



Technical Data

M-Aeromonas Selective Agar Base (Havelaar)

M1283

Intended Use:

Recommended for the detection of *Aeromonas* species in water and other liquid samples by membrane filter technique.

Composition**

Ingredients	g / L
Tryptose	5.000
Yeast extract	2.000
Dextrin	11.400
Sodium chloride	3.000
Potassium chloride	2.000
Magnesium sulphate	0.100
Ferric chloride	0.060
Sodium deoxycholate	0.100
Bromothymol blue	0.080
Agar	13.000
Final pH (at 25°C)	7.5±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 36.74 grams in 1000 ml purified / distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45- 50°C and aseptically add rehydrated contents of 1 vial of Amp Selective Supplement (FD082). Mix well and pour into sterile Petri plates.

Principle And Interpretation

Aeromonas species are natural inhabitants of aquatic environments worldwide. Procedures to isolate, enumerate and identify *Aeromonas* from water and wastewater sources is of significance, because of their role in causing human and animal disease, their ability to colonize treatment plants and distribution systems and their presence and distribution as an alternative indicator of the trophic state of water (1). M-Aeromonas Selective Agar Base is recommended for the detection of *Aeromonas* species in water sample by the membrane filter technique. This medium was formulated by Havelaar et al (2,3) and also complies with the recommendations of USEPA Approved Method 1605 (2001) which describes Ampicillin Dextrin Agar with Vancomycin (4). *Aeromonas* utilize Dextrin in the medium to form acids which are detected by the pH indicator bromothymol blue by changing the colour from blue to yellow.

Tryptose and yeast extract provide nitrogenous compounds along with other essential nutrients for growth of *Aeromonas*. Sodium chloride maintains the osmotic balance of the medium. *Aeromonas* forms acid from dextrin, which is indicated by change in colour from blue to yellow. Selectivity of the medium is increased by the addition of ampicillin. The effectiveness of ampicillin as a selective agent has been reported by several workers (5-8).

Membrane filters through which water samples have been passed are aseptically placed on M-Aeromonas Selective Agar Base plates. After an incubation at 35-37°C for 24 hours *Aeromonas* species appear as large, yellow colonies with a purple periphery.

Type of specimen

Water samples.

Specimen Collection and Handling:

For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards.(1) After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

Read the label before opening the container. The media should be handled by trained personnel only. 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 specimens. Safety guidelines may be referred in individual safety data sheets.

Please refer disclaimer Overleaf.

Limitations :

1. This medium is general purpose medium and may not support the growth of fastidious organisms.

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 greenish yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.3% Agar gel.

Colour and Clarity of prepared medium

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

Reaction

Reaction of 3.67% w/v aqueous solution at 25°C. pH : 7.5±0.2

pH

7.30-7.70

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 24 hours with added Amp Selective Supplement (FD082).

Organism	Inoculum (CFU)	Growth
<i>Aeromonas hydrophila</i> ATCC 7966	50-100	good-luxuriant
<i>Escherichia coli</i> ATCC 25922 (00013*)	≥10 ⁴	inhibited
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> ATCC 25923 (00034*)	≥10 ⁴	inhibited

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 sample must be decontaminated and disposed of in accordance with current laboratory techniques (9,10).

Reference

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- 3.Havelaar A. H., Vonk M., 1988, Lett. Appl. Microbiol. 7:169
- 4.United States Environmental Protection Agency (USEPA), Method 1605: *Aeromonas* in Finished Water by Membrane Filtration using Ampicillin Dextrin Agar with Vancomycin (ADA-V) October 2001.
- 5.Atkinson M., 1986 Culture; Vol. 7, No. 2.
- 6.Moulds M. T., 1983, The Lancet, 1:351.
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