 80%, FCC | W225207 | B86970 | HC-23SICK57 |

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|--|--------------|----------|-----------------------|
| 407. BETA-CYCLOCITRAL 95%, FG | W363928 | A96541 | HC-23SILF99 |
| 408. BETA-IONONE, NATURAL (US) | W259525 | C35048 | HC-23SI286 |
| 409. BIRCH OIL, SWEET, NATURAL | W215481 | C53462 | HC-23SIFB90 |
| 410. BIS(2-METHYL-3-FURYL) DISULFIDE 98%, FG | W325900 | B78302 | HC-23SIUB93 |
| 411. BIS(METHYLTHIO)METHANE 99%, FG | W387800 | B35571 | HC-23SIGC95 |
| 412. BOIS DE ROSE | W215600 | C47738 | HC-23SITL08 |
| 413. BUTAN-3-ONE-2-YL BUTANOATE | W333200 | C10282 | HC-23SIO948 |
| 414. BUTAN-3-ONE-2-YL BUTANOATE 98%, FCC | W333204 | B38138 | HC-23SI7X05 |
| 415. BUTYL (S)-(-)-LACTATE 97% | W220507 | B69484 | HC-23SI5K29 |
| 416. BUTYL (S)-(-)-LACTATE, 97%, FG | W220500 | A86199 | HC-23SIMR29 |
| 417. BUTYL 10-UNDECENOATE | W221600 | C42587 | HC-23SILH76 |
| 418. BUTYL 2-METHYLBUTYRATE 97%, FG | W339318 | B13294 | HC-23SI6S41 |

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|--|--------------|----------|-----------------------|
| 419. BUTYL ACETATE | W217409 | C44259 | HC-23SIIG94 |
| 420. BUTYL ACETATE NATURAL, 98%, FG | W217417 | B64754 | HC-23SIGD97 |
| 421. BUTYL ALCOHOL 99.9%, FCC, FG | W217820 | C87817 | HC-23SI7K22 |
| 422. Butyl Alcohol Natural | W217816 | C29012 | HC-23SIIR10 |
| 423. BUTYL BENZOATE, 98% | W515000 | A16526 | HC-23SI9N54 |
| 424. BUTYL BUTYRATE 98%, FCC, FG | W218618 | B39157 | HC-23SI9Y17 |
| 425. BUTYL BUTYRATE, NATURAL | W218626 | C44260 | HC-23SIQQ43 |
| 426. BUTYL BUTYRYLLACTATE 98%, FCC, FG | W219002 | B29479 | HC-23SIDB54 |
| 427. BUTYL BUTYRYLLACTATE, NATURAL | W219010 | C20179 | HC-23SIJE79 |
| 428. BUTYL FORMATE | W219606 | C51533 | HC-23SI4O52 |
| 429. BUTYL HEXANOATE 98%, FG | W220108 | C87818 | HC-23SIMK30 |
| 430. BUTYL ISOBUTYRATE | W218804 | C39736 | HC-23SI6Z45 |

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| Product Name | Product Code | Halal-ID | Product Certificate # |
|--|--------------|----------|-----------------------|
| 431. BUTYL ISOVALERATE 98%, FCC, FG | W221805 | B20652 | HC-23SIYK92 |
| 432. BUTYL PROPIONATE | W221104 | C47739 | HC-23SIN155 |
| 433. BUTYLAMINE 99% | W313009 | B58157 | HC-23SIIM48 |
| 434. BUTYLATED HYDROXYANISOLE 99%, FCC | W218308 | A86672 | HC-23SIMP33 |
| 435. BUTYRALDEHYDE, NATURAL | W221910 | C29110 | HC-23SILG12 |
| 436. BUTYRIC ACID NATURAL, 99%, FCC, FG | W222119 | B80835 | HC-23SI4T08 |
| 437. BUTYRIC ACID, 99%, FG | W222100 | B71311 | HC-23SICW45 |
| 438. CAFFEINE ANHYDROUS, FCC, 99% | W222402 | B19191 | HC-23SIXC81 |
| 439. CAMPHENE | W222910 | C37174 | HC-23SIHA83 |
| 440. CANOLA OIL, CERTIFIED ORGANIC | W530228 | C35039 | HC-23SI9T44 |
| 441. CARDAMOM OIL, CERTIFIED ORGANIC (NOP) | W224123 | A97340 | HC-23SILW05 |
| 442. CARROT SEED OIL, FG | W224405 | A27262 | HC-23SIZS22 |

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| Product Name | Product Code | Halal-ID | Product Certificate # |
|---|--------------|----------|-----------------------|
| 443. CARVACROL 98%, FCC, FG | W224502 | B71542 | HC-23SIE748 |
| 444. CARVACROL, NATURAL | W224511 | C36275 | HC-23SI4851 |
| 445. CASSIA OIL | W225800 | B71238 | HC-23SI2J43 |
| 446. CASTOR OIL, CERTIFIED ORGANIC (NOP) | W226318 | B24577 | HC-23SIDY24 |
| 447. CEDARWOOD OIL, ATLAS TYPE, CERTIFIED ORGANIC (NOP) | W530143 | B60381 | HC-23SIKW59 |
| 448. CHAMOMILE MOROCCO | W521302 | C35036 | HC-23SIWH83 |
| 449. CHAMOMILE OIL, GERMAN, CERTIFIED ORGANIC (NOP) | W227315 | A19847 | HC-23SIAS81 |
| 450. CHOLINE CHLORIDE, 98%, FCC | W450001 | B32384 | HC-23SIFH70 |
| 451. CINNAMALDEHYDE NATURAL, 95%, FG | W228613 | A21501 | HC-23SI1S93 |
| 452. CINNAMIC ALCOHOL, NATURAL | W229411 | C36278 | HC-23SI5N58 |
| 453. CINNAMON BARK OIL FCC, FG | W229105 | B21710 | HC-23SIYI03 |

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|---|--------------|----------|-----------------------|
| 454. CINNAMON BARK OIL, CERTIFIED ORGANIC (NOP) | W229140 | B29555 | HC-23SIDG55 |
| 455. CINNAMON LEAF OIL, CERTIFIED ORGANIC (NOP) | W229208 | B52053 | HC-23SIQE11 |
| 456. CINNAMON OIL, CEYLON TYPE | W229202 | B95984 | HC-23SIW685 |
| 457. CINNAMYL ACETATE | W229318 | C47740 | HC-23SI8772 |
| 458. CINNAMYL ACETATE, NATURAL | W229301 | C36277 | HC-23SIJT87 |
| 459. CINNAMYL ALCOHOL 98% | W229407 | B68364 | HC-23SI8818 |
| 460. CINNAMYL BENZOATE, 98%, FG | W470301 | A89117 | HC-23SIOI46 |
| 461. CINNAMYL CINNAMATE, MIXTURE OF ISOMERS | W229806 | C47741 | HC-23SI6O46 |
| 462. Cinnamyl Isobutyrate | W229709 | C29013 | HC-23SIDC30 |
| 463. CIS-2-HEXEN-1-OL 96%, FG | W392405 | B33342 | HC-23SIHL79 |
| 464. CIS-2-NONEN-1-OL | W372005 | C56645 | HC-23SIG885 |
| 465. CIS-2-PENTEN-1-OL | W430500 | C42600 | HC-23SIC134 |

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|---|--------------|----------|-----------------------|
| 466. CIS-3,7-DIMETHYL-2,6-OCTADIEN-1-OL | W277002 | C39748 | HC-23SI7B97 |
| 467. CIS-3-HEPTEN-1-OL | W519030 | C56648 | HC-23SIDS66 |
| 468. CIS-3-HEXEN-1-OL 98%, FCC, FG | W256307 | A41215 | HC-23SID223 |
| 469. CIS-3-HEXEN-1-OL NATURAL, 98%, FCC, FG | W256323 | A23218 | HC-23SI3Z03 |
| 470. CIS-3-HEXENAL SOLUTION 50% IN TRIACETIN | W256102 | A20251 | HC-23SI2F84 |
| 471. cis-3-Hexenyl 2-Methylbutanoate | W349700 | C41922 | HC-23SIKD16 |
| 472. CIS-3-HEXENYL 3-METHYLBUTANOATE 97%, FCC, FG | W349801 | B38841 | HC-23SI6K13 |
| 473. CIS-3-HEXENYL ACETATE 98%, FCC, FG | W317101 | A81084 | HC-23SIUD98 |
| 474. CIS-3-HEXENYL ACETATE NATURAL | W317128 | A95025 | HC-23SIJQ85 |
| 475. CIS-3-HEXENYL ACETATE, NATURAL | W317100 | C29509 | HC-23SIFP62 |
| 476. CIS-3-HEXENYL BENZOATE | W368806 | C42598 | HC-23SI5Q31 |
| 477. CIS-3-HEXENYL BUTYRATE 98%, FG | W340200 | B28072 | HC-23SIEY48 |

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|--|--------------|----------|-----------------------|
| 478. CIS-3-HEXENYL CIS-3-HEXENOATE 95%, FG | W368903 | A56022 | HC-23SIX815 |
| 479. CIS-3-HEXENYL FORMATE | W335304 | C42596 | HC-23SI9P20 |
| 480. CIS-3-HEXENYL HEXANOATE 98%, FG | W340308 | A99561 | HC-23SIM918 |
| 481. CIS-3-HEXENYL ISOBUTYRATE 98%, FG | W392901 | A91511 | HC-23SI5F62 |
| 482. CIS-3-HEXENYL LACTATE 98%, FG | W369004 | A38324 | HC-23SIPN09 |
| 483. CIS-3-HEXENYL PHENYLACETATE 99% | W363308 | B20456 | HC-23SIZZ88 |
| 484. CIS-3-HEXENYL PROPIONATE | W393304 | C42599 | HC-23SIDG90 |
| 485. CIS-3-HEXENYL TIGLATE | W393118 | C44276 | HC-23SISF90 |
| 486. CIS-4-DECENAL 93%, STABILIZED | W326402 | B21092 | HC-23SIYP97 |
| 487. CIS-4-HEPTENAL 98%, FCC, FG | W328901 | B60926 | HC-23SIJI64 |
| 488. CIS-5-OCTEN-1-OL 98% | W372218 | A60734 | HC-23SIPN43 |
| 489. CIS-6-NONEN-1-OL 95%, FG | W346500 | A14331 | HC-23SI4441 |

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|--|--------------|----------|-----------------------|
| 490. CIS-6-NONENAL 95%, FG | W358002 | A62888 | HC-23SINJ65 |
| 491. CIS-JASMONE | W319600 | B44938 | HC-23SIBT56 |
| 492. CITRAL DIETHYL ACETAL 93% | W230405 | B52246 | HC-23SIQ313 |
| 493. CITRAL DIMETHYL ACETAL 90% | W230502 | A60477 | HC-23SIPS41 |
| 494. CITRAL MIXTURE OF CIS AND TRANS, 96%, FG | W230308 | A26988 | HC-23SII1319 |
| 495. CITRAL, NATURAL | W230316 | C37175 | HC-23SI7G12 |
| 496. CITRIC ACID NATURAL, 99.5%, FCC, FG | W230633 | C87819 | HC-23SI7306 |
| 497. CITRIC ACID, 99.5%, FCC, FG | W230618 | B46148 | HC-23SIBB63 |
| 498. CITRONELLA OIL, JAVA, CERTIFIED ORGANIC (NOP) | W230840 | A42469 | HC-23SI6935 |
| 499. CITRONELLA OIL, JAVA, NATURAL | W230812 | C53463 | HC-23SI6U38 |
| 500. CITRONELLOL, MIXTURE OF ISOMERS, NATURAL | W230915 | C36279 | HC-23SIPL45 |
| 501. CITRONELLYL ACETATE | W231118 | C42589 | HC-23SITL31 |

