

Technical Information

Salt Polymyxin Broth Base

Product Code: DM 1821I

Application: - Salt Polymyxin Broth Base is recommended for detection and enumeration of *Vibrio* species.

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue	9.000
Yeast extract	2.700
Sodium chloride	18.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance

Principle & Interpretation

Vibrios are easy to isolate from both clinical and environmental material, though some species may require growth factors and /or vitamins. *Vibrio parahaemolyticus* is the major cause of bacterial diarrhoea associated with the consumption of contaminated food products. Salt Polymyxin Broth (DM1821) is formulated according to the recommendation of APHA ⁽¹⁾. ISO Committee ⁽²⁾ has recommended a modification (DM1821I) of this medium for detection and enumeration of salt tolerant *Vibrio parahaemolyticus*. Peptic digest of animal tissue and yeast extract provide nitrogenous compounds, carbon, sulphur, trace elements and vitamin B complex, essential for the growth. Polymyxin B sulphate inhibits the growth of gram-positive organisms.

Weigh 50 grams of sample into a blender. Add 450 ml phosphate buffer saline dilution water and blend for 1 minute at 8000 rpm. This constitutes 1:10 dilution. Prepare 1:100, 1:1000, 1:10000 dilutions or higher, if necessary, in PCB. Inoculate 3 x 10 ml portion of the 1 : 10 dilutions into 3 tubes containing 10 ml of enrichment broth i. e. Salt Polymyxin Broth Base-2x concentration. This represents the 1 gram portion. Similarly inoculate 3 x 1 ml of dilutions into 10 ml of single strength Salt Polymyxin Broth Base. Incubate tubes at 35 ± 2°C for 24 hours.

After incubation a loopful is subcultured on solid medium such as TCBS Agar (DM1189) for further studies. *V. parahaemolyticus* appears as round, green or bluish colonies, 2-3 mm in diameter while *V. cholerae* forms yellow coloured colonies.

Methodology

Suspend 14.85 grams of powder media in 500 ml distilled water. Shake well & heat if necessary 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 Polymyxin B Selective Supplement (MS2003). Mix well and dispense as desired.

Quality Control

Physical Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Light yellow coloured clear solution without any precipitate

Reaction

Reaction of 2.97% w/v aqueous solution at 25°C. pH : 7.4±0.2

pH range

7.20-7.60

Cultural Response/Characteristics

DM 1821I: Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours with added Polymyxin B Selective Supplement (MS2003).



Dehydrated Culture Media
Bases / Media Supplements

Organism	Inoculum (CFU)	Growth
<i>Vibrio cholerae</i> ATCC 14035	50-100	luxuriant
<i>Vibrio parahaemolyticus</i> ATCC 17802	50-100	luxuriant

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: 2-8⁰ in sealable plastic bags for 2-5 days.

Further Reading

1. Downes F. P. and Ito K., (Eds.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th Ed., APHA, Washington, D.C.
2. International Organization for Standardization (ISO), 1990, Draft ISO/DIS 8914.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conforms solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at **CDH** is true and accurate.
- **Central Drug House Pvt. Ltd.** reserves the right to make changes to specifications and information related to the products at any time.
- Products are not intended for human or animal diagnostic or therapeutic use but for laboratory, research or further manufacturing of diagnostic reagents extra.
- Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.
- Do not use the products if it fails to meet specifications for identity and performance parameters.

