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Motility Test Medium

Commented [A1]:

Motility Test Medium is used for testing motility of bacteria.

REF: BS.1/NZ01.100.0100	100 Gram	REF: BS.1/NZ01.250.0250	250 Gram
REF: BS.1/NZ01.500.0500	500 Gram		

safety data sheet.

PRINCIPLE AND INTERPERTATION :

Bacterial motility can be observed either directly on a microscopic slide or demonstrated using motility media containing a low agar concentration of 0.4% or less (1). The use of such semisolid media for detecting bacterial motility was first reported by Tittsler and Sandholzer (2). Motility Test Medium represents a modification of their original formulation. Motility is indicated by a diffuse zone of growth spreading outward from the line of inoculation (1). The hanging-drop technique used in motility testing presents several practical difficulties, which are effectively overcome by culture-based methods employing semisolid media, as these methods provide macroscopic and cumulative results. Tryptose serves as a source of essential nutrients required for bacterial metabolism. Sodium chloride maintains the osmotic balance of the medium, while the small amount of agar helps to produce a semisolid consistency suitable for observing motility. Bacterial motility can be assessed directly by examining the tubes after incubation. Inoculation is performed by stabbing straight through the center of the medium. The medium is then incubated at an appropriate temperature for 18–40 hours. Non-motile organisms grow only along the line of inoculation, whereas motile organisms grow away from the line of inoculation and may even show growth throughout the medium. Any weak or equivocal motility results should be confirmed using a flagella stain or by direct wet-mount microscopy (hanging drop) (3,4).

MEDIA COMPOSITION

Item	Formula per liter of medium
tryptose	10.00 gm
Sodium chloride	5.00 gm
Agar	5.00 gm

Final pH (at 25°C) 7.2 ± 0.2 ** Formula adjusted, standardized to suit performance parameters.

PRECAUTIONS AND WARNINGS

Media to be handled by entitled and professionally educated person. Do not ingest or inhale.

Good Laboratories practices using appropriate precautions should be followed in:

- Wearing personnel protective equipment (overall, gloves, glasses,).
- Do not pipette by mouth.
- In case of contact with eyes or skin; rinse immediately with plenty of soap and water. In case of severe injuries; seek medical advice immediately.
- Respect country requirement for waste disposal.
S56: dispose of this material and its container at hazardous or special waste collection point.
S57: use appropriate container to avoid environmental contamination.
S61: avoid release in environment.

For further information, refer to the Motility Test Medium material

STORAGE AND STABILITY

BioScien Motility Test Medium Store between 10-30°C in a tightly closed container and the prepared medium at 15-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

PREPARATION

Suspend 20 grams in 1000 ml purified / distilled water. Heat to boiling to dissolve the medium completely. Dispense in tubes and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Allow tubed medium to cool to 45-50°C in an upright position.

Deterioration

The color The color of BioScien Motility Test Medium is a cream to yellow, homogeneous, free-flowing powder. The prepared medium appears as a light yellow, clear to slightly opalescent gel forming butts in tubes. If any physical changes are observed in the powder, or if there are signs of deterioration such as shrinking, cracking, or discoloration, the medium should be discarded. Hydrated media showing any evidence of contamination must also be discarded.

EQUIPMENT REQUIRED NOT PROVIDED

- Sterile petri dishes
- Incubator
- Autoclave

PERFORMANCE CHARACTERISTICS

-Cultural characteristics observed after an incubation at 35-37°C for 18 24 hours.

Organisms (ATCC)	Growth	
Escherichia coli ATCC 25922	luxuriant	positive, growth away from stabline causing turbidity
Klebsiella aerogenes ATCC 13048	luxuriant	negative, growth along the stabline, surrounding medium remains clear
Staphylococcus aureus subsp. aureus ATCC 25923 (00034)	luxuriant	negative, growth along the stabline, surrounding medium remains clear

Fits your perfection

QUALITY CONTROL

To ensure adequate quality control, it is recommended that positive and negative control included in each run. If control still out of range please contact **BioScien** technical support.

REFERENCE

1. Koneman E. W., Allen S. D., Janda W. M., Schreckenberger P. C., Winn W. C. Jr., (Eds.), 1992, Colour Atlas and Textbook of Diagnostic Microbiology, 4th Ed., J. B. Lippincott Company.
2. Tittsler R. P. and Sandholzer L. A., 1936, J. Bacteriol., 31:575.
3. Edward P. R. and Ewing W. H. 1972, Identification of Enterobacteriaceae 3rd Ed., Minneapolis, Burgess.2

SYMBOLS IN PRODUCT LABELLING		
	For in-vitro diagnostic use	 Number of <n> test in the pack
	Batch Code/Lot number	 Caution
	Catalogue Number	 Do not use if package is damaged
	Temperature Limitation	 Consult Instruction for use
	Expiration Date	
	Manufactured by	