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|---|--------------|----------|-----------------------|
| 502. CLOVE BUD OIL NATURAL (US), FCC, FG | W232300 | B51830 | HC-23SIQQ07 |
| 503. CLOVE BUD OIL, CERTIFIED ORGANIC (NOP) | W232314 | A71757 | HC-23SITK30 |
| 504. COCOA EXTRACT, BLEND, FG | W584649 | B65604 | HC-23SIG304 |
| 505. COCONUT OIL, VIRGIN, CERTIFIED ORGANIC (NOP) | W530155 | B15645 | HC-23SIWD57 |
| 506. COFFEE OIL, ROASTED, NATURAL (US) | W530618 | C35037 | HC-23SIJE66 |
| 507. COPAIBA BALSAM OIL | W521809 | A41463 | HC-23SI6526 |
| 508. CORIANDER OIL, NATURAL | W233404 | C53464 | HC-23SIUN97 |
| 509. CORNMINT OIL, CERTIFIED ORGANIC (NOP) | W421906 | B48848 | HC-23SINI82 |
| 510. COUMARIN | W526509 | C42602 | HC-23SIVV05 |
| 511. CUMINALDEHYDE 98%, FCC | W234109 | B14973 | HC-23SIWO53 |
| 512. CYCLOHEXYL ACETATE 98%, FG | W234907 | A68608 | HC-23SIJR08 |
| 513. CYCLOHEXYL BUTYRATE | W235105 | C44262 | HC-23SIKL11 |

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Date: June 30, 2023

Document #: 4739.15720.II230010

Company Name & Address: **Sigma-Aldrich Corporation** 6000 N. Teutonia Avenue Milwaukee, Wisconsin 53209 USA

Plant Name & Address: **Aldrich Chemical Company, LLC** 5485 County Road V Sheboygan Falls, Wisconsin 53085 USA

| Product Name | Product Code | Halal-ID | Product Certificate # |
|---|--------------|----------|-----------------------|
| 514. CYCLOPENTANETHIOL 97% | W326208 | B38236 | HC-23SI7V07 |
| 515. CYCLOPENTANONE 99%, FG | W391018 | A83289 | HC-23SIT510 |
| 516. D-CAMPHOR | W223018 | C51534 | HC-23SIR934 |
| 517. D-CAMPHOR | W223023 | C35042 | HC-23SISB91 |
| 518. D-CARVONE | W224928 | C39737 | HC-23SI5G37 |
| 519. D-DIHYDROCARVONE, MIXTURE OF ISOMERS | W356506 | C39751 | HC-23SI2Q42 |
| 520. D-DIHYDROCARVONE, NATURAL | W356511 | C35053 | HC-23SIUV93 |
| 521. DECANAL | W236209 | C39738 | HC-23SIJY05 |
| 522. DECANAL, NATURAL | W236217 | C36280 | HC-23SIWN28 |
| 523. DECANOIC ACID 98%, FCC, FG | W236403 | B58375 | HC-23SIHB50 |
| 524. DECANOIC ACID NATURAL, 98%, FCC, FG | W236411 | B79908 | HC-23SI4C01 |
| 525. DELTA-DECALACTONE 98%, FCC, FG | W236101 | B20919 | HC-23SIY195 |

Muhammad Munir Chaudry

Muhammad Munir Chaudry, Ph.D.
President



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|--|--------------|----------|-----------------------|
| 526. DELTA-DECALACTONE NATURAL, 98%, FCC, FG | W236128 | A47681 | HC-23SII465 |
| 527. DELTA-DODECALACTONE MIXTURE OF ISOMERS, 98%, FCC, FG | W240109 | A10469 | HC-23SIQ411 |
| 528. DELTA-DODECALACTONE, MIXTURE OF ISOMERS, NATURAL, 98%, FG | W240115 | B50662 | HC-23SIOA97 |
| 529. DELTA-HEXALACTONE | W316700 | C42594 | HC-23SIWN07 |
| 530. DELTA-NONALACTONE 98%, FCC, FG | W335606 | B28381 | HC-23SIET49 |
| 531. DELTA-TETRADECALACTONE 98%, FG | W359009 | A42738 | HC-23SI6237 |
| 532. DELTA-TETRADECALACTONE, NATURAL | W359020 | C36290 | HC-23SISM58 |
| 533. DELTA-UNDECALACTONE, 97%, FG | W329401 | B23295 | HC-23SI1P12 |
| 534. DIETHYL MALATE 97%, FG | W237418 | A14166 | HC-23SI4B40 |
| 535. DIETHYL MALONATE 98% | W237507 | B27853 | HC-23SIE146 |
| 536. DIETHYL SEBACATE 98%, FCC, FG | W237604 | B29929 | HC-23SID959 |

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|---|--------------|----------|-----------------------|
| 537. DIETHYL SUCCINATE 99%, FCC, FG | W237701 | B84448 | HC-23SI7Q37 |
| 538. DIETHYL SUCCINATE, NATURAL, =99%, FG | W237712 | B52944 | HC-23SIQ315 |
| 539. DIETHYL SULFIDE | W382501 | C56646 | HC-23SINF66 |
| 540. DIHYDRO-BETA-IONONE | W362603 | C54818 | HC-23SILS06 |
| 541. DIHYDROCOUMARIN 99%, FCC, FG | W238104 | B54212 | HC-23SIS623 |
| 542. DIHYDROJASMONE 98% | W376302 | B24046 | HC-23SIZK19 |
| 543. DIMETHYL DISULFIDE, 98%, FG | W353604 | B76746 | HC-23SI3Y83 |
| 544. DIMETHYL PHENYL ETHYL CARBINYL ISOBUTYRATE | W273601 | A40050 | HC-23SIDB17 |
| 545. DIMETHYL SUCCINATE | W239607 | C44263 | HC-23SIDK18 |
| 546. DIMETHYL SULFIDE NATURAL, 99%, FCC, FG | W274623 | A29903 | HC-23SI1M48 |
| 547. Dimethyl Sulfide, Redistilled | W274615 | C41914 | HC-23SIJN09 |
| 548. DIMETHYL SULFOXIDE 99% | W387509 | A29885 | HC-23SI1W47 |

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|--|--------------|----------|-----------------------|
| 549. DIMETHYL TRISULFIDE 98%, FG | W327506 | B64729 | HC-23SIGT95 |
| 550. DIPHENYL ETHER, 99%, FG | W366706 | A85210 | HC-23SIK425 |
| 551. DISODIUM SUCCINATE 98% | W327700 | B73688 | HC-23SI3Y60 |
| 552. DL-ALANINE 99%, FCC, FG | W381810 | A30662 | HC-23SIEO56 |
| 553. DL-Menthol | W266507 | C29015 | HC-23SIOJ95 |
| 554. DL-MENTHYL ACETATE 97%, FG | W266809 | C87825 | HC-23SITV81 |
| 555. DL-METHIONINE | W330108 | C45650 | HC-23SIZD31 |
| 556. DL-VALINE | W344400 | C53468 | HC-23SISH60 |
| 557. D-Octalactone, Mixture Of Isomers | W321405 | C41920 | HC-23SIFI65 |
| 558. D-RIBOSE, NATURAL | W379312 | B88298 | HC-23SI1689 |
| 559. d-Tridecalactone | W468501 | C29022 | HC-23SIUI12 |
| 560. D-Undecalactone, Mixture Of Isomers Natural | W329415 | C41921 | HC-23SIKF21 |

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|---|--------------|----------|-----------------------|
| 561. D-XYLOSE, NATURAL | W360620 | B88310 | HC-23SIZ715 |
| 562. ETHANETHIOL | W425800 | C54820 | HC-23SIH573 |
| 563. Ethyl 10-undecenoate | W246107 | B95985 | HC-23SI5347 |
| 564. ETHYL 2-AMINOBENZOATE 96%, FCC, FG | W242101 | A43851 | HC-23SI6U40 |
| 565. ETHYL 2-FUROATE 98% | W501301 | A74454 | HC-23SIQ849 |
| 566. ETHYL 2-MERCAPTOPROPIONATE 95%, FG | W327905 | B42328 | HC-23SIAI33 |
| 567. ETHYL 2-METHYL-1,3-DIOXOLANE-2-ACETATE | W447704 | D23346 | HC-23SIRN86 |
| 568. ETHYL 2-METHYL-4-PENTENOATE 98% | W348902 | A77721 | HC-23SITE74 |
| 569. ETHYL 2-METHYLBUTYRATE 98%, FCC, FG | W244309 | A33902 | HC-23SIF275 |
| 570. ETHYL 2-METHYLBUTYRATE NATURAL, MIXTURE OF ENANTIOMERS, 98%, FCC, FG | W244317 | B80172 | HC-23SI4V03 |
| 571. ETHYL 2-TRANS-4-CIS-DECADIENOATE 80% | W314803 | B55781 | HC-23SIRB32 |

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|---|--------------|----------|-----------------------|
| 572. ETHYL 2-TRANS-4-CIS-DECADIENOATE NATURAL, 95%, FG | W314811 | B10661 | HC-23SIMK25 |
| 573. ETHYL 2-TRANS-4-CIS-DECADIENOATE, =95%, STABILIZED, FG | W314820 | A63692 | HC-23SIGF70 |
| 574. ETHYL 3-(FURFURYLTHIO)PROPIONATE 98% | W367400 | B38325 | HC-23SI7Q08 |
| 575. ETHYL 3-(METHYLTHIO)PROPIONATE 99%, FCC, FG | W334308 | B47105 | HC-23SINC72 |
| 576. ETHYL 3-HYDROXYBUTYRATE 97%, FG | W342807 | A97903 | HC-23SIK709 |
| 577. ETHYL 3-HYDROXYBUTYRATE, NATURAL | W342815 | C20194 | HC-23SIOJ33 |
| 578. ETHYL 3-HYDROXYHEXANOATE 98%, FG | W354503 | B70042 | HC-23SI4F33 |
| 579. ETHYL 3-METHYL-2-OXOPENTANOATE | W490355 | D23360 | HC-23SIE676 |
| 580. ETHYL 3-PHENYLGLYCIDATE MIXTURE OF CIS AND TRANS, 92% | W245402 | A46401 | HC-23SI5Z54 |
| 581. ETHYL ACETOACETATE NATURAL, 97%, FG | W241512 | B14799 | HC-23SI5V50 |
| 582. ETHYL BENZOATE, NATURAL | W242217 | C37177 | HC-23SIHB42 |

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|---|--------------|----------|-----------------------|
| 583. ETHYL BICYCLO[2.2.1]HEPT-2-ENE-5-CARBOXYLATE | W479010 | D23357 | HC-23SIKE12 |
| 584. ETHYL BUTYRATE 98%, FCC, FG | W242705 | B46538 | HC-23SIAS68 |
| 585. ETHYL BUTYRATE NATURAL, 98%, FCC, FG | W242713 | A28734 | HC-23SI2L38 |
| 586. ETHYL CINNAMATE 98%, FCC, FG | W243000 | B82509 | HC-23SIYK19 |
| 587. ETHYL CINNAMATE NATURAL, 95%, FG | W243019 | B51250 | HC-23SIO801 |
| 588. ETHYL DECANOATE 98%, FCC, FG | W243205 | B44726 | HC-23SIB354 |
| 589. ETHYL DECANOATE, NATURAL | W243213 | C20182 | HC-23SIRO37 |
| 590. ETHYL FORMATE 97%, FCC, FG | W243418 | A88335 | HC-23SIMQ41 |
| 591. ETHYL FORMATE NATURAL, 95%, FG | W243434 | A22264 | HC-23SIZH98 |
| 592. ETHYL HEPTANOATE 98%, FCC, FG | W243701 | B26223 | HC-23SIC535 |
| 593. ETHYL HEXANOATE 98%, FCC, FG | W243906 | A77129 | HC-23SIRV69 |
| 594. ETHYL HEXANOATE NATURAL, 98%, FCC, FG | W243914 | B85548 | HC-23SIH444 |

