Mannitol Motility Test Medium

Intended Use
Mannitol Motility Test Medium is a semisolid medium suitable for determining motility and mannitol fermentation.

Summary
Mannitol Motility Test Medium is designed to differentiate bacteria on the basis of their motility and ability to ferment mannitol.

Principle
The highly nutritious peptic digest of animal tissue supports luxuriant growth of fastidious bacteria like Staphylococci. Semisolid nature of the medium due to 0.3% agar helps to detect motility. Motile bacteria produce diffused growth throughout the medium while non-motile bacteria grow only along the line of inoculation. Fermentation of mannitol produces acidity in the medium. Phenol red is the pH indicator, which detects acidity by exhibiting a visible colour change from red to yellow.

Formula*

Ingredients	**g/L**
Peptic Digest of Animal Tissue	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

*Adjusted to suit performance parameters.

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Specimen Collection and Handling
Ensure that all samples are properly labelled. Follow appropriate techniques for handling samples as per established guidelines. Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure. The samples must be stored and tested within the permissible time duration. After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions
1. Suspend 26.04 g of the powder in 1000 mL purified / distilled water.
2. Boil with frequent agitation to dissolve the powder completely.
3. Dispense into sterile test tubes.
4. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.
5. Cool the tubed medium in an upright position.

Quality Control
Dehydrated Appearance: Light yellow to pink coloured, homogenous, free flowing powder.
Prepared Appearance: Pinkish red to red coloured, clear to slightly semisolid opalescent gel, forms in tubes as butts.
Cultural Response: Cultural characteristics is observed after an incubation at 35°C-37°C for 18-48 hours.

Organism (ATCC)	Growth	Mannitol Fermentation	Motility
Escherichia coli (25922)	Good	+	+
Proteus mirabilis (25933)	Good	-	+
Proteus hauseri (13315)	Good	-	+
Staphylococcus aureus subsp. *aureus* (25923)	Good	+	-
Staphylococcus epidermidis strain PCI 1200 (12228)	Good	-	-
Klebsiella pneumoniae subsp. *pneumoniae* (10031)	Good	+	-

Key:
(+) for Mannitol Fermentation - Yellow colour
(-) for Mannitol Fermentation - No colour change
(+) for Motility - Growth away from stabline causing turbidity
(-) for Motility - Growth along the stabline, surrounding medium remains clear

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. MacFaddin J. F., 2000, (Ed.), Biochemical Tests for the Identification of Medical Bacteria, 3rd Ed., Williams and Wilkins, New York.
2. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201130330100	Dehydrated Culture Media	100 g
201130330500	Dehydrated Culture Media	500 g