

TECHNICAL SHEET

B1223	MANNITOL MOTILITY NITRATE MEDIUM				
Formula					
Ingredients :		gms/lit.			
Casein enzymic hydrolysate		10.00			
Potassium nitrate		1.00			
Mannitol		7.50			
Phenol red		0.04			
Agar		3.50			
Final pH (at 25°C) : 7.6 ± 0.2					
Directions :					
Suspend 22.04 grams in 1000 ml distilled water. 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 medium in an upright position.					
Principle :					
The highly nutritious casein enzymic hydrolysate supports luxuriant growth of bacteria. Semisolid nature of the medium due to 0.35% agar 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 differentiation of mannitol fermenting bacteria which turns the medium yellow. Members of Enterobacteriaceae characteristically reduce nitrate to nitrite which reacts with sulfanilic acid and dimethyl-1-naphthylamine to produce the red colour.					
QC Tests – (I) Dehydrated Medium					
Colour :		Light yellow to pink			
Appearance :		Homogeneous Free Flowing powder			
(II) Rehydrated medium					
pH (post autoclaving/heating) :		7.6 ± 0.2			
Colour (post autoclaving/heating) :		Red			
Clarity (post autoclaving/heating) :		clear to slightly opalescent semisolid gel			
(III) Q.C. Test Microbiological					
Cultural characteristics observed after 18-24 hours at 35-37°C.					
MICROORGANISM (ATCC)	GROWTH	MANNITOL FERMENTATION	MOTILITY	NITRATE REDUCTION*	
Escherichia Coli (35218)	Luxuriant	+, yellow colour	+	+	
Proteus Vulgaris (13315)	Luxuriant	- no colour change,	+	+	
Salmonella Typhi (6539)	Luxuriant	+, yellow colour	+	+	
Shigella Sonnei (25931)	Luxuriant	+, yellow colour	-	+	
Staphylococcus aureus (25923)	Luxuriant	+, yellow colour	-	+	
Staphylococcus epidermidis (12228)	Luxuriant	-, no colour change	-	+	
*- Red colour developed with sulfanilic acid and dimethyl-1-naphthylamine within 1-2 minutes					
Precautions :	1. For Laboratory Use. 2. Follow proper, established laboratory procedures in handling and disposing of infectious materials.				
Limitations :	1. Since the nutritional requirements of organisms vary, some strains may be encountered that fail to grow or grow poorly on this medium.				
Use :	It is used for studying mannitol fermentation, nitrate reduction and motility of bacteria.				
Storage :	Dehydrated medium- below 30°C Prepared medium- Between 2 to 8°C.				
Packing :	500 gm. bottle				
Product profile:	Reconstitution	Quantity on Preparation (500g)	pH (25°C)	Supplement	Sterilization
B1223	22.04 g/l	22.686 L	7.6 ± 0.2	NIL	121°C / 15 minutes

Disclaimer:

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related BIOMARK LABORATORIES publications.

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