

Technical Information

Brewer Thioglycollate MiVeg Medium

Product Code : VM1019

Application:- Brewer Thioglycollate MiVeg Medium is used for testing the sterility of biological products and for cultivation of enteric, anaerobic and microaerophilic organisms.

Composition

Ingredients	Gms / Litre
MiVeg peptone No.3	10.00
MiVeg infusion	17.50
Dextrose	5.00
Sodium chloride	5.00
Dipotassium phosphate	2.00
Sodium thioglycollate	0.50
Methylene blue	0.002
Agar	0.50
Final pH (at 25°C)	7.2 ±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Brewer Thioglycollate MiVeg Medium is prepared by using vegetable peptones in place of animal based peptone which makes it BSE/TSE risk free. This medium is the modification of Brewer Thioglycollate Medium prepared as per the original formula of Brewer (1, 2).

It contains highly nutritious ingredient like MiVeg peptone No.3 and Miveg infusion which gives luxuriant growth of even fastidious bacteria. Sodium thioglycollate helps to maintain anaerobic condition as well as neutralizes toxicity of mercurial compounds if present in the inoculum of the test material. 0.05% of agar is incorporated to maintain anaerobic conditions at the bottom of the broth. Methylene blue is a oxidation-reduction indicator, indicating oxygen content of the medium by exhibiting bluish-green colour to the medium in presence of oxygen. The uninoculated medium shows bluish green colour at the top indicating presence of oxygen in that part. Organisms which ferment dextrose and lower the pH to critical levels may not survive in this medium after growth has taken place.

Note : If more than the upper one third layer acquires bluish-green colour (absorbs oxygen), the dissolved oxygen can be removed by heating the medium in free flowing steam for 5-10 minutes or in a water bath until the green colour disappears.

Methodology

Suspend 40.5 grams of powder media in 1000 ml distilled water. Mix thoroughly. Boil to dissolve the medium completely. Dispense in tubes or in suitable containers as desired and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. The prepared medium should be stored in the dark till use.

Quality Control

Physical Appearance

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

Colour and Clarity of prepared medium

Yellow coloured, clear to very slightly opalescent fluid with upper 10% or less medium bluish green on standing.

Reaction

Reaction of 4.05 % w/v aqueous solution 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 18-24 hours

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery
* <i>Bacteroides melaninogenicus</i> (25848)	10 ² -10 ³	luxuriant	>70%
* <i>Clostridium sporogenes</i> (11437)	10 ² -10 ³	luxuriant	>70%
<i>Streptococcus mitis</i> (9895)	10 ² -10 ³	luxuriant	>70%
<i>Streptococcus pyogenes</i> (19615)	10 ² -10 ³	luxuriant	>70%

Key : * = when incubated anaerobically

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.

Further Reading

1. Brewer, 1940, J. Bact., 39:10
2. Brewer, 1940, J.A.M.A., 115:598.

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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