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|--|--------------|----------|-----------------------|
| 595. ETHYL ISOBUTYRATE 98%, FCC, FG | W242802 | B55621 | HC-23SIRN30 |
| 596. ETHYL ISOBUTYRATE NATURAL, 98%, FCC, FG | W242810 | A40388 | HC-23SID920 |
| 597. ETHYL ISOVALERATE 98%, FCC, FG | W246301 | A56928 | HC-23SIWW19 |
| 598. ETHYL ISOVALERATE NATURAL, 98%, FCC, FG | W246328 | A80691 | HC-23SIUO96 |
| 599. ETHYL LACTATE 98%, FCC, FG | W244007 | B42148 | HC-23SI8S32 |
| 600. ETHYL LAURATE 98%, FCC, FG | W244104 | A11780 | HC-23SI3D21 |
| 601. ETHYL LEVULINATE 98%, FCC, FG | W244201 | B46245 | HC-23SIAD65 |
| 602. ETHYL LEVULINATE, NATURAL, 98%, FG | W244220 | B27240 | HC-23SIEA44 |
| 603. ETHYL MALTOL 99%, FCC, FG | W348708 | A78277 | HC-23SIST84 |
| 604. ETHYL MYRISTATE 98%, FCC, FG | W244503 | A64584 | HC-23SI8676 |
| 605. ETHYL NONANOATE 98%, FCC, FG | W244708 | A72686 | HC-23SITE35 |
| 606. ETHYL NONANOATE, NATURAL, 98%, FG | W244740 | B54153 | HC-23SIP922 |

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|---|--------------|----------|-----------------------|
| 607. ETHYL OCTANOATE 98%, FCC, FG | W244902 | B62247 | HC-23SIJV72 |
| 608. Ethyl Octanoate, Natural | W244910 | C41909 | HC-23SIA876 |
| 609. ETHYL PALMITATE 95%, FG | W245100 | A84109 | HC-23SILV18 |
| 610. ETHYL PALMITATE, NATURAL | W245115 | C36282 | HC-23SIUU95 |
| 611. ETHYL P-ANISATE | W242000 | C10274 | HC-23SIF583 |
| 612. ETHYL P-ANISATE 97%, FCC | W242004 | A34966 | HC-23SIFV84 |
| 613. ETHYL PHENYLACETATE 98%, FCC, FG | W245208 | B29873 | HC-23SID558 |
| 614. ETHYL PHENYLACETATE, NATURAL | W245230 | C20184 | HC-23SIAU80 |
| 615. ETHYL PROPIONATE 97%, FCC, FG | W245607 | B62816 | HC-23SI3L78 |
| 616. ETHYL PROPIONATE NATURAL, 97%, FCC, FG | W245615 | B83651 | HC-23SI5Q28 |
| 617. ETHYL PYRUVATE 97% | W245704 | A23535 | HC-23SI3U04 |
| 618. ETHYL PYRUVATE NATURAL, 95%, FG | W245712 | A98244 | HC-23SIKQ12 |

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|---|--------------|----------|-----------------------|
| 619. ETHYL PYRUVATE, =97%, FG | W245735 | B75829 | HC-23SI6P73 |
| 620. ETHYL SALICYLATE 99%, FCC, FG | W245801 | B31814 | HC-23SIF167 |
| 621. ETHYL TIGLATE 98% | W246018 | B19723 | HC-23SIWD84 |
| 622. ETHYL TIGLATE, =98%, FG | W246000 | A11573 | HC-23SI3O19 |
| 623. ETHYL TRANS-2-BUTENOATE 96%, FG | W348600 | B20507 | HC-23SIZQ89 |
| 624. ETHYL TRANS-2-DECENOATE 95%, FG (STABILISED) | W364118 | A17436 | HC-23SI8763 |
| 625. ETHYL TRANS-3-HEXENOATE 98%, FG | W334200 | A26302 | HC-23SIYV17 |
| 626. ETHYL VALERATE 98%, FG | W246204 | A58632 | HC-23SIVH30 |
| 627. ETHYL VANILLIN 98%, FCC, FG | W246409 | A62715 | HC-23SINT62 |
| 628. ETHYL VINYL KETONE | W338210 | C29635 | HC-23SIKZ10 |
| 629. ETHYL VINYL KETONE 95%, STABILIZED, FG | W338206 | B55746 | HC-23SIRI31 |
| 630. ETHYLCYCLOPENTENOLONE,NATURAL | W315230 | C10275 | HC-23SI6U48 |

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|---|--------------|----------|-----------------------|
| 631. ETHYLENE BRASSYLATE | W354309 | C42597 | HC-23SIMR51 |
| 632. ETHYL-TRANS-2-OCTENOATE 98%, FG | W364304 | A77513 | HC-23SIRO73 |
| 633. EUCALYPTOL, NATURAL | W246506 | C39742 | HC-23SILR17 |
| 634. EUCALYPTUS OIL, RADIATA, CERTIFIED ORGANIC (NOP) | W530089 | A31255 | HC-23SIEW60 |
| 635. EUGENOL 98%, FCC, FG | W246700 | A29021 | HC-23SI2K40 |
| 636. EUGENOL, NATURAL | W246719 | C37178 | HC-23SIFD89 |
| 637. Eugenyl Acetate | W246905 | C32919 | HC-23SI9M45 |
| 638. EVENING PRIMROSE OIL, CERTIFIED ORGANIC (NOP) | W530165 | A75717 | HC-23SISM56 |
| 639. FARNESENE, MIXTURE OF ISOMERS | W383902 | C37190 | HC-23SI5112 |
| 640. FARNESOL MIXTURE OF ISOMERS, 95% | W247804 | A58430 | HC-23SIWU27 |
| 641. FENCHYL ALCOHOL | W248010 | C39743 | HC-23SIMM53 |
| 642. FENNEL OIL, SWEET | W248207 | C49386 | HC-23SI3G11 |

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|--|--------------|----------|-----------------------|
| 643. FENUGREEK ABSOLUTE, NATURAL | W248606 | B92008 | HC-23SI7A70 |
| 644. FORMIC ACID 95%, FCC, FG | W248703 | B63088 | HC-23SI3F80 |
| 645. FRANKINCENSE OIL, CERTIFIED ORGANIC (NOP) | W281623 | A92353 | HC-23SI7J69 |
| 646. FUMARIC ACID | W248800 | C36284 | HC-23SIAG69 |
| 647. Fumaric Acid Natural | W248835 | C29014 | HC-23SIEI04 |
| 648. FURFURAL | W248908 | C29218 | HC-23SIBM57 |
| 649. FURFURAL, NATURAL | W248924 | C29219 | HC-23SIW934 |
| 650. FURFURYL 3-METHYLBUTANOATE 98%, FG | W328308 | A84221 | HC-23SIKM20 |
| 651. FURFURYL ACETATE 98%, FG | W249009 | B26837 | HC-23SICI39 |
| 652. FURFURYL ALCOHOL 97%, FG | W249106 | B85854 | HC-23SI6O47 |
| 653. FURFURYL ALCOHOL, NATURAL | W249166 | C20185 | HC-23SI6U53 |
| 654. FURFURYL BUTYRATE 99% | W501700 | B76673 | HC-23SI7T80 |

Muhammad Munir Chaudry

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President



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Date: June 30, 2023

Document #: 4739.15720.II230010

Company Name & Address: **Sigma-Aldrich Corporation** 6000 N. Teutonia Avenue Milwaukee, Wisconsin 53209 USA

Plant Name & Address: **Aldrich Chemical Company, LLC** 5485 County Road V Sheboygan Falls, Wisconsin 53085 USA

| Product Name | Product Code | Halal-ID | Product Certificate # |
|---------------------------------------|--------------|----------|-----------------------|
| 655. FURFURYL MERCAPTAN 97%, FG | W249300 | A91210 | HC-23SI5H59 |
| 656. FURFURYL MERCAPTAN, NATURAL | W249311 | C29224 | HC-23SIH771 |
| 657. FURFURYL METHYL SULFIDE | W316008 | C51539 | HC-23SIUU06 |
| 658. FURFURYL PROPIONATE 98%, FG | W334618 | B51339 | HC-23SIOV03 |
| 659. FURFURYL THIOACETATE 98%, FG | W316202 | B46776 | HC-23SIOF70 |
| 660. FURFURYL THIOACETATE NATURAL | W316255 | D12702 | HC-23SINH53 |
| 661. FURFURYL THIOPROPIONATE 98% | W334707 | A74386 | HC-23SIQA48 |
| 662. GAMMA-DECALACTONE 98%, FCC, FG | W236004 | A24839 | HC-23SIYK08 |
| 663. GAMMA-DODECALACTONE 97%, FCC, FG | W240001 | A50487 | HC-23SIJ583 |
| 664. GAMMA-DODECALACTONE, NATURAL | W240015 | C37176 | HC-23SIZO18 |
| 665. GAMMA-HEPTALACTONE 98%, FCC, FG | W253901 | A53304 | HC-23SII995 |
| 666. GAMMA-HEXALACTONE 98%, FCC, FG | W255602 | A58544 | HC-23SIWO29 |

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|---|--------------|----------|-----------------------|
| 667. GAMMA-METHYL DECALACTONE | W378621 | C44275 | HC-23SI7776 |
| 668. GAMMA-NONALACTONE | W278106 | C44268 | HC-23SIM936 |
| 669. GAMMA-NONANOIC LACTONE, NATURAL | W278140 | C41917 | HC-23SIJ989 |
| 670. GAMMA-OCTALACTONE 97%, FCC, FG | W279609 | A76707 | HC-23SIRZ66 |
| 671. GAMMA-OCTALACTONE NATURAL, 97%, FG | W279617 | B61498 | HC-23SIJ868 |
| 672. GAMMA-TERPINENE 95%, FG | W355909 | B77473 | HC-23SI3288 |
| 673. GAMMA-TERPINENE, NATURAL | W355901 | C45652 | HC-23SIN854 |
| 674. GAMMA-UNDECALACTONE 98%, FCC, FG | W309109 | A93499 | HC-23SI7474 |
| 675. GAMMA-UNDECALACTONE, NATURAL (US) | W309101 | C35049 | HC-23SI5R28 |
| 676. GAMMA-VALEROLACTONE 98%, FCC, FG | W310301 | B39047 | HC-23SI9116 |
| 677. GARLIC OIL, CHINESE | W250309 | C44264 | HC-23SIRW26 |
| 678. GERANIC ACID | W412101 | C47743 | HC-23SIN176 |

