OXFORD LAB FINE CHEM LLP
ISO 9001-2008 Certified Company

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Oxford
Range of
Laboratory Chemicals

TECHNICAL DATA SHEET

MacConkey Sorbitol Agar Base

Principle

MacConkey agar is composed of peptone, proteose peptone, S-sorbitol, bile salt, sodium chloride, neutral red, crystal violet and agar. Peptone and proteose peptone provide nitrogen and other nutrients necessary for the growth of microorganism. D-sorbitol is a carbon source and plays a important role for selection of sorbitol fermenting microbes. Bile salt and crystal violet are selective agents, inhibit growth of grampositive organisms. Neutral red is pH indicator dye. Agar is solidifying agent. When lactose is fermented, acid is produced and result in bile salt precipitation. This medium is formulated by Rappaport and Henigh (1952) particularly isolation of enteropathogenic *Escherichia coli 0157:H7*, which ferments lactose but does not ferment sorbitol. Hence produce colorless colonies. Whereas the lactose fermenting colonies of coliform bacteria are pink in color and may be surrounded by a zone of bile precipitation.

Use: For isolation & identification of enteropathogenic Escherichia coli strains associated with infant diarrhoea.

Contents*

Ingredients	Gram/Liter
Peptone	17.000
Proteose Peptone	3.000
D-Sorbitol	10.000
Bile Salt	1.500
Sodium Chloride	5.000
Neutral Red	0.030
Crystal Violet	0.001
Agar	13.500
pH at 25˚C	7.1 ±0.2

*** Formula adjusted for optimum performance and parameters**

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Directions: Dissolve 50.00 grams in 1000 ml distilled water. Boil to dissolve the medium completely and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 min, cool it to 42-45 °C and distribute aseptically in petri plates. Ensure complete solidification and inoculate test sample aseptically.

Specimens' types analyzed

Pharmaceutical samples, clinical and non-clinical samples. food, dairy and water samples etc.

Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	**Light pink colored free flowing, homogeneous powder**
Reaction of 5.0% solution	**7.1 ±0.2 at 25 ˚C**
pH	**6.90- 7.30**
Gelling	**Firm comparable with 1.35% agar gel**
Color and clarity of ready medium	**Orange red colored opalescent gel**
Growth Promotion properties	**Best at ≤ 100 CFU at 32-37 ºC for 18-72 h**
Indicative properties	**Optimum at ≤ 100 CFU at 32-37 ºC for 18-48 h**
Negative control	**Performed using sterile distilled water**

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Different Microbial Response: Prepare media as per the label directions. Inoculate (Inoculum 50-100 CFU) and incubate at 35±2°C for 18-24 hours.

Organism	ATCC	Growth	Recovery	Colony Color
Escherichia coli	8739	Luxuriant	≥ 60%	Pink red with Bile precipitated
Salmonella typhimurium	14028	Luxuriant	≥ 60%	Pink
Escherichia coli serotype	O11 & O55	Luxuriant	≥ 60%	Colorless
Escherichia coli	O157:H7	Luxuriant	≥ 60%	Colorless
Shigella flexneri	9199	Luxuriant	≥ 60%	Colorless

Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label. Note: Sterilize media immediately after reconstitution.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. **Atlas, R. M. (2005). Handbook of media for environmental microbiology. CRC press.**
2. **Difco Manual (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.**
3. **Pelczar M. J., Chan E. C. and Kreig M. R., (1986), Microbiology, 5th Ed., McGraw Hill Book Co., New York.**
4. **Rand, M. C., Arnold E. Greenberg, and Michael J. Taras, (1976), Standard methods for the examination of water and wastewater. Prepared and published jointly by American Public Health Association, American Water Works Association, and Water Pollution Control Federation.**
5. **Rappaport, F., and E. Henig. (1952). Media for the isolation and differentiation of pathogenic Escherichia coli (serotypes 0111 and 055). J. Clin. Pathology. 5:361-362.**

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