PRODUCT SPECIFICATION SHEET

MacConkey Broth Purple (DM150BS)

Intended Use
MacConkey Broth Purple (DM150BS) is used for presumptive identification of coliforms from variety of specimens such as water, milk and food etc.

Product Summary and Explanation
MacConkey Broth is a modification of the original bile salt broth recommended by MacConkey[1] that contained 0.5% sodium taurocholate and litmus as an indicator. In later publications, MacConkey[2,3] suggested variations of this formulation using neutral red indicator instead of litmus. Childs and Allen[4] demonstrated the inhibitory effect of neutral red and substituted the less inhibitory bromcresol purple. Oxgall in the medium replaces the original sodium taurocholate to inhibit growth of gram-positive organisms.
MacConkey Broth Purple is recommended for detection and estimation of coliforms in foodstuff[5] and for presumptive identification of coliforms from a variety of specimens such as water, milk and food. This medium is recommended for use in microbiological examination of foodstuff[6] and for direct inoculation of water samples for coliform counts.[7] This medium is also used for the Examination of Milk and Dairy Products[8] and pharmaceutical preparations.[9]

Principles of the Procedure
MacConkey Broth Purple contains Peptic digest of animal tissue which provides essential growth nutrients for the growth microorganisms. Lactose is the fermentable source of carbohydrate. Bromocresol purple is the pH indicator in the medium, which turns the medium yellow under acidic condition produced by lactose fermenting organisms on lactose fermentation. The selective action of this medium is attributed to Sodium taurocholate which are inhibitory to most species of gram-positive bacteria. Gram-negative bacteria usually grow well on the medium and are differentiated by their ability to ferment lactose. Lactose fermenting strains grow as yellow coloured. The yellow colour is due to production of acid from lactose. Lactose non-fermenting strains, such as *Shigella* and *Salmonella* are colourless and transparent and typically do not alter appearance of the medium.

Formula / Liter

Ingredients	Gms / Liter
Peptic digest of animal tissue	20.00
Lactose	10.00
Sodium taurocholate	5.00
Sodium chloride	5.00
Bromo cresol purple	0.02
Final pH: 7.2 ± 0.2 at 25°C	
Formula may be adjusted and/or supplemented as required to meet performance specifications	

Precautions
1. For Laboratory Use only.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.

Directions
1. Suspend 40.02 grams of the medium in one liter of purified/ distilled water.
2. Heat if necessary to dissolve the medium completely.
3. Dispense as desired.
4. Autoclave at 121°C, 15 psi pressure, for 15 minutes / validated cycle.
5. Cool the tubes before inoculation.

PRODUCT SPECIFICATION SHEET

Quality Control Specifications

Dehydrated Appearance	ream to yellow homogeneous free flowing powder
Prepared Medium	Purple coloured clear solution in tubes
Reaction of 4.0% Solution	H : 7.2 ± 0.2 at 25°C
Gel Strength	Not Applicable

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

Sr. No.	Organisms	Results to be achieved			
		Inoculum (CFU)	Growth	Acid	Gas
1.	*Escherichia coli ATCC 8739*	50 -100	good-luxuriant	positive reaction, yellow colour	positive reaction
2.	*Staphylococcus aureus ATCC 6538*	>=10^3	inhibited		
3.	*Escherichia coli ATCC 25922*	50 -100	good-luxuriant	positive reaction, yellow colour	positive reaction
4.	*Escherichia coli NCTC 9002*	50 -100	good-luxuriant	positive reaction, yellow colour	positive reaction
5.	*Enterobacter aerogenes ATCC 13048*	50 -100	good-luxuriant	positive reaction, yellow colour	positive reaction
6.	*Salmonella Choleraesuis ATCC 12011*	50 -100	fair-good	negative reaction	positive reaction
7.	*Staphylococcus aureus ATCC 25923*	>=10^3	inhibited		

The organisms listed are the minimum that should be used for quality control testing.

Test Procedure
Refer to appropriate references for standard test procedures.

Results
Refer to appropriate references and test procedures for interpretation of results.

Storage
Store the sealed bottle containing the dehydrated medium at 10 - 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light.

Expiration
Refer to the expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitations of the Procedure
1. For identification, organisms must be in pure culture. Morphological, biochemical and/or serological tests should be performed for final identification.
2. Consult appropriate texts for detailed information and recommended procedures.

PRODUCT SPECIFICATION SHEET

Packaging
Product Name : MacConkey Broth Purple
Product Code : DM150BS
Available Pack sizes : 100gm / 500gm

References

1. MacConkey. 1901. Zentralbl. Bakteriol.
29:740.2. MacConkey. 1905. J. Hyg. 5:333.
3. MacConkey. 1908. J. Hyg. 8:322.
4. Childs and Allen. 1953. J. Hyg. Camb. 51:468.
5. Bureau of Indian Standards IS : 5401 - 1969.
6. Speck M. (Ed.), 1985, Compendium of Methods for the Microbiological Examination of Foods, 2nd ed., APHA, Washington, D.C.
7. Greenberg A. E., Clesceri L. S. and Eaton A. D., (Eds.), 1992, Standard Methods for the Examination of Water and Wastewater, 18th ed., APHA, Washington, D.C.
8. Marshall R. (Ed.), 1992, Standard Methods For the Examination of Dairy Products, 16th ed., APHA, Washington, D.C.
9. The United States Pharmacopoeia XXI and the National Formulary, 16th ed., 1985, United States Pharmacopeial Convention, Inc., Washington, D.C.

Further Information

For further information please contact your local MICROMASTER Representative.

MICROMASTER LABORATORIES PRIVATE LIMITED
Unit 38/39, Kalpataru Industrial Estate,
Off G.B. Road, Near 'R-Mall' , Thane (W) – 400607. M.S. INDIA.
Ph: +91-9320126789/9833630009/9819991103
Email: sales@micromasterlab.com

DM150BS QAD/FR/024,Rev.00