

CM 21156 - MANNITOL MOTILITY TEST MEDIUM

INTENDED USE

For studying mannitol fermentation and motility of bacteria.

PRODUCT SUMMARY AND EXPLANATION

Mannitol Motility Test Medium is designed to differentiate bacteria on the basis of their motility and ability to ferment mannitol. 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, which detects acidity by exhibiting a visible colour change from red to yellow.

COMPOSITION

Ingredients	Gms / Ltr
Peptic digest of animal tissue	20.000
Mannitol	2.000
Potassium nitrate	1.000
Phenol red	0.040
Agar	3.000

PRINCIPLE

Casein enzymic hydrolysate contains tryptophan, which is acted upon by certain microorganisms, resulting in the production of indole. Potassium nitrate acts as the substrate for determining nitrate reduction by microorganisms. Phenol red is the pH indicator.

INSTRUCTION FOR USE

- Dissolve 26.00 grams in 1000 ml distilled water.
- Heat to boiling to dissolve the medium completely.
- Dispense into test tubes.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool the tubed medium in an upright position.

QUALITY CONTROL SPECIFICATIONS

- Appearance of Powder : Light yellow to pink homogeneous free flowing powder.
- Appearance of prepared medium : Red coloured clear to slightly opalescent gel forms in tube as butts.
- pH (at 25°C) : 7.6±0.2

INTERPRETATION

Cultural characteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Mannitol fermentation	Motility	Incubation Temperature	Incubation Period
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Escherichia coli	35218	50-100	Luxuriant	Positive reaction, yellow colour	Positive, growth away from stabline causing turbidity	35-37°C	18-48 Hours
Proteus mirabilis	25933	50-100	Luxuriant	Negative reaction, no colour change or red	Positive, growth away from stabline causing turbidity	35-37°C	18-48 Hours
Proteus vulgaris	13315	50-100	Luxuriant	Negative reaction, no colour change or red	Positive, growth away from stabline causing turbidity	35-37°C	18-48 Hours
Salmonella Typhi	6539	50-100	Luxuriant	Positive reaction, yellow colour	Positive, growth away from stabline causing turbidity	35-37°C	18-48 Hours
Shigella sonnei	25931	50-100	Luxuriant	Positive reaction, yellow colour	Negative, growth along the stabline, surrounding medium Remains clear	35-37°C	18-48 Hours
Staphylococcus aureus	25923	50-100	Luxuriant	Positive reaction, yellow colour	Negative, growth along the stabline, surrounding medium Remains clear	35-37°C	18-48 Hours
Staphylococcus epidermidis	12228	50-100	Luxuriant	Negative reaction, no colour change or red	Negative, growth along the stabline, surrounding medium Remains clear	35-37°C	18-48 Hours

PACKAGING:

In pack size of 100 gm and 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES
