Ampicillin Dextrin Broth Base

M1471

Ampicillin Dextrin Broth Base is recommended for differential and selective isolation of *Aeromonas* species from water samples using membrane filter technique.

Composition**

Ingredients	Gms / Litre
Tryptose	5.000
Dextrin	10.000
Yeast extract	2.000
Sodium chloride	3.000
Potassium chloride	2.000
Magnesium sulphate	0.200
Iron (III) chloride	0.100
Bromothymol blue	0.080
Final pH (at 25°C)	8.0±0.1

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 22.38 grams in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 55°C and aseptically add reconstituted contents of one vial of Ampicillin Dextrin Selective Supplement (FD107A). Mix well and dispense as desired.

Principle And Interpretation

Aeromonas is ubiquitous in the environment, present in all times of water worldwide, as well as in food and soil. There are approximately 16 different species in this genus, the best known of which is *Aeromonas hydrophila* . Physiologically, *Aeromonas* are similar to bacteria in the coliform group and can be isolated from similar environments including f aquatic environments, including freshwater, estuarine, brackish, and salt waters. Some members of this group of bacteria have been implicated in human disease, although not all strains appear to be pathogenic to humans(1). *Aeromonas* species can cause various enteric symptoms in children and adults (2, 3). This medium is used for differential and selective isolation of *Aeromonas* species from other gram negative species, from water samples using membrane filter technique (4).

Tryptose is the nitrogenous source and yeast extract is a rich source of vitamin B complex. 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 by the pH indicator bromo thymol blue. The effectiveness of ampicillin as selective agent has been reported by several workers (5,6,7). The selectivity of the medium is increased by the addition of ampicillin.

Quality Control

Appearance
Light yellow to greenish yellow homogeneous free flowing powder

Colour and Clarity of prepared medium
Dark green coloured clear solution in tubes

Reaction
Reaction of 2.24% w/v aqueous solution at 25°C. pH : 8.0±0.1

pH
7.90-8.10

Cultural Response
M1471: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth

Cultural Response

Aeromonas hydrophila ATCC 7966	50-100	luxuriant
Escherichia coli ATCC 25922	50-100	none-poor
Staphylococcus aureus ATCC 25923	>=10^3	inhibited

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Reference

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5. Richardson C. J., Robinson J. O., Wagener L. B., Burke V. J., 1982,Antimicrob., Chemother., 9:267.
6. Moulsdale M. T. 1983, The Lancet, 1:351.
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