

Technical Information

A-1 MiVeg Broth

Product Code :VM1874

Application:- A-1 MiVeg Broth is used for detecting faecal coliforms in water samples, wastewater, seawater and foods by a MPN Method.

Composition**

Ingredients	Gms / Litre
MiVeg hydrolysate	20.0
Lactose	5.0
Sodium chloride	5.0
Salicin	0.5
Polyethylene glycol p-isooctylphenyl ether (Triton X-100)	1.0
Final pH (at 25°C)	6.9 ± 0.1

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

This medium is prepared by using MiVeg hydrolysate in place of Casein enzymic hydrolysate, which makes it free from BSE/TSE risks. A-1 MiVeg Broth is the modification of A-1 Broth devised by Andrews and Presnell (1) for the recovery of *Escherichia coli* from estuarine water. A-1 MiVeg Broth like the conventional medium facilitates easy recovery of *Escherichia coli* within 24 hours instead of 72 hours which includes additional pre-enrichment step. This medium provides possible accurate results with a substantial reduction in false positive results. The formation of gas in the Durham's tube indicates the presence of faecal coliforms. The number of faecal coliforms is determined using the MPN table. MiVeg hydrolysate provides carbonaceous and nitrogenous substances required for bacterial metabolism. Lactose and salicin act as energy sources and sodium chloride maintains osmotic equilibrium. Polyethylene glycol p-isooctylphenyl ether acts as surfactant.

Methodology

Suspend 31.5 grams of powder media in 1000 ml distilled water. Mix thoroughly. Heat if necessary to dissolve the medium completely. Distribute 10ml amounts into tubes containing inverted Durham's tubes. Sterilize by autoclaving at 15 lbs pressure (121°C) for 10 minutes.

Quality Control

Physical Appearance

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

Colour and Clarity of prepared medium

Light amber coloured clear solution after cooling to room temperature.

Reaction

Reaction of 3.15% w/v aqueous solution pH 6.9±0.1 at 25°C

pH range

6.8-7.0

Cultural Response/Characteristics

Cultural characteristics observed after an incubation for 18-24 hours

Organisms (ATCC)

Inoculum (CFU)

Recovery at 35-37°C

Recovery at 44-45°C

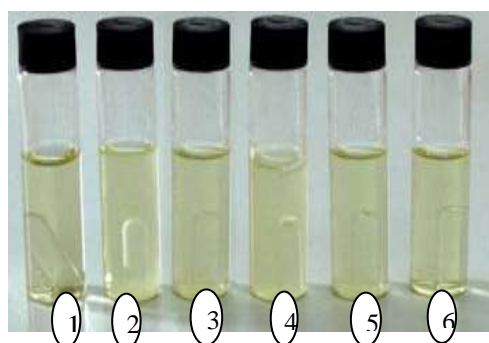
<i>Bacillus subtilis</i> (6633)	10^2 - 10^3	none	none
<i>Enterobacter aerogenes</i> (13048)	10^2 - 10^3	luxuriant*	poor
<i>Escherichia coli</i> (25922)	10^2 - 10^3	luxuriant w/gas	luxuriant w/gas
<i>Salmonella</i> serotype Typhimurium (14028)	10^2 - 10^3	luxuriant without gas	good without gas
<i>Enterococcus faecalis</i> 19433)	10^2 - 10^3	poor	none- poor

Key : * = may or may not produce gas.

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° in sealable plastic bags for 2-5 days.



VM1874 A-1 MiVeg Broth (Incubated at 37°C)

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|---|----------------------------------|
| 1. Control | 4. <i>Enterobacter aerogenes</i> |
| 2. <i>Escherichia coli</i> | 5. <i>Enterococcus faecalis</i> |
| 3. <i>Salmonella</i> serotype Typhimurium | 6. <i>Bacillus subtilis</i> |

Further Reading

1. Andrews and Presnell, 1972, Appl. Microbiol., 23:521

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
- **Central Drug House Pvt. Ltd.** reserves the right to make changes to specifications and information related to the products at any time.
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