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|---|--------------|----------|-----------------------|
| 679. GERANIOL 97%, FCC, FG | W250708 | A34589 | HC-23SIFT81 |
| 680. GERANIOL, NATURAL | W250716 | C39744 | HC-23SIC932 |
| 681. GERANIUM OIL, CHINESE, NATURAL | W250813 | C51535 | HC-23SIDR67 |
| 682. GERANYL ACETATE FCC | W250902 | A57458 | HC-23SIWD22 |
| 683. GERANYL ACETATE, NATURAL | W250910 | C44265 | HC-23SIAZ73 |
| 684. GERANYL BUTYRATE, NATURAL | W251216 | C20186 | HC-23SIQA39 |
| 685. GERANYL ISOVALERATE 95%, FG | W251801 | A51893 | HC-23SIJZ86 |
| 686. Geranyl Isovalerate, US Natural | W251820 | C32920 | HC-23SIJ717 |
| 687. GERANYL PHENYLACETATE FCC | W251607 | B12209 | HC-23SILB31 |
| 688. GERANYL PROPIONATE, 95%, FCC, FG | W251704 | B57603 | HC-23SII143 |
| 689. GERANYL PROPIONATE, NATURAL, 95%, FG | W251700 | B71908 | HC-23SIBN50 |
| 690. GINGER OIL NATURAL, FCC, FG | W252204 | A92063 | HC-23SI7Q68 |

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| Product Name | Product Code | Halal-ID | Product Certificate # |
|--------------------------------------|--------------|----------|-----------------------|
| 691. GLYCEROL, 99%, FCC, FG | W252506 | B35474 | HC-23SIGI94 |
| 692. GLYCINE, NATURAL | W328712 | B88306 | HC-23SIBT05 |
| 693. Grapefruit Oil, Florida Natural | W253006 | C32921 | HC-23SIQM44 |
| 694. GUAIACOL NATURAL, 98%, FG | W253200 | A46856 | HC-23SI5S57 |
| 695. Guaiacyl Phenyl Acetate | W253502 | C32922 | HC-23SIYU12 |
| 696. GUAICWOOD ACETATE | W522007 | B26968 | HC-23SICK41 |
| 697. HAZELNUT KETONE, NATURAL | W376112 | C10280 | HC-23SIAE72 |
| 698. HEPTANAL 95%, FCC, FG | W254002 | A25370 | HC-23SIYM10 |
| 699. HEPTANOIC ACID, NATURAL | W334812 | C45651 | HC-23SIDQ72 |
| 700. HEPTYL ACETATE 98%, FG | W254703 | A80618 | HC-23SIUQ95 |
| 701. Heptyl Acetate, Natural | W254711 | C41910 | HC-23SIPR90 |
| 702. HEPTYL ALCOHOL 97%, FCC, FG | W254800 | C87821 | HC-23SISD59 |

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|---|--------------|----------|-----------------------|
| 703. HEPTYL ALCOHOL, NATURAL | W254820 | C10277 | HC-23SIII91 |
| 704. HEPTYL FORMATE 98% | W255203 | B49033 | HC-23SIMG84 |
| 705. Heptyl Heptanoate Natural | W434100 | C32923 | HC-23SIQH42 |
| 706. HEXANAL 97%, FCC, FG | W255718 | A72367 | HC-23SITL34 |
| 707. HEXANAL NATURAL, 95%, FG | W255726 | B57669 | HC-23SIIV44 |
| 708. HEXANOIC ACID 98%, FCC, FG | W255904 | A15114 | HC-23SI6S47 |
| 709. HEXANOIC ACID NATURAL, =98%, FCC, FG | W255900 | A16305 | HC-23SI6Q53 |
| 710. HEXANOIC ACID NATURAL, 98%, FCC | W255912 | B50016 | HC-23SISX93 |
| 711. HEXYL 2-METHYLBUTANOATE 95%, FCC, FG | W349909 | B14710 | HC-23SI5Y48 |
| 712. HEXYL ACETATE 98%, FCC, FG | W256501 | A11596 | HC-23SI3X20 |
| 713. HEXYL ACETATE NATURAL, 98%, FCC, FG | W256528 | A28594 | HC-23SI2L37 |
| 714. HEXYL ALCOHOL | W256706 | C37180 | HC-23SISW24 |

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|--|--------------|----------|-----------------------|
| 715. HEXYL ALCOHOL NATURAL, 98%, FCC, FG | W256714 | A95057 | HC-23SIJ86 |
| 716. HEXYL BENZOATE FG | W369101 | A68197 | HC-23SIJ604 |
| 717. HEXYL BUTYRATE 98%, FG | W256803 | B47388 | HC-23SINW75 |
| 718. HEXYL BUTYRATE NATURAL | W256811 | C37181 | HC-23SIV261 |
| 719. HEXYL FORMATE | W257001 | C45646 | HC-23SI9559 |
| 720. HEXYL HEXANOATE 97%, FG | W257206 | A63493 | HC-23SIGI68 |
| 721. HEXYL ISOBUTYRATE 98%, FG | W317209 | A99332 | HC-23SIKH17 |
| 722. HEXYL ISOBUTYRATE, NATURAL (US) | W317215 | C42595 | HC-23SI4H30 |
| 723. HEXYL PROPIONATE 97%, FG | W257605 | B22856 | HC-23SI1108 |
| 724. HEXYL PROPIONATE, NATURAL (US) | W257615 | C53465 | HC-23SIIW74 |
| 725. HEXYL TRANS-2-BUTENOATE 95%, FCC | W335401 | A27655 | HC-23SI1527 |
| 726. HEXYL TRANS-2-BUTENOATE, 95%, FG | W335400 | A26241 | HC-23SIY516 |

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|--|--------------|----------|-----------------------|
| 727. HYDROCINNAMALDEHYDE 95%, FG, FCC | W288705 | B69086 | HC-23SIZF24 |
| 728. HYDROXYCITRONELLAL | W258318 | C54814 | HC-23SI4F48 |
| 729. HYDROXYCITRONELLAL DIMETHYL ACETAL 95%, FCC | W258504 | A69303 | HC-23SIJA15 |
| 730. HYSSOP OIL, CERTIFIED ORGANIC (NOP) | W259105 | A42531 | HC-23SI6736 |
| 731. ISOAMYL ACETATE 95%, 70% ISOAMYL ACETATE BASIS, FCC | W205508 | B65160 | HC-23SICX98 |
| 732. ISOAMYL ACETATE NATURAL, 97%, FCC, FG | W205532 | B46677 | HC-23SIOE69 |
| 733. ISOAMYL ALCOHOL 98%, FG | W205702 | A27614 | HC-23SI1C26 |
| 734. ISOAMYL ALCOHOL NATURAL, 98%, FG | W205710 | A37931 | HC-23SIMS06 |
| 735. ISOAMYL BENZOATE | W205818 | C53460 | HC-23SIQX06 |
| 736. ISOAMYL BENZOATE4-HYDROXY-2,5-DIMETHYL-3(2H)-FURANONE, 15 wt. % IN PROPYLENE GLYCOL | W317410 | C53466 | HC-23SIJF87 |
| 737. ISOAMYL BUTYRATE 98%, FCC, FG | W206008 | A94399 | HC-23SI7U78 |

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|--|--------------|----------|-----------------------|
| 738. ISOAMYL BUTYRATE NATURAL, 80% ISOAMYL BUTYRATE BASIS, FCC | W206016 | A20554 | HC-23SI1186 |
| 739. ISOAMYL CINNAMATE 97%, FG | W206318 | A13377 | HC-23SI5N35 |
| 740. Isoamyl Cinnamate Natural | W206326 | C32916 | HC-23SI1W07 |
| 741. ISOAMYL FORMATE MIXTURE OF ISOMERS | W206903 | A83789 | HC-23SIL515 |
| 742. ISOAMYL HEXANOATE, MIXTURE OF ISOMERS FCC | W207500 | B34106 | HC-23SIH384 |
| 743. ISOAMYL ISOBUTYRATE 98%, FG | W350702 | A88811 | HC-23SILO44 |
| 744. ISOAMYL ISOBUTYRATE NATURAL, 98%, 70% ISOAMYL ISOBUTYRATE BASIS | W350710 | B42915 | HC-23SIAB38 |
| 745. ISOAMYL ISOVALERATE 98%, FCC | W208507 | B42920 | HC-23SIA739 |
| 746. ISOAMYL ISOVALERATE NATURAL, 98%, FCC, FG | W208515 | A35342 | HC-23SIQJ87 |
| 747. ISOAMYL OCTANOATE | W208000 | C53461 | HC-23SIN873 |
| 748. ISOAMYL OCTANOATE NATURAL, 98%, FG | W208019 | B75097 | HC-23SI6868 |

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|---|--------------|----------|-----------------------|
| 749. ISOAMYL PHENYLACETATE NATURAL, 98%, FG | W208100 | A73305 | HC-23SIQ239 |
| 750. ISOAMYL PROPIONATE | W208205 | C42585 | HC-23SIJT07 |
| 751. Isoamyl Propionate Natural | W208213 | C32918 | HC-23SIZR07 |
| 752. ISOBORNEOL | W215805 | C39735 | HC-23SILA14 |
| 753. ISOBORNYL ACETATE | W216003 | C37173 | HC-23SIWG24 |
| 754. ISOBUTYL ACETATE 98%, FCC, FG | W217506 | B66735 | HC-23SIB908 |
| 755. ISOBUTYL ACETATE NATURAL, 97%, FCC, FG | W217514 | B15184 | HC-23SIWK54 |
| 756. ISOBUTYL ALCOHOL 99%, FCC, FG | W217905 | A70506 | HC-23SIIX23 |
| 757. ISOBUTYL ALCOHOL, NATURAL | W217913 | C36274 | HC-23SIZJ90 |
| 758. ISOBUTYL BUTYRATE 98%, FCC, FG | W218707 | B25374 | HC-23SIDG29 |
| 759. ISOBUTYL BUTYRATE, NATURAL | W218715 | C44261 | HC-23SI8S71 |
| 760. ISOBUTYL CINNAMATE 98%, FCC, FG | W219304 | B71323 | HC-23SI4846 |

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| 761. ISOBUTYL FORMATE 95%, FG | W219703 | A62065 | HC-23SINR56 |
| 762. ISOBUTYL HEXANOATE | W220205 | C42586 | HC-23SIR184 |
| 763. ISOBUTYL HEXANOATE, NATURAL, 95% | W220213 | A68354 | HC-23SIJY06 |
| 764. ISOBUTYL ISOVALERATE, NATURAL (US) | W336900 | C44271 | HC-23SILC13 |
| 765. ISOBUTYL PHENYLACETATE 98%, FCC, FG | W221007 | B10150 | HC-23SIM721 |
| 766. ISOBUTYL PROPIONATE | W221201 | C54813 | HC-23SI9L57 |
| 767. ISOBUTYL PROPIONATE, NATURAL | W221240 | C20180 | HC-23SICF79 |
| 768. ISOBUTYL SALICYLATE 98%, FCC | W221309 | B73576 | HC-23SIAS58 |
| 769. Isobutyraldehyde | W222003 | C41908 | HC-23SIAR78 |
| 770. ISOBUTYRALDEHYDE NATURAL, 96%, FG | W222011 | B48458 | HC-23SINK79 |
| 771. ISOEUGENOL MIXTURE OF CIS AND TRANS, 99%, FG | W246808 | B42336 | HC-23SIAM34 |
| 772. ISOEUGENOL, NATURAL, 99%, FG | W246830 | A71374 | HC-23SIUW26 |

