OXFORD LAB FINE CHEM LLP
ISO 9001-2008 Certified Company

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Oxford
Range of
Laboratory Chemicals

TECHNICAL DATA SHEET

MacConkey Broth w/ Neutral Red

Principle

MacConkey broth is composed of peptone, proteose peptone, lactose, bile salt, sodium chloride and neutral red. Peptone and proteose peptone provide 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 agent, inhibit growth of gram-positive organisms. Neutral