Aeromonas Isolation Medium Base

M884

Intended use

Recommended for selective and differential isolation of *Aeromonas hydrophila* from clinical and environmental specimens.

Composition**

Ingredients	g/ L
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

Directions

Suspend 28.15 grams in 500 ml purified / distilled water. Heat to boiling to dissolve the medium completely. **DO NOT AUTOCLAVE.** Cool to 45-50°C and aseptically add rehydrated contents of 1 vial of Amp Selective Supplement (FD039). Mix well and pour into sterile Petri plates.

Principle And Interpretation

Aeromonas species occur widely in soil and water where these species cause disease in fish and amphibians. Also found in untreated and chlorinated drinking water, raw food and raw milk (1,2). It is observed that the major cause of gastrointestinal infections by *Aeromonas* species (1,3) is because of ingesting infected water (4,5). This medium therefore, may be considered as a useful diagnostic aid for investigating diarrhoeal disease (6,7). Aeromonas medium was found to be superior over some other formulae for detection of *Aeromonas* species in tap water, bottled water and foods including meat, poultry, fish and seafood (8,9,10). Aeromonas Isolation Medium is based on the formulation of Ryan (11). It is a modification of XLD Medium, which supports the growth of *Aeromonas*, *Plesiomonas*, *Proteus*, as well as *Enterobacteriaceae* so the medium is used as universal medium in the investigation of enteric disease. The selectivity of the medium is increased by the addition of Ampicillin (FD039). The effectiveness of Ampicillin as a selective agent has been reported by several workers (6,12,3,14). It was noted that the recovery of *Aeromonas* species was very low from fresh foods of animal origin when cultivated on clinical media. Also difficulties were encountered in distinguishing the *Aeromonas hydrophila* group from the background microflora. Polumbo et.al formulated Starch Ampicillin (SA) Agar with starch hydrolysis as the differential trait and ampicillin to suppress the background microflora (15).

Peptone special and yeast extract provide essential nitrogenous and carbonaceous compounds, long chain amino acids, vitamins and other essential growth nutrients. 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.

Type of specimen

Clinical samples - faeces; food samples; water samples

Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (16,17).
For food, follow appropriate techniques for sample collection and processing as per guidelines (18).
For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (19). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic Use. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Addition of Ampicillin is required for selective isolation of *Aeromonas* and to eliminate contaminating flora.
2. It is advised to incubate for recommended period and temperature to avoid misinterpretation of results.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

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
7.80-8.20
Cultural Response
Cultural characteristics observed with added Aeromanas Selective Supplement (FD039) after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colony characteristics
Aeromonas hydrophila ATCC 7966 (00063*)	50-100	luxuriant	>=50%	dark green, opaque with dark centre
Escherichia coli ATCC 25922 (00013*)	>=10^4	inhibited	0%	
Pseudomonas aeruginosa ATCC 27853 (00025*)	50-100	good-luxuriant	>=50%	blue/grey, transluscent pinpoint
Salmonella Typhi ATCC 6539	>=10^4	inhibited	0%	
Shigella flexneri ATCC 12022 (00126*)	>=10^4	inhibited	0%	

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory technique (16,17).

Reference

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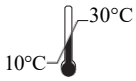

Storage temperature

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CE **CE Marking**

Do not use if package is damaged

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