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| 773. ISOEUGENYL ACETATE 98%, FCC, FG | W247006 | B62049 | HC-23SIJ171 |
| 774. ISOPENTYLAMINE 98% | W321907 | A73282 | HC-23SIRX38 |
| 775. ISOPENTYLAMINE, =98% | W321900 | A26199 | HC-23SIYC15 |
| 776. ISOPROPYL ACETATE 99%, FCC | W292605 | B44899 | HC-23SIBX55 |
| 777. Isopropyl Alcohol | W292912 | B31239 | HC-23SIFP64 |
| 778. ISOPROPYL ALCOHOL 99.7%, FCC, FG | W292907 | A72077 | HC-23SITG33 |
| 779. ISOPROPYL CINNAMATE 96%, FG | W293903 | A78404 | HC-23SISD86 |
| 780. Isopropyl Isovalerate | W296101 | A10636 | HC-23SI7813 |
| 781. ISOPROPYL MYRISTATE 98% | W355690 | A76329 | HC-23SISF61 |
| 782. ISOPROPYL PALMITATE | W515604 | C47746 | HC-23SIDP25 |
| 783. ISOPROPYL TIGLATE 98% | W322903 | A91776 | HC-23SI8V65 |
| 784. ISOVALERALDEHYDE | W269204 | C29310 | HC-23SIIP75 |

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Date: **June 30, 2023**

Document #: **4739.15720.II230010**

Company Name & Address: **Sigma-Aldrich Corporation** 6000 N. Teutonia Avenue Milwaukee, Wisconsin 53209 USA

Plant Name & Address: **Aldrich Chemical Company, LLC** 5485 County Road V Sheboygan Falls, Wisconsin 53085 USA

| Product Name | Product Code | Halal-ID | Product Certificate # |
|---|--------------|----------|-----------------------|
| 785. ISOVALERIC ACID 99%, FCC | W310204 | A18898 | HC-23SIAO74 |
| 786. ISOVALERIC ACID NATURAL, 98%, FG | W310212 | A76605 | HC-23SIRB64 |
| 787. JASMIN ABSOLUTE | W259802 | A73962 | HC-23SIQF45 |
| 788. JUNIPER BERRY OIL, CERTIFIED ORGANIC (NOP) | W260404 | A91480 | HC-23SI5B61 |
| 789. L-(+)-TARTARIC ACID 99.7%, FCC, FG | W304409 | B66785 | HC-23SI4J10 |
| 790. L-(+)-TARTARIC ACID, NATURAL | W304412 | C29443 | HC-23SIVV65 |
| 791. LACTIC ACID 85%, FCC | W261106 | A18205 | HC-23SIAM70 |
| 792. LACTIC ACID NATURAL, 85% | W261114 | A37592 | HC-23SIEU02 |
| 793. L-ALANINE, NATURAL | W381812 | B88299 | HC-23SI5U53 |
| 794. L-ARABINOSE, NATURAL | W325512 | B88304 | HC-23SI6R70 |
| 795. L-ARGININE, NATURAL | W381920 | B88300 | HC-23SIUG98 |
| 796. L-ASPARTIC ACID | w365612 | B88311 | HC-23SIOR05 |

Muhammad Munir Chaudry

Muhammad Munir Chaudry, Ph.D.
President



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|--|--------------|----------|-----------------------|
| 797. LAURIC ACID 98%, FCC, FG | W261408 | B13921 | HC-23SI6Q43 |
| 798. LAURIC ACID, NATURAL | W261416 | C36285 | HC-23SIV304 |
| 799. LAURIC ALDEHYDE 95%, FCC, FG | W261505 | B86829 | HC-23SIYX55 |
| 800. LAURIC ALDEHYDE NATURAL, 95%, FG | W261513 | A29554 | HC-23SI1W46 |
| 801. LAURYL ACETATE | W261602 | C47742 | HC-23SI3285 |
| 802. LAURYL ALCOHOL 98%, FG | W261718 | A65835 | HC-23SIFD87 |
| 803. LAVENDER OIL, 40/42% FLEURS | W262218 | C54815 | HC-23SIX705 |
| 804. LAVENDER OIL, CERTIFIED ORGANIC (NOP) | W262235 | A17426 | HC-23SI9362 |
| 805. L-CARVEOL, MIXTURE OF CIS AND TRANS 95%, FG | W224707 | B21303 | HC-23SIYJ99 |
| 806. L-CARVONE 97%, FCC, FG | W224901 | B76168 | HC-23SIBM75 |
| 807. L-CARVONE, NATURAL | W224908 | C36276 | HC-23SI4P38 |
| 808. L-CYSTEINE | W326305 | C51540 | HC-23SIX316 |

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|--|--------------|----------|-----------------------|
| 809. L-CYSTEINE HYDROCHLORIDE | W778567 | C49394 | HC-23SIJ890 |
| 810. L-DIHYDROCARVYL ACETATE MIXTURE OF ISOMERS, 95% | W238007 | A16587 | HC-23SI9B55 |
| 811. LEMON OIL COLD-PRESSED, CALIFORNIA ORIGIN, FG | W262528 | A62165 | HC-23SIMP57 |
| 812. LEMON OIL, CERTIFIED ORGANIC (NOP) | W262533 | A12161 | HC-23SI2V24 |
| 813. LEMONGRASS OIL, CERTIFIED ORGANIC (NOP) | W262440 | B44426 | HC-23SIB552 |
| 814. LEVULINIC ACID 97%, FG | W262706 | B80363 | HC-23SI4L04 |
| 815. LEVULINIC ACID, NATURAL | W262701 | C37182 | HC-23SI3D26 |
| 816. L-FENCHONE 98% | W507709 | A48344 | HC-23SIIN68 |
| 817. L-GLUTAMIC ACID, NATURAL | W328512 | B88305 | HC-23SIKZ26 |
| 818. LIME OIL, CERTIFIED ORGANIC (NOP) | W530106 | A62385 | HC-23SINX61 |
| 819. LIME OIL, NATURAL, PURIFIED BY DISTILLATION | W263109 | C37183 | HC-23SIJZ84 |
| 820. LINALOOL 97%, FCC, FG | W263508 | A13840 | HC-23SI4I39 |

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|---|--------------|----------|-----------------------|
| 821. Linalool Oxide, Natural | W374600 | C41923 | HC-23SI1N94 |
| 822. LINALYL ACETATE 97%, FCC, FG | W263605 | C87823 | HC-23SIGY60 |
| 823. LINALYL ACETATE NATURAL, 80% | W263613 | C87824 | HC-23SIHI39 |
| 824. LINALYL BENZOATE 95% | W263818 | B75571 | HC-23SIC172 |
| 825. LINALYL BUTYRATE 95%, FG | W263907 | B60074 | HC-23SIHZ57 |
| 826. LINALYL FORMATE FCC | W264202 | B22338 | HC-23SIX506 |
| 827. LINALYL PROPIONATE 95%, FCC, FG | W264504 | B79431 | HC-23SIUS96 |
| 828. LINOLEIC ACID, 95%, FG | W338020 | A77466 | HC-23SIRO72 |
| 829. LITSEA CUBEBA OIL | W517208 | B86730 | HC-23SIYJ52 |
| 830. LITSEA CUBEBA OIL, CERTIFIED ORGANIC (NOP) | W384606 | A52863 | HC-23SIK93 |
| 831. L-LEUCINE, NATURAL | W329712 | B88307 | HC-23SISK92 |
| 832. L-LINALOOL NATURAL | W263516 | C35046 | HC-23SIHX74 |

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|--|--------------|----------|-----------------------|
| 833. L-LYSINE HYDROCHLORIDE, NATURAL | W384712 | B88301 | HC-23SITS83 |
| 834. L-LYSINE,=98%, FG | W384720 | A87506 | HC-23SIMB38 |
| 835. L-MENTHOL NATURAL | W266523 | D12697 | HC-23SI9M47 |
| 836. L-MENTHONE MIXTURE OF ISOMERS, 96%, FCC, FG | W266701 | B43017 | HC-23SIA540 |
| 837. L-MENTHYL ACETATE, NATURAL | W266825 | C42590 | HC-23SI6367 |
| 838. L-MENTHYL LACTATE | W374800 | C44274 | HC-23SIKV11 |
| 839. L-PHENYLALANINE, NATURAL | W358512 | B88309 | HC-23SI4U43 |
| 840. L-PROLINE 99%, FCC, FG | W331902 | B81660 | HC-23SI4F14 |
| 841. L-RHAMNOSE MONOHYDRATE, NATURAL | W373012 | B88297 | HC-23SIJ870 |
| 842. L-RHAMNOSE, NATURAL | W373011 | C20196 | HC-23SIOK22 |
| 843. L-TURPENTINE | W308900 | B44351 | HC-23SIC751 |
| 844. L-VALINE, NATURAL | W344412 | B88308 | HC-23SINV28 |

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|---|--------------|----------|-----------------------|
| 845. MACADAMIA OIL, CERTIFIED ORGANIC (NOP) | W530179 | A99764 | HC-23SIMA19 |
| 846. MALIC ACID, NATURAL | W265512 | B88303 | HC-23SIPH47 |
| 847. MALTOL 99.0%, FCC, FG | W265608 | A93640 | HC-23SI7276 |
| 848. MALTOL NATURAL, 98.5%, FG | W265624 | A92830 | HC-23SI7D72 |
| 849. MALTYL ISOBUTYRATE 98%, FG | W346209 | A96794 | HC-23SIL601 |
| 850. MANDARIN GREEN OIL, CERTIFIED ORGANIC (NOP) | W265734 | B82024 | HC-23SI4E16 |
| 851. MANDARIN OIL ITALIAN, FCC | W265713 | A46947 | HC-23SI4H60 |
| 852. MANGO FURANONE NATURAL | W410100 | D23343 | HC-23SIZT84 |
| 853. MARJORAM OIL, SWEET, CERTIFIED ORGANIC (NOP) | W266309 | A40020 | HC-23SICH16 |
| 854. Massoia Lactone Natural | W374400 | C29018 | HC-23SIBS66 |
| 855. M-CRESOL 98%, FG | W353000 | B61521 | HC-23SIJ369 |
| 856. MENTHALACTONE 99% | W376418 | B17742 | HC-23SIVO68 |

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|--|--------------|----------|-----------------------|
| 857. MENTHYL ISOVALERATE 98%, FG | W266906 | A49925 | HC-23SIHM78 |
| 858. MENTHYL VALERATE NATURAL (US) | W415655 | D23344 | HC-23SIZD23 |
| 859. METHIONAL 97%, FG | W274704 | A56085 | HC-23SIX317 |
| 860. METHYL (METHYLTHIO)ACETATE, FG | W400301 | A59396 | HC-23SIOH34 |
| 861. METHYL 2-FUROATE | W270318 | C37184 | HC-23SI7D23 |
| 862. METHYL 2-FUROATE, NATURAL | W270327 | C35051 | HC-23SIK37 |
| 863. METHYL 2-METHYL-3-FURYL DISULFIDE 98%, FG | W357308 | A77859 | HC-23SIT778 |
| 864. METHYL 2-METHYLBUTYRATE NATURAL, 98%, FCC, FG | W271926 | B32709 | HC-23SIF174 |
| 865. METHYL 2-NONYNOATE 99%, FG | W272604 | B50348 | HC-23SIOE94 |
| 866. METHYL 2-OCTYNOATE 99%, FCC, FG | W272906 | A47229 | HC-23SI8Z63 |
| 867. METHYL 2-PYRROLYL KETONE 98%, FG | W320218 | B69417 | HC-23SI5V27 |
| 868. METHYL 2-THIOFUROATE 98%, FG | W331104 | B81540 | HC-23SIE13 |

