# Technical Information

## Glucose Azide MiVeg Broth

## Product Code : VM1982

**Application:-** Glucose Azide MiVeg Broth is recommended for enumeration of faecal *Streptococci* from water and sewage by MPN technique.

## Composition

| Ingredients | Gms / Litre |
|---|---|
| MiVeg peptone | 10.00 |
| Yeast extract | 3.00 |
| Sodium chloride | 5.00 |
| Dipotassium phosphate | 5.00 |
| Monopotassium phosphate | 2.00 |
| Dextrose | 5.00 |
| Sodium azide | 0.25 |
| Bromo cresol purple | 0.03 |
| Final pH (at 25°C) | 6.7 ± 0.2 |

** Formula adjusted, standardized to suit performance parameters.

## Principle & Interpretation

Glucose Azide MiVeg Broth is prepared by adding MiVeg peptone in place of Peptic digest of animal tissue thus making it free from BSE/TSE risks. Glucose Azide MiVeg Broth is the modification of Glucose Azide Broth and it can be used for confirming the presence of *Enterococci* particularly in bacteriological analysis of water according to Hajna and Perry (1, 2). Preliminary testing of water sample for enumerating feacal *Streptococci* by MPN technique as cited in APHA (3) is done in the Azide Dextrose MiVeg Broth (VM1345) or equivalent Azide Dextrose Broth (DM1345).

Glucose Azide MiVeg Broth contains MiVeg peptone and yeast extract which supplies nitrogenous compounds, sulphur, amino acids and trace ingredients required for bacterial growth. Dextrose (D-glucose) is the fermentable carbon source and bromocresol purple serves as a pH indicator. The change in colour of the medium from purple to yellowindicates dextrose fermentation. Sodium chloride maintains osmotic balance of the medium. Sodium azide suppresses the growth of gram-negative organisms and thereby allows the cultivation of faecal *Enterococci*.

## Methodology

Suspend 30.3 grams of powder media in 1000 ml distilled water. Mix thoroughly. Heat to boiling to dissolve the medium completely. Dispense 5 ml volume in test tubes and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. For larger inocula, prepare double strength medium.

**Warning:** Sodium Azide has a tendency to form explosive metal azides with plumbing materials thus it is advisable to use enough water to flush off the disposables.

## Quality Control

**Physical Appearance**

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

**Colour and Clarity of prepared medium**

Purple coloured, clear solution without any precipitate.

**Reaction**

Reaction of 3.03% w/v aqueous solution is pH 6.7 ± 0.2 at 25°C.

**pH Range**

6.5-6.9

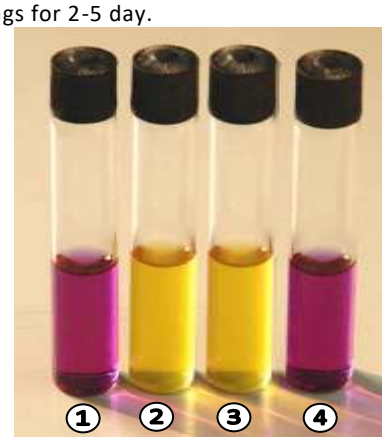
**Cultural Response/Characteristics**

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

| Organisms (ATCC) | Inoculum (CFU) | Growth | Colour change to yellow |
|---|---|---|---|
| *Enterococcus faecalis* (19433) | $10^2$ -$10^3$ | good-luxuriant | + |
| *Enterococccus hirae* (8043) | $10^2$ -$10^3$ | good-luxuriant | + |
| *Escherichia coli* (25922) | $10^2$-2 X$10^3$ | inhibited | – |
| *Staphylococcus aureus* (25923) | $10^2$-2 X$10^3$ | 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 day.




**VM1982 Glucose Azide MiVeg Broth**

1. Control
2. *Enterococcus faecalis*
3. *Enterococccus hirae*
4. *Escherichia coli*

## Further Reading

1. Hajna, A,A. 1951. Publ. Health Lab., 9:80.

2. Hajna, A. A. and Perry,C.A. 1943. Am. J. Publ. Health, 33:550.

3. Eaton, A.D., Clesceri, L.S and Greenberg, A.E. (eds.) 2005, Standard methods for the examination of water and wastewater, 21st edition, APHA, Washington, D.C

## Disclaimer :

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