Technical Information

Mannitol Motility Test MiVeg Medium

Product Code : VM1770

Application:- Mannitol Motility Test MiVeg Medium is a semisolid medium recommended for determining motility and mannitol fermentation of bacteria.

Composition

Ingredients	Gms / Litre
MiVeg peptone	20.0
Mannitol	2.0
Potassium nitrate	1.0
Phenol red	0.04
Agar	3.0
Final pH (at 25°C)	7.6±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Mannitol Motility Test MiVeg Medium is prepared by using MiVeg peptone in place of animal based peptone which makes the medium BSE/TSE risks free. This medium is like the conventional medium is designed to differentiate bacteria on the basis of their motility and ability to ferment mannitol. It contains the highly nutritious MiVeg peptone which provides luxuriant growth of fastidious bacteria like *Staphylococci*. The medium is semisolid due to 0.3% agar which helps to detect motility. Motile bacteria produce diffused growth throughout the medium while non-motile bacteria grow only along the line of inoculation. Combination of mannitol and phenol red helps to detect mannitol fermenting bacteria by the colour change of the medium to yellow.

Methodology

Suspend 26 grams of powder media in 1000 ml distilled water. Mix thoroughly. Heat to boiling to dissolve the medium completely. Dispense into test tubes. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool the tube medium in an upright position.

Quality Control

Physical Appearance

Light pink coloured, homogeneous, free flowing powder.

Gelling

Semisolid, comparable with 0.3% Agar gel.

Colour and Clarity of prepared medium

Red coloured clear to slightly opalescent gel forms in tubes as butt.

Reaction

Reaction of 2.6 % w/v aqueous solution pH: 7.6 ±0.2 at 25°C

pH range

7.4-7.8

Cultural Response/Characteristics

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

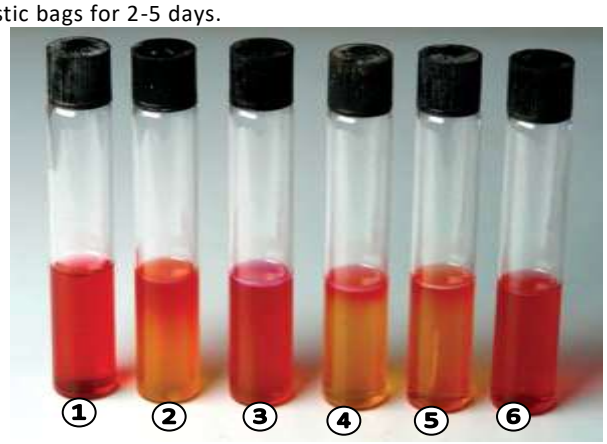
Organisms (ATCC)	Inoculum (CFU)	Growth	Motility	Mannitol fermentation
Escherichia coli (35218)	10^2-10^3	luxuriant	+	+
Proteus mirabilis (25933)	10^2-10^3	luxuriant	+	-

Proteus vulgaris (13315)	10^2-10^3	luxuriant	+	-
Salmonella serotype Typhi (6539)	10^2-10^3	luxuriant	+	+
Shigella sonnei (25931)	10^2-10^3	luxuriant	-	+
Staphylococcus aureus (25923)	10^2-10^3	luxuriant	-	+
Staphylococcus epidermidis (12228)	10^2-10^3	luxuriant	-	-

Key : Mannitol fermentation + = colour change to yellow
- = no change
Motility + = growth away from stabline (motile)
- = growth along the stabline (non-motile)

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.



VM1770 Mannitol Motility Test Mi Veg Medium

1. Control
2. *Escherichia coli*
3. *Proteus vulgaris*
4. *Salmonella* serotype Typhi
5. *Staphylococcus aureus*
6. *Staphylococcus epidermidis*

Further Reading

1. MacFaddin J.F., 2000(ed), Biochemical Tests for Identification of Medical Bacteria, 3rd edition, Lippinicott Williams and Wilkins, New York.

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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