Technical Information

Azide Dextrose MiVeg Broth

Product Code : VM1345

Application:- Azide Dextrose MiVeg Broth is a selective medium used for detection and enumeration of *Streptococci* in water, sewage, food and other material suspected of sewage contamination.

Composition

Ingredients	Gms / Litre
MiVeg special peptone	15.0
MiVeg extract	4.5
Dextrose	7.5
Sodium chloride	7.5
Sodium azide	0.2
Final pH (at 25°C)	7.2±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Azide Dextrose MiVeg Broth contains MiVeg special peptone and MiVeg extract (vegetable based) instead of Peptone special and Beef extract (animal based) respectively, so the medium becomes free from BSE/TSE risks.
This medium is the modification of Azide Dextrose Broth formulated by Rothe, Mullmann andSeligmann (1) for quantitative determination of *Enterococci* in water, sewage, foods and other materials suspected of contamination with sewage.
It can be used for enumeration of faecal *Streptococci* by MPN technique as it is similar to conventional Azide Dextrose Broth recommended by APHA (2). Ingredients like MiVeg special peptone, MiVeg extract and dextrose makes this medium highly nutritious. Sodium azide inhibits growth of gram-negative bacteria, allowing *Enterococci* to grow (1, 3, 4). *Enterococci* are more resistant to chlorine in water, hence are better indicators of sewage pollution than *Escherichia coli*. When large volumes of water samples are to be examined, double strengthmedium can be used. Turbidity in tubes indicate presence of *Enterococci*. the presence of *Enterococci* should be further confirmed by inoculation in EVA Broth (DM1426) or Bromo Cresol Purple Azide Broth (DM2212). Alternately MiVeg Media can be use EVA MiVeg Broth (VM1426) or Bromo Cresol Purple Azide MiVeg Broth (VM2212) or Glucose Azide MiVeg Broth (VM1982) can be used.

Methodology

Suspend 34.7 grams of powder media in 1000 ml distilled water for preparing single strength broth or use 69.4 grams in 1000 ml distilled water for double strength broth. Mix throughly. Heat if necessary to ensure complete solution. Dispense in test tubes and sterilize by autoclaving at 12 lbs pressure (118°C) for 15 minutes.
Warning: Sodium Azide has a tendency to form explosive metal azides with plumbing materials. It is advisable to use enough water to flush off the disposables.

Quality Control

Physical Appearance

Light yellow coloured, may have slightly greeenish tinge, homogeneous, free flowing powder.

Colour and Clarity of prepared medium

Amber coloured, clear solution without any precipitate

Reaction

Reaction of 3.47% w/v aqueous solution is pH 7.2 ± 0.2 at 25°C.

pH range

7.0-7.4

Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours

Organisms (ATCC)	**Growth**
Enterococcus faecalis (29212)	luxuriant
Escherichia coli (25922)	inhibited

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: 2-8^0 in sealable plastic bags for 2-5 days.

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1. Control
2. *Enterococcus faecalis*
3. Escherichia coli

Further Reading

1. Mullmann W.L. and Seligmann E.B., 1950, Am. J. Publ. Health, 40:286.
2. Eaton A.D., Clesceri L.S. and Greenberg A.E.,(Eds.),1995, Standard Methods for the Examination of Water and Wastewater, 19th ed, APHA, Washington DC.
3. Edwards S.J., 1933, J. Comp. Path. Therap., 46:2111.
4. Hartman G., 1937, Milchw. Forsch, 18:166.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform 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
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