OXFORD LAB FINE CHEM LLP
ISO 9001-2008 Certified Company

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Oxford
Range of
Laboratory Chemicals

TECHNICAL DATA SHEET

MacConkey Agar W/ Bromothymol Blue

Principle

MacConkey agar with bromothymol blue is composed of peptone, lactose, bile salt, sodium chloride, bromothymol blue and agar. Peptone provides nitrogen and other nutrients necessary for the growth of microorganism. Lactose is a carbon source and plays an important role for selection of lactose fermenting microbes. Bile salt is selective agents, inhibit growth of gram-positive organisms. Sodium chloride maintains the osmotic equilibrium of the medium. Bromothymol blue is pH indicator dye. Lactosefermenting organisms show prominent growth and produce acid and gas, causing the medium to turn yellow. Non-fermenting organisms produce good growth but will not produce acid or gas. Agar is a solidifying agent.

Use: For the detection of lactose fermenting enteric bacteria.

Contents*

Ingredients	Gram/Liter
Peptone	20.000
Lactose	10.000
Bile salt	1.500
Sodium chloride	5.000
Bromothymol Blue	0.030
Agar	15.000
pH at 25˚C	7.1 ± 0.2

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

Directions: Dissolve 51.5 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

Food, dairy and water samples, pharmaceutical samples, clinical and non-clinical samples. etc.

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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	**Beige to greenish yellow colored free flowing, homogeneous powder**
Reaction of 5.15% solution	**7.1 ± 0.2 at 25 ˚C**
pH	**6.90 – 7.30**
Gelling	**Firm comparable with 1.5% agar gel**
Color and clarity of ready medium	**Greenish color to slightly to medium opalescent gel**
Growth Promotion properties	**Best at ≤ 100 CFU at 32-37 ºC for 18-72 hours**
Indicative properties	**Optimum at ≤ 100 CFU at 32-37 ºC for 18-48 hours**
Negative control	**Performed using sterile distilled water**

Different Microbial Response: Cultural characteristics observed after incubation at 35±2°C for 18-24 hours. Inoculum 50-100 CFU.

Organism	ATCC	Growth	Recovery (%)	Colony color
Escherichia coli	8739	Luxuriant	≥ 60%	Yellow
Escherichia coli	25922	Luxuriant	≥ 60%	Yellow
Klebsiella aerogenes	13048	Luxuriant	≥ 60%	Yellow
Salmonella typhimurium	14028	Luxuriant	≥ 60%	Colorless to light blue
Staphylococcus aureus	25923	Inhibited	--	--
Enterococcus faecalis	14506	Inhibited	--	--

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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. **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.**

Disclaimer:

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