Technical Information

Thioglycollate MiVeg Medium w/o Indicator

Product Code : VM1191

Application:- Thioglycollate MiVeg Medium without indicator is used for cultivating wide variety of microorganisms, particularly obligate anaerobes from clinical specimens and other materials.

Composition

Ingredients	Gms / Litre
MiVeg hydrolysate	17.0
Papaic digest of soyabean meal	3.0
Dextrose	6.0
Sodium chloride	2.5
Sodium thioglycollate	0.5
L-Cystine	0.25
Sodium sulphite	0.1
Agar	0.7
Final pH (at 25°C)	7.0±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Thioglycollate MiVeg Medium w/o Indicator is prepared by using MiVeg hydrolysate instead of Casein enzymic hydrolysate thereby making the medium BSE/TSE risks free. This medium is the modification of the semisolid Thioglycollate medium w/o Indicator originally formulated by Brewer (1) for the growth of aerobic and anaerobic microorganisms (2, 3). The obligate aerobes grow at the top of the medium while anaerobes grow and survive at the bottom of the medium due to different degree of oxygen required for their growth. It is nutritious and favours the growth of *Clostridium butyricum*, *Campylobacter* species, *Bacteroides* species, *Pneumococci* etc. from minimal inocula. Methylene blue was reported toxic to few organisms so it has been omitted which acted as Eh indicator. *Brucella* species which fail to grow in the presence of indicator, can grow in this medium. By incorporating 10% v/v serum, this medium can be used for cultivation of fastidious *Trichomonas vaginalis*. Calcium carbonate neutralizes the acid produced during growth and prevents rapid growth and death of gram-negative cocci, *Clostridium perfringens* and other acid-sensitive bacteria. Therefore this can also be used as transportation medium.

It contains MiVeg hydrolysate, Papaic digest of soyabean meal, dextrose which supplies nitrogenous and carbonaceous compounds, fermentable carbohydrate and trace elements. Sodium thioglycollate and L-Cystine lowers the oxidation reduction potential of the medium which makes it suitable for the growth of anaerobes. The small amount of agar also helps to maintain anaerobic conditions.

Methodology

Suspend 30 grams of powder media in 1000 ml distilled water. Mix thoroughly. Heat to boiling to dissolve the medium completely. Dispense as desired and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool the medium in upright position. For maintenance of viability of cultures, add small amount of calcium carbonate into the containers before filling.

Quality Control

Physical Appearance

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

Colour and Clarity of prepared medium

Light amber coloured, slightly opalescent viscous solution.

Reaction

Reaction of 3.0 % w/v aqueous solution pH: 7.0 ±0.2 at 25°C

pH range

6.8-7.2

Cultural Response/Characteristics

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

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery
#*Bacteroides vulgatus* (8482)	10^2-10^3	poor - fair	>20%
#*Clostridium sporogenes* (11437)	10^2-10^3	good-luxuriant	>70%
**Candida albicans* (10231)	10^2-10^3	good-luxuriant	>70%
Bacillus subtilis (6633)	10^2-10^3	good-luxuriant	>70%
Micrococcus luteus (10240)	10^2-10^3	good-luxuriant	>70%
Neisseria meningitidis (13090)	10^2-10^3	good-luxuriant	>70%
Streptococcus pyogenes (19615)	10^2-10^3	good-luxuriant	>70%

Key : * = These cultures were incubated at 25-30°C for 2-7 days
= These cultures were incubated in anaerobic condition

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.

Further Reading

1. Brewer, 1940, J.Bact., 35:10
2. Vera, 1944, J. Bact., 47:59
3. Hansen, Price and Clements, 1952, J. Bact., 64:772.

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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