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|--|--------------|----------|-----------------------|
| 869. METHYL 3-(METHYLTHIO)PROPIONATE 98%, FG | W272000 | A97501 | HC-23SIKQ07 |
| 870. METHYL 3-HYDROXYHEXANOATE 97%, FG | W350818 | B74585 | HC-23SICJ65 |
| 871. METHYL 3-HYDROXYBUTYRATE | W445000 | C29020 | HC-23SI1Z21 |
| 872. METHYL 3-NONENOATE 96%, FG | W371009 | B14778 | HC-23SI5R49 |
| 873. METHYL ACETATE 98%, FG | W267600 | B51989 | HC-23SIQA10 |
| 874. METHYL ACETATE NATURAL (US), 98%, FG | W267619 | B23248 | HC-23SI1Q11 |
| 875. METHYL ANTHRANILATE 98%, FCC, FG | W268208 | A50458 | HC-23SIJB81 |
| 876. METHYL ANTHRANILATE, 99%, NATURAL | W268216 | A12972 | HC-23SI4332 |
| 877. METHYL ANTHRANILATE, NATURAL, 99%, FG | W268224 | A96208 | HC-23SIJS93 |
| 878. METHYL BENZOATE, NATURAL | W268313 | C35044 | HC-23SIVE99 |
| 879. METHYL BUTYRATE 98%, FG | W269301 | A27935 | HC-23SIZX30 |
| 880. METHYL BUTYRATE NATURAL, 98%, FG | W269328 | A30555 | HC-23SIEX55 |

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|--|--------------|----------|-----------------------|
| 881. METHYL CINNAMATE NATURAL, 98%, FCC, FG | W269816 | A97610 | HC-23SIK308 |
| 882. METHYL CYCLOHEXADIENE MIXTURE OF ISOMERS, STABILIZED | W431105 | D23345 | HC-23SI6438 |
| 883. METHYL CYCLOPENTENOLONE ANHYDROUS, 98%, FCC, FG | W270008 | A46677 | HC-23SI5N56 |
| 884. Methyl Cyclopentenolone Anhydrous, Natural | W270015 | C41913 | HC-23SI2935 |
| 885. METHYL CYCLOPENTENOLONE HYDRATE, NATURAL | W270036 | C35050 | HC-23SIKE14 |
| 886. METHYL DECANOATE | W505501 | C45654 | HC-23SIY211 |
| 887. METHYL DIHYDROJASMONATE, MIXTURE OF CIS AND TRANS 96%, FG | W340804 | A54285 | HC-23SIVE98 |
| 888. METHYL EUGENOL | W247502 | C36283 | HC-23SIZC14 |
| 889. METHYL FURFURYL DISULFIDE 95%, FG | W336203 | A48090 | HC-23SIIW66 |
| 890. METHYL FURFURYL MERCAPTOPROPIONATE | W453801 | D23348 | HC-23SINN81 |
| 891. METHYL HEXANOATE 99%, FG | W270806 | B42402 | HC-23SIAN35 |

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| 892. METHYL HEXANOATE NATURAL, 99%, FG | W270814 | A96367 | HC-23SIJ97 |
| 893. METHYL ISOBUTYRATE, NATURAL | W269440 | C42591 | HC-23SI5K30 |
| 894. METHYL ISOEUGENOL 98%, FG | W247618 | A43965 | HC-23SI6V41 |
| 895. METHYL ISOVALERATE | W275301 | C49388 | HC-23SIXJ80 |
| 896. METHYL JASMONATE 95% | W341002 | A37686 | HC-23SIEN03 |
| 897. METHYL LAURATE | W271500 | C44266 | HC-23SIA861 |
| 898. METHYL LAURATE, NATURAL | W271511 | C35052 | HC-23SIJ585 |
| 899. METHYL OCTANOATE | W272809 | C42592 | HC-23SIGX94 |
| 900. METHYL P-ANISATE | W267902 | C49387 | HC-23SIAR36 |
| 901. METHYL PHENYLACETATE 98%, FCC, FG | W273309 | B33282 | HC-23SIE177 |
| 902. METHYL PROPIONATE | W274208 | C51537 | HC-23SI6V45 |
| 903. METHYL PROPYL DISULFIDE 95%, FG | W320102 | B41988 | HC-23SI8530 |

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| 904. METHYL P-TERT-BUTYLPHENYLACETATE 95%, FG | W269018 | A73995 | HC-23SIQJ46 |
| 905. METHYL SALICYLATE 98%, FCC, FG | W274518 | B76694 | HC-23SI4781 |
| 906. METHYL SALICYLATE, NATURAL, 98%, FCC, FG | W274502 | A64498 | HC-23SI8V74 |
| 907. METHYL STEARATE | W504807 | C47744 | HC-23SIBL68 |
| 908. METHYL SULFOXIDE, 99%, FG | W387520 | A62198 | HC-23SIOG58 |
| 909. METHYL THIOBUTYRATE 97%, FG | W331007 | B28503 | HC-23SIEP50 |
| 910. METHYL THIOBUTYRATE, NATURAL, =98%, FG | W331015 | A65439 | HC-23SIFR85 |
| 911. METHYL TRANS-2-NONENOATE 97%, FG | W272507 | A32711 | HC-23SIDQ71 |
| 912. METHYL TRANS-2-OCTENOATE 96% | W371203 | A17449 | HC-23SI8S64 |
| 913. METHYL TRANS-3-HEXENOATE | W336408 | C35045 | HC-23SIIR67 |
| 914. METHYL TRANS-CINNAMATE 98%, FCC, FG | W269808 | A36718 | HC-23SISV94 |
| 915. Methyl Valerate | W275204 | C41915 | HC-23SIC244 |

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| 916. METHYL VANILLATE 98%, FG | W510319 | A98908 | HC-23SIKO13 |
| 917. MUSK KETONE | W522902 | C49393 | HC-23SIK624 |
| 918. MYRCENE 90%, FCC, FG | W276200 | A52411 | HC-23SIJM90 |
| 919. MYRISTIC ACID 95%, FCC, FG | W276405 | A16221 | HC-23SI6Z52 |
| 920. MYRISTIC ACID NATURAL | W276413 | B56499 | HC-23SIRH38 |
| 921. N-Amyl Octanoate | W207918 | C32917 | HC-23SIJQ96 |
| 922. NEOHESPERIDIN DIHYDROCHALCONE 96% | W381101 | B39393 | HC-23SI9318 |
| 923. NEROLI OIL, MOROCCO FG | W277126 | B12282 | HC-23SIL432 |
| 924. NERYL ACETATE 98%, FCC, FG | W277304 | A82414 | HC-23SITC07 |
| 925. NERYL ACETATE, NATURAL | W277315 | C44267 | HC-23SIFO96 |
| 926. Neryl Isobutyrate | W277509 | C41916 | HC-23SIUD01 |

Muhammad Munir Chaudry

Muhammad Munir Chaudry, Ph.D.
President



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المجلس الإسلامي الأمريكي للغذاء و التغذية
THE ISLAMIC FOOD AND NUTRITION COUNCIL OF AMERICA
IFANCA HALAL PRODUCT CERTIFICATE شهادة حلال

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Date: **June 30, 2023**

Document #: **4739.15720.II230010**

Company Name & Address: **Sigma-Aldrich Corporation** 6000 N. Teutonia Avenue Milwaukee, Wisconsin 53209 USA

Plant Name & Address: **Aldrich Chemical Company, LLC** 5485 County Road V Sheboygan Falls, Wisconsin 53085 USA

| Product Name | Product Code | Halal-ID | Product Certificate # |
|---|--------------|----------|-----------------------|
| 927. N-ETHYL-2-ISOPROPYL-5-METHYLCYCLOHEXANECARBOXAMIDE 99%, FG | W345501 | A65273 | HC-23SIFT83 |
| 928. NONANAL 95%, FCC | W278203 | A13202 | HC-23SI5U34 |
| 929. Nonanal Natural | W278220 | C29016 | HC-23SIBW67 |
| 930. NONANOIC ACID 96%, FG | W278408 | B15203 | HC-23SIWO55 |
| 931. NONANOIC ACID, NATURAL | W278430 | C10276 | HC-23SI7C99 |
| 932. NONYL ALCOHOL 98%, FCC | W278904 | A60803 | HC-23SIPS44 |
| 933. NOOTKATONE | W326620 | B95988 | HC-23SIM629 |
| 934. NOOTKATONE | W316620 | B92009 | HC-23SIDZ65 |
| 935. N-PROPYL ISOVALERATE, NATURAL (US) | W296000 | C54817 | HC-23SIQH09 |
| 936. O-ANISALDEHYDE | W407701 | C39753 | HC-23SI2A41 |
| 937. O-CRESOL | W348007 | C51541 | HC-23SIOB11 |

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|---|--------------|----------|-----------------------|
| 938. OCTANAL 95%, FCC, FG | W279706 | A78484 | HC-23SISH87 |
| 939. OCTANAL, NATURAL | W279714 | C36286 | HC-23SIJE65 |
| 940. OCTANOIC ACID 98%, FG | W279900 | B46182 | HC-23SIBK64 |
| 941. OCTYL 2-METHYLBUTYRATE | W360406 | B92010 | HC-23SILX16 |
| 942. OCTYL ACETATE 98%, FCC, FG | W280607 | B13205 | HC-23SI6Z39 |
| 943. OCTYL BUTYRATE 98%, FG | W280704 | B76535 | HC-23SI7578 |
| 944. OCTYL FORMATE | W280909 | B92005 | HC-23SITJ96 |
| 945. OLEIC ACID NATURAL, FCC | W281506 | B18681 | HC-23SIXZ75 |
| 946. OLIVE OIL, EXTRA VIRGIN, CERTIFIED ORGANIC (NOP) | W530191 | A96823 | HC-23SIL402 |
| 947. OMEGA-PENTADECALACTONE 98%, FG | W284009 | B52867 | HC-23SIQY14 |
| 948. O-METHOXYCINNAMALDEHYDE 96%, FG | W318108 | B21566 | HC-23SIYJ02 |
| 949. OPOPONAX OIL NATURAL | W522600 | B64342 | HC-23SIK692 |

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| Product Name | Product Code | Halal-ID | Product Certificate # |
|---|--------------|----------|-----------------------|
| 950. ORANGE OIL NATURAL, COLD-COMPRESSED, CALIFORNIA ORIGIN | W282510 | A57649 | HC-23SIWB23 |
| 951. ORANGE OIL, SWEET, CERTIFIED ORGANIC (NOP) | W282401 | B75132 | HC-23SI6169 |
| 952. ORANGE TERPENES | W522708 | C29831 | HC-23SI6J81 |
| 953. ORIGANUM OIL FCC | W282812 | A27427 | HC-23SI1S25 |
| 954. ORRIS CONCRETE | W282928 | A29917 | HC-23SI1U49 |
| 955. O-TOLUENETHIOL 97%, FG | W324000 | B78093 | HC-23SIUF92 |
| 956. P,ALPHA,ALPHA-TRIMETHYLBENZYL ALCOHOL 95%, FG | W324205 | A82307 | HC-23SIU205 |
| 957. P,ALPHA-DIMETHYLSTYRENE 98% | W314404 | A68054 | HC-23SIJE02 |
| 958. PALM FRUIT OIL, CERTIFIED ORGANIC (NOP) | W530216 | A30259 | HC-23SI2551 |
| 959. PALMITIC ACID 95%, FCC, FG | W283207 | A20954 | HC-23SI1B88 |
| 960. PALMITIC ACID, NATURAL | W283215 | C20190 | HC-23SI3R62 |

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| Product Name | Product Code | Halal-ID | Product Certificate # |
|--|--------------|----------|-----------------------|
| 961. P-ANISALDEHYDE 97.5%, FCC | W267007 | A53714 | HC-23SIVL96 |
| 962. P-ANISALDEHYDE, NATURAL | W267020 | C20188 | HC-23SIKM15 |
| 963. P-ANISIC ACID, NATURAL | W394512 | C36292 | HC-23SIHL80 |
| 964. PATCHOULI OIL, CERTIFIED ORGANIC (NOP) | W283823 | B87080 | HC-23SIZ759 |
| 965. p-Cresol | W233706 | B88302 | HC-23SI8G24 |
| 966. P-CYMENE 97%, FG | W235601 | C87820 | HC-23SIPG21 |
| 967. PEPPERMINT OIL NATURAL, FCC, FG | W284815 | B31800 | HC-23SIFN66 |
| 968. PEPPERMINT OIL PURIFIED BY RECTIFICATION, FCC, FG | W284807 | B44455 | HC-23SIBA53 |
| 969. PEPPERMINT OIL, CERTIFIED ORGANIC (NOP) | W284843 | B18577 | HC-23SIX273 |
| 970. PETITGRAIN OIL, PARAGUAY, CERTIFIED ORGANIC (NOP) | W530183 | A74869 | HC-23SIQ451 |
| 971. PHENETHYL 2-METHYLBUTYRATE 95%, FCC, FG | W363200 | A35700 | HC-23SIS590 |
| 972. PHENETHYL ACETATE 98%, FCC, FG | W285706 | B49519 | HC-23SIPW89 |

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|--|--------------|----------|-----------------------|
| 973. PHENETHYL ACETATE NATURAL, 98%, FCC | W285714 | A74845 | HC-23SIQ850 |
| 974. PHENETHYL ALCOHOL 99%, FCC, FG | W285803 | B82353 | HC-23SIEM17 |
| 975. PHENETHYL ALCOHOL NATURAL, 99%, FCC, FG | W285811 | B21142 | HC-23SIYI98 |
| 976. PHENETHYL HEXANOATE 97%, FG | W322105 | A65541 | HC-23SIFM86 |
| 977. PHENETHYL HEXANOATE NATURAL (US) | W322120 | D12703 | HC-23SIDI26 |
| 978. PHENETHYL ISOVALERATE 98%, FCC, FG | W287105 | B82692 | HC-23SIXC21 |
| 979. PHENETHYL OCTANOATE 99% | W322202 | B66757 | HC-23SIB209 |
| 980. PHENETHYL PHENYLACETATE 98%, FCC, FG | W286605 | A28093 | HC-23SIZA33 |
| 981. PHENETHYL PROPIONATE 98%, FG | W286702 | B76292 | HC-23SIB677 |
| 982. Phenethyl Tiglate | W287008 | C41918 | HC-23SITA37 |
| 983. PHENOL 99% | W322318 | A45866 | HC-23SI4C50 |
| 984. PHENOL, NATURAL | W322340 | C20192 | HC-23SIAF79 |

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|--|--------------|----------|-----------------------|
| 985. PHENYL DISULFIDE, 98% | W322504 | A60625 | HC-23SIPS42 |
| 986. PHENYLACETALDEHYDE 95%, FCC, FG | W287407 | A67842 | HC-23SIFH99 |
| 987. PHENYLACETALDEHYDE DIMETHYL ACETAL 98%, FCC | W287601 | A60025 | HC-23SIO836 |
| 988. PHENYLACETIC ACID 99%, FCC, FG | W287806 | A73354 | HC-23SIQX40 |
| 989. PHENYLACETIC ACID, NATURAL | W287800 | C20191 | HC-23SIOC99 |
| 990. PHENYLETHYL MERCAPTAN | W389404 | C14547 | HC-23SIBT74 |
| 991. PHOSPHORIC ACID SOLUTION 85 WT. % IN H2O | W290017 | A42153 | HC-23SI6I34 |
| 992. PIMENTA LEAF OIL, NATURAL | W290106 | C54816 | HC-23SIEM61 |
| 993. PIPERIDINE 99%, FCC | W290807 | A90942 | HC-23SI5X57 |
| 994. PIPERIDINE, =99%, FG | W290820 | B48191 | HC-23SINT77 |
| 995. PIPERINE 97%, FG | W290904 | A89045 | HC-23SILH45 |
| 996. PIPERONAL 99%, FCC, FG | W291102 | B33292 | HC-23SIHQ78 |

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|---|--------------|----------|-----------------------|
| 997. PIPERONAL, NATURAL | W291113 | C41919 | HC-23SIOC12 |
| 998. PIPERONYL ISOBUTYRATE 98%, FG | W291307 | B38924 | HC-23SI6D14 |
| 999. P-MENTHA-8-THIOL-3-ONE MIXTURE OF CIS AND TRANS, 95%, FG | W317705 | B69971 | HC-23SI4F32 |
| 1000. P-MENTHA-8-THIOL-3-ONE MIXTURE OF CIS AND TRANS, NATURAL, 95%, FG | W317713 | B82648 | HC-23SIYI20 |
| 1001. POLYSORBATE 80 FG | W291706 | A26587 | HC-23SIYV18 |
| 1002. POTASSIUM ACETATE | W292001 | C44269 | HC-23SIVV07 |
| 1003. P-PROPYL ANISOLE 99%, FCC, FG | W293008 | A67008 | HC-23SIGZ92 |
| 1004. PRENYL ACETATE 98% | W420201 | B68448 | HC-23SI5719 |
| 1005. PROPANAL, 98%, NATURAL, FG | W292312 | A14824 | HC-23SI4J44 |
| 1006. PROPANIONALDEHYDE, =97%, FG | W292303 | B48910 | HC-23SIMC83 |
| 1007. PROPENYL GUAETHOL 99%, FCC | W292206 | B84351 | HC-23SIW435 |

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|--|--------------|----------|-----------------------|
| 1008. PROPIONIC ACID 99.5%, FCC, FG | W292400 | A17335 | HC-23SI8960 |
| 1009. PROPIONIC ACID NATURAL, 99%, FG | W292419 | B73159 | HC-23SI4J53 |
| 1010. PROPYL ACETATE 98%, FG | W292508 | B17630 | HC-23SIVZ66 |
| 1011. PROPYL ACETATE NATURAL, 97%, FCC, FG | W292516 | A80349 | HC-23SIUZ94 |
| 1012. PROPYL BUTYRATE 98% | W293407 | B74777 | HC-23SIC966 |
| 1013. PROPYL BUTYRATE NATURAL, 95% | W293415 | A60234 | HC-23SIO137 |
| 1014. PROPYL DISULFIDE 97%, FG | W322806 | B32331 | HC-23SIFC69 |
| 1015. PROPYL FORMATE 97% | W294306 | A41360 | HC-23SICQ25 |
| 1016. PROPYL GALLATE 98%, FCC | W294705 | A36757 | HC-23SISZ95 |
| 1017. PROPYL HEXANOATE NATURAL, 95%, FG | W294926 | B13978 | HC-23SI6544 |
| 1018. PROPYL LEVULINATE | W448001 | C29021 | HC-23SIFX79 |
| 1019. PROPYL MERCAPTAN 98% | W352101 | A89164 | HC-23SIOD47 |

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|--|--------------|----------|-----------------------|
| 1020. PROPYL PROPIONATE | W295809 | C37186 | HC-23SI7Q41 |
| 1021. PROPYL PROPIONATE NATURAL (US), 98%, FCC, FG | W295817 | A78357 | HC-23SITK85 |
| 1022. PROPYLENE GLYCOL 99.5%, FCC, FG | W294004 | A44558 | HC-23SI6O42 |
| 1023. P-TOLUALDEHYDE 97%, FG | W306800 | B13587 | HC-23SI6L42 |
| 1024. PYRAZINEETHANETHIOL 97%, FG | W323004 | B60454 | HC-23SIJP60 |
| 1025. PYRIDINE 99% | W296600 | B23721 | HC-23SIZV17 |
| 1026. PYRROLIDINE | W352316 | C35040 | HC-23SIVP08 |
| 1027. PYRUVALDEHYDE SOLUTION 40 WT. % IN H2O | W296902 | B65459 | HC-23SICH02 |
| 1028. PYRUVIC ACID NATURAL, 80% | W297070 | A69115 | HC-23SIKI13 |
| 1029. QUININE MONOHYDROCHLORIDE DIHYDRATE 90% | W297607 | B73411 | HC-23SIBZ55 |
| 1030. QUINOLINE | W347000 | C36289 | HC-23SINA50 |
| 1031. RAPESEED OIL, NATURAL | W834500 | C29846 | HC-23SIO139 |

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|---|--------------|----------|-----------------------|
| 1032. RESORCINOL =98% | W358908 | C14952 | HC-23SIO959 |
| 1033. RHODINOL MIXTURE OF L-CITRONELLOL AND GERANIOL, FCC | W298018 | B27677 | HC-23SIE145 |
| 1034. ROSEMARY OIL FCC | W299200 | B47184 | HC-23SIN174 |
| 1035. ROSEMARY OIL, CERTIFIED ORGANIC (NOP) | W299225 | B46336 | HC-23SIAZ67 |
| 1036. SABINENE, NATURAL, 75% | W530597 | A70062 | HC-23SIIY20 |
| 1037. SAFRANAL 88% | W338907 | B67095 | HC-23SIEM11 |
| 1038. SAGE OIL, CERTIFIED ORGANIC (NOP) | W300100 | A62859 | HC-23SINQ64 |
| 1039. SALICYLALDEHYDE 98%, FG | W300403 | B24238 | HC-23SIZK21 |
| 1040. SALICYLIC ACID 99%, FG | W398500 | A30819 | HC-23SIE858 |
| 1041. SANDALWOOD OIL NATURAL | W300500 | B59452 | HC-23SIH453 |
| 1042. SASSAFRAS OIL | W510483 | B58125 | HC-23SIIR47 |

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|--|--------------|----------|-----------------------|
| 1043. SCLAREOL NATURAL | W450210 | D23347 | HC-23SIBS25 |
| 1044. S-METHYL THIOACETATE, NATURAL, 96%, FG | W387619 | A14909 | HC-23SI4945 |
| 1045. SODIUM ALGINATE | W201502 | C36273 | HC-23SIZE28 |
| 1046. SODIUM BENZOATE 99%, FCC, FG | W302503 | B38553 | HC-23SI7F10 |
| 1047. SODIUM CITRATE DIHYDRATE 99%, FG | W302600 | B16352 | HC-23SIV662 |
| 1048. SODIUM PROPIONATE | W518905 | C42601 | HC-23SIUI99 |
| 1049. SOYBEAN OIL, CERTIFIED ORGANIC | W530261 | C35038 | HC-23SI6L48 |
| 1050. SPEARMINT OIL RECTIFIED, FCC, FG | W303208 | A76418 | HC-23SIRB62 |
| 1051. SPEARMINT OIL, CERTIFIED ORGANIC (NOP) | W303237 | B73405 | HC-23SI3C54 |
| 1052. STEARIC ACID 95%, FCC, FG | W303518 | A71722 | HC-23SITR29 |
| 1053. STYRAX | W303704 | A77797 | HC-23SIT976 |
| 1054. SUCCINIC ACID FCC | W502707 | B27956 | HC-23SIET47 |

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This is to certify that the following product(s) have been produced under the supervision of the Islamic Food and Nutrition Council of America (IFANCA). The production facility as well as component ingredients have been reviewed and approved. The product(s) are in compliance with the halal requirements under Islamic laws.

