



Dehydrated Culture Media
Bases / Media Supplements

Technical Information

Horie Arabinose Ethyl Violet Broth

Product Code: DM 1924

Application: - Horie Arabinose Ethyl Violet Broth is recommended for the enrichment of *Vibrio* species.

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue	5.000
Beef extract	3.000
Sodium chloride	30.000
Bromothymol blue	0.030
Ethyl violet	0.001
Arabinose	5.000
Final pH (at 25°C)	9.0±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Horie Arabinose Ethyl Violet Broth (HAE, pH 9.0) was recommended for recovering *V. parahaemolyticus* from refrigerated and frozen oyster homogenates (1, 2, 3).

Vibrio parahaemolyticus is frequently isolated from coastal waters and seafood in temperate zones throughout the world. *V. parahaemolyticus* cells are often injured during food processing. Such injured cells may not be fully recovered by plating on selective media. Therefore, enrichment should involve special media to ensure the optimum recovery of both injured and healthy cells.

Peptic digest of animal tissue and beef extract serves as sources of carbon, nitrogen, vitamins and minerals in the medium. Sodium chloride at 3.0% concentration protects cold and heat injured cells against inactivation (4). Due to fermentation of arabinose, the medium turns yellow under acidic conditions. Bromothymol blue and ethyl violet are the pH indicators.

Weigh 50 grams of seafood sample into a blender. Add 450 ml Phosphate Buffer Saline dilution water and blend for 1 minute at 8000 rpm. This constitutes the 1:10 dilution. Prepare further dilutions and inoculate in 10 ml of Horie Arabinose Ethyl Violet Broth for enrichment. Incubate the tubes overnight at 35°C and streak a loopful from the top of the broth tubes containing the highest dilution showing growth onto TCBS Agar (DM1189).

Methodology

Suspend 43.03 grams of dehydrated media in 1000 ml distilled water. Mix thoroughly & heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Shake well before dispense as desired.

Quality Control

Appearance

Light yellow to greenish blue homogeneous free flowing powder

Colour and Clarity

Blue coloured, clear solution without any precipitate

Reaction

Reaction of 4.3% w/v aqueous solution at 25°C. pH : 9.0±0.2

pH Range

8.80-9.20





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Cultural Response

DM1924: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Colour of medium
<i>Vibrio cholerae</i> ATCC15748	50-100	good-luxuriant	yellow
<i>Vibrio parahaemolyticus</i> ATCC 17802	50-100	good-luxuriant	yellow

Storage and Shelf Life

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

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

Further Reading

1. Vanderzant C. and Splittstoesser D. F., (Eds.), 1992, Compendium of Methods for the Microbiological Examination of Foods, 3rd Ed., APHA, Washington, D.C.
2. Wong, H. 2003. Journal of Food and Drug Analysis Vol. 11. No. 2.p.79.
3. Horie S., Saheki K., Kozima T., Nara M. and Sekine Y., 1964, Bull. Jpn. Soc. Sci. Fish, 30: 786.
4. Beuchat L. R., 1977, Can.J. Microbiol., 23: 630.

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