17118 Aeromonas Isolation Agar (Base)

Used with Ampicillin for the selective, differential isolation of *Aeromonas hydrophila* from clinical and environmental specimens.

Composition:

Ingredients	Grams/Litre
Peptone, special	5.0
Yeast extract	3.0
L-Lysine hydrochloride	3.5
L-Arginine hydrochloride	2.0
Inositol	2.5
Lactose	1.5
Sorbose	3.0
Xylose	3.75
Bile salts	3.0
Sodium thiosulfate	10.67
Sodium chloride	5.0
Ferric ammonium citrate	0.8
Bromothymol Blue	0.04
Thymol Blue	0.04
Agar	12.5

Final pH 7.0 +/- 0.2 at 25°C

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C.

Appearance: Faintly to light beige coloured, homogeneous, free flowing powder.
Colour and Clarity: Slightly to deep green coloured, clear to slightly opalescent gel forms in petri plates.

Directions:
Suspend 28.15 g in 500 ml distilled water. Heat to boiling to dissolve the medium completely. Do not autoclave. Cool to 50°C and aseptically add rehydrated contents of 1 vial of Aeromonas Selective Supplement (Cat. No. 17119). Mix well and dispense for use as desired.

Principle and Interpretation:
Aeromonas Isolation Agar is based on the formulation of Ryan. It is a modification of the XLD Medium which supports the the growth of *Aeromonas, Plesiomonas, Proteus*, as well as *Enterobacteriaceae* species so the medium is used as universal medium in the investigation of enteric disease. This medium is made more selective by adding Ampicililin. (1, 2, 3, 4).
Aeromonas media are used for the detection of *Aeromonas* in tap water, bottled water and foods including meat, poultry, fish and seafood (5, 6, 7). *Aeromonas* species occur widlely in soil and water cause disease in fish and amphibians. Also found in untreated and chlorinated drinking water, raw food and raw milk (8, 9). It is observed that the major cause of gastrointestinal infections by *Aeromonas* species (9, 10) is because of ingesting infected water (11, 12).
Peptone special, amino acid and yeast extract provide nitrogenous compounds, carbon, sulfur, trace nutrients, vitamin B complex, which are essential for the growth of *Aeromonas*. Inositol, Lactose, Sorbose and Xylose are the carbohydrate substrates and sodium thiosulfate is important for the netralisation of chlorinated water.
Complex sodium thiosulfate-ferric ammonium citrate produces black-centered colonies when ferric ammonium citrate precipitates (H_2S production). The mixed indicator bromothymol blue and thymol blue changes its colour to yellow, when acid is formed. Sodium chloride is for the osmotic balance and bile salts inhibits growth of gram-positive bacteria.

Cultural characteristics after 24 hours at 37°C.

Organisms (ATCC)	Growth	Colony Characteristics
Aeromonas hydrophila (7966)	+++	dark green, opaque with dark centres
Escherichia coli (25922)	-	-
Pseudomonas aeruginosa (27853)	++/+++	Blue/grey, transluscent pinpoint
Salmonella serotype Typhi (6539)	-	-
Shigella flexneri (12022)	-	-

References:

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Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.