Date: **June 30, 2023**

Document #: **4739.15720.II230010**

Company Name & Address: **Sigma-Aldrich Corporation** 6000 N. Teutonia Avenue Milwaukee, Wisconsin 53209 USA

Plant Name & Address: **Aldrich Chemical Company, LLC** 5485 County Road V Sheboygan Falls, Wisconsin 53085 USA

| Product Name | Product Code | Halal-ID | Product Certificate # |
|--|--------------|----------|-----------------------|
| 1055. SUCCINIC ACID NATURAL | W471912 | D23351 | HC-23SICS13 |
| 1056. SUCCINIC ACID, >99%, FCC, FG | W471920 | B70083 | HC-23SI3834 |
| 1057. SUCROSE OCTAACETATE 97%, FG | W303801 | B19162 | HC-23SIXS79 |
| 1058. TANNIC ACID | W304204 | C37187 | HC-23SIPP92 |
| 1059. TAURINE 98%, FG | W381306 | B49168 | HC-23SIM785 |
| 1060. TEA TREE OIL | W390208 | A14368 | HC-23SI4A42 |
| 1061. TEA TREE OIL, CERTIFIED ORGANIC (NOP) | W390215 | B70787 | HC-23SI2238 |
| 1062. TERPINOLENE 90% | W304603 | A32150 | HC-23SIE268 |
| 1063. TERPINYL ACETATE 95% (MIXTURE OF ISOMERS) | W304700 | A69868 | HC-23SIJ318 |
| 1064. TERPINYL FORMATE, MIXTURE OF ISOMERS 97% | W305200 | A40301 | HC-23SIDD19 |
| 1065. TETRAHYDRO-4-METHYL-2-(2-METHYL-1-PROPENYL)-2H-PYRAN MIXTURE OF CIS AND TRANS, 98%, FG | W323608 | A69454 | HC-23SIJ316 |

Muhammad Munir Chaudry

Muhammad Munir Chaudry, Ph.D.
President



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|---|--------------|----------|-----------------------|
| 1066. TETRAHYDROFURFURYL ACETATE 97%, FG | W305502 | B10410 | HC-23SIMZ22 |
| 1067. THEASPIRANE MIXTURE OF CIS AND TRANS, 85% | W377406 | B64040 | HC-23SIKS89 |
| 1068. THIAMINE HYDROCHLORIDE 98%, FCC, FG | W332208 | A39965 | HC-23SICQ15 |
| 1069. THIAZOLE 99% | W361518 | A28538 | HC-23SIZG36 |
| 1070. THYME OIL RED | W306401 | A27108 | HC-23SI1920 |
| 1071. THYME OIL WHITE, FCC | W306509 | B82988 | HC-23SIX525 |
| 1072. THYME OIL, WHITE, CERTIFIED ORGANIC (NOP) | W306540 | A65315 | HC-23SIFR84 |
| 1073. THYMOL 99%, FCC | W306606 | B10523 | HC-23SIMT24 |
| 1074. TOLU BALSAM | W306908 | A47231 | HC-23SII464 |
| 1075. TRANS,TRANS-2,4-DECADIENAL 89%, FG | W313505 | B53307 | HC-23SIQY16 |
| 1076. TRANS,TRANS-2,4-DECADIENAL, NATURAL, 89% | W313520 | B11855 | HC-23SILG30 |
| 1077. TRANS,TRANS-2,4-HEPTANDIENAL 88% | W316407 | A79788 | HC-23SIV392 |

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| 1078. TRANS,TRANS-2,4-UNDECADIENAL, FG | W342203 | A77764 | HC-23SITI75 |
| 1079. TRANS,TRANS-2,6-NONADIENAL 95%, FG | W376604 | A27947 | HC-23SIZ332 |
| 1080. TRANS-2,CIS-6-NONADIEN-1-OL 95%, FCC, FG | W278009 | B54480 | HC-23SIRP27 |
| 1081. TRANS-2,CIS-6-NONADIENAL MIXTURE OF ISOMERS, 96%, FCC, FG | W337706 | A60309 | HC-23SIO638 |
| 1082. TRANS-2-DECENAL | W236608 | C29151 | HC-23SIXB32 |
| 1083. TRANS-2-DODECENAL | W240206 | B92006 | HC-23SIO302 |
| 1084. TRANS-2-HEPTENAL 95%, FG | W316504 | A35650 | HC-23SIST89 |
| 1085. TRANS-2-HEXEN-1-AL 95%, FCC, FG | W256005 | A28761 | HC-23SI2E39 |
| 1086. TRANS-2-HEXEN-1-AL NATURAL, 95%, FG | W256110 | B26841 | HC-23SICR40 |
| 1087. TRANS-2-HEXEN-1-AL, NATURAL | W256009 | C14546 | HC-23SIN152 |
| 1088. TRANS-2-HEXEN-1-OL 95%, FCC, FG | W256218 | A84722 | HC-23SIK622 |

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|--|--------------|----------|-----------------------|
| 1089. TRANS-2-HEXEN-1-OL, NATURAL | W256230 | C37179 | HC-23SIH379 |
| 1090. TRANS-2-HEXENOIC ACID 98%, FG | W316903 | B39414 | HC-23SI9T19 |
| 1091. TRANS-2-HEXENYL ACETATE 98%, FCC, FG | W256404 | A73491 | HC-23SIQO41 |
| 1092. TRANS-2-HEXENYL BUTYRATE 96% | W392618 | A33093 | HC-23SIFY73 |
| 1093. TRANS-2-METHYL-2-BUTENAL SUM OF ISOMERS, 99%, FG | W340707 | B55895 | HC-23SIR433 |
| 1094. TRANS-2-METHYL-2-BUTENOIC ACID 98%, FG | W359904 | A46208 | HC-23SI5Y52 |
| 1095. TRANS-2-METHYL-2-PENTENOIC ACID 98%, FCC, FG | W319503 | B33642 | HC-23SIHF82 |
| 1096. TRANS-2-NONEN-1-OL 96%, FCC | W337900 | A36868 | HC-23SITE97 |
| 1097. TRANS-2-NONENAL 95%, FG | W321303 | A92541 | HC-23SI7F71 |
| 1098. TRANS-2-OCTENAL 95%, STABILIZED, FG | W321508 | B82989 | HC-23SI5226 |
| 1099. TRANS-2-PENTENAL 95%, FG | W321818 | B52132 | HC-23SIQA12 |
| 1100. TRANS-2-TRIDECENAL 95%, FCC, FG | W308218 | B12729 | HC-23SILP34 |

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|---|--------------|----------|-----------------------|
| 1101. TRANS-2-UNDECENAL 95%, FG | W342300 | B83891 | HC-23SI5T33 |
| 1102. Trans-3-Hexen-1-ol | W435600 | C29019 | HC-23SIUR27 |
| 1103. TRANS-3-HEXENOIC ACID 98%, FG | W317004 | A48487 | HC-23SIHG69 |
| 1104. TRANS-3-OCTEN-2-ONE 98% | W341606 | B14903 | HC-23SI5F52 |
| 1105. TRANS-ANETHOLE | W208604 | C54811 | HC-23SIQL85 |
| 1106. TRANS-CINNAMALDEHYDE 98%, FCC, FG | W228605 | B63289 | HC-23SI3881 |
| 1107. TRANS-CINNAMIC ACID 99%, FG | W228818 | B65241 | HC-23SIFB01 |
| 1108. TRANS-CINNAMIC ACID NATURAL, 99%, FCC, FG | W228826 | B83720 | HC-23SIFD30 |
| 1109. TRANS-CINNAMYL BUTYRATE 96%, FCC | W229601 | B69260 | HC-23SIBE26 |
| 1110. TRANS-CINNAMYL PROPIONATE | W230103 | C56639 | HC-23SIJ491 |
| 1111. Triacetin | W200712 | A70433 | HC-23SII321 |
| 1112. TRIACETIN 99%, FCC, FG | W200700 | B13270 | HC-23SI6U40 |

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|---|--------------|----------|-----------------------|
| 1113. TRIBUTYRIN 97%, FG | W222305 | B70732 | HC-23SI2937 |
| 1114. Tridecanal | W433500 | C41925 | HC-23SISQ57 |
| 1115. TRIETHYL CITRATE 99%, FCC | W308307 | A65862 | HC-23SIF988 |
| 1116. TRIETHYL CITRATE, NATURAL, 99% | W308302 | A37127 | HC-23SIEP99 |
| 1117. TRIMETHYLAMINE SOLUTION 25 WT. % IN H2O, FG | W324125 | C87828 | HC-23SI6X27 |
| 1118. TRIPROPIONIN 97.1%, FCC, FG | W328618 | A41552 | HC-23SI5O29 |
| 1119. TRITHIOACETONE 99%, FG | W347507 | A31678 | HC-23SIEM62 |
| 1120. UNDECANAL FCC, 96% | W309206 | A16787 | HC-23SI9J58 |
| 1121. UNDECYL ALCOHOL 97%, FG | W309702 | A70726 | HC-23SIU324 |
| 1122. UNDECYLENIC ACID 95%, FG | W324701 | B35186 | HC-23SIGD92 |
| 1123. UNDECYLENIC ACID, 95%, FG | W324721 | A12864 | HC-23SI5D31 |
| 1124. UNDECYLENIC ACID, NATURAL | W324720 | C20193 | HC-23SITW28 |

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|---|--------------|----------|-----------------------|
| 1125. VALENCENE NATURAL, 65% | W344303 | B19306 | HC-23SIWD82 |
| 1126. VALERALDEHYDE 97%, FG | W309818 | A91351 | HC-23SI5I60 |
| 1127. VALERIC ACID 99%, FCC | W310107 | B82881 | HC-23SIGQ24 |
| 1128. VALERIC ACID NATURAL | W310162 | D12700 | HC-23SI3627 |
| 1129. VANILLIC ACID 97%, FG | W398802 | A36895 | HC-23SIEW98 |
| 1130. VANILLIN 97%, FCC, FG | W310700 | A90960 | HC-23SI6O58 |
| 1131. VANILLIN ACETATE 98%, FG | W310808 | A52089 | HC-23SIJX88 |
| 1132. VANILLIN ISOBUTYRATE 98%, FG | W375403 | B30059 | HC-23SIFT61 |
| 1133. VANILLIN NATURAL, 97%, FCC, FG | W310727 | B80637 | HC-23SIEN05 |
| 1134. VANILLYL BUTYL ETHER | W379620 | C39752 | HC-23SIGT88 |
| 1135. VANILLYL BUTYL ETHER, NATURAL | W379601 | C36291 | HC-23SIB961 |
| 1136. VANILLYL ETHYL ETHER NATURAL (US) | W381512 | D23340 | HC-23SI6Z39 |

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|---|--------------|----------|-----------------------|
| 1137. VANILLYLACETONE 96%, FG | W312401 | A39925 | HC-23SICX14 |
| 1138. VANILLYLACETONE NATURAL (US) | W312420 | D12701 | HC-23SIEC09 |
| 1139. VERATRALDEHYDE 98%, FG | W310905 | B77979 | HC-23SIY790 |
| 1140. YLANG-YLANG OIL EXTRA, FG | W311936 | A67595 | HC-23SIFH97 |
| 1141. YLANG-YLANG OIL, EXTRA, CERTIFIED ORGANIC (NOP) | W311942 | B27002 | HC-23SIEC42 |

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