Dehydrated Culture Media
Bases / Media Supplements

Technical Information

Aeromonas Isolation Medium Base

Product Code: DM 1884

Application: - Aeromonas Isolation Medium Base with added Ampicillin supplement is recommended for selective and differential isolation of *Aeromonas hydrophila* from clinical and environmental specimens.

Composition**

Ingredients	Gms / Litre
Peptone, special	5.000
Yeast extract	3.000
L-Lysine hydrochloride	3.500
L-Arginine hydrochloride	2.000
Inositol	2.500
Lactose	1.500
Sorbose	3.000
Xylose	3.750
Bile salts	3.000
Sodium thiosulphate	10.670
Sodium chloride	5.000
Ferric ammonium citrate	0.800
Bromo thymol blue	0.040
Thymol blue	0.040
Agar	12.500
Final pH (at 25°C)	8.0±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Aeromonas species occur widely in soil and water where they cause disease in fish and amphibians.It has also been found in untreated and chlorinated drinking water, raw food and raw milk [9, 10]. It has been seen that the major cause of gastrointestinal infections by *Aeromonas* species [10, 11] is due to consumption of infected water [12, 13]. This medium therefore, may be considered as a useful diagnostic tool for investigating diarrhoeal disease [5, 14]. Aeromonas medium was found to be superior over some other medium for detection of *Aeromonas* species from tap water, bottled water and foods including meat, poultry, fish and seafood [6, 8].The formulation of Aeromonas Isolation Medium is based on thework done by of Ryan [1]. It is a modification of XLD Medium, which supports the growth of *Aeromonas , Plesiomonas , Proteus ,* as well as *Enterobacteriaceae* so the medium can be used as universal medium for the investigation of enteric disease. The selectivity of the medium is increased by the addition of Ampicillin (MS2039) as reported by several workers [2, 3, 4, 5].

The media has been further improved by Polumbo et.al. He formulated Starch Ampicillin (SA) Agar in which starch hydrolysis as the differential trait and ampicillin suppress the growth of background microflora [15].

Peptone special and yeast extract provide essential nitrogenous compounds. The salts provide the essential minerals and electrolytes. Sodium chloride maintains osmotic equilibrium. Lactose, sorbose, inositol and xylose are sources of carbon and energy. Ampicillin, bile salts and sodium thioglycollate makes the medium selective. Bromothymol blue and thymol blue acts as indicators giving the characteristic colony colour.

Methodology

Suspend 28.15 gramsof powder media in 500 ml distilled water. Shake it well & heat to boil to dissolve the medium completely. DO NOT AUTOCLAVE. Cool to 45-50°C and aseptically add rehydrated contents of 1 vial of Aeromonas Selective Supplement (MS2039). Mix well and pour into sterile Petri plates.

Quality Control

Physical Appearance

Light yellow to light tan homogeneous free flowing powder

Gelling

Firm, comparable with 1.25% Agar gel.

Colour and Clarity of prepared medium

Dark green coloured clear to slightly opalescent gel forms in Petri plates.

Reaction

Reaction of 5.63% w/v aqueous solution at 25°C. pH : 8.0±0.2

pH Range:-7.80-8.20

Cultural Response/Characteristics

DM 1884 Cultural characteristics observed with added Aeromanas Selective Supplement (MS2039) after an incubation at 35-37°C for 18-24 hours.

Cultural Response

Organism	Inoculum (CFU)	Growth	Recovery	Colony characteristics
Aeromonas hydrophila ATCC 7966	50-100	Luxuriant	>=50%	Dark green opaque with dark centre
Escherichia coli ATCC 25922	>=10^3	inhibited	0%	
Pseudomonas aeruginosa ATCC 27853	50-100	good-luxuriant	>=50%	Blue/grey, translucent pinpoint
Salmonella Typhi ATCC 6539	>=10^3	inhibited	0%	
Shigellaflexneri ATCC 12022	>=10^3	inhibited	0%	

Storage and Shelf Life

Dried media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

Prepared Media: 2-8^0 in sealable plastic bags for 2-5 days.

Further Reading

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12. George W. L., 1987, Clin. Microbiol., Newsletter 9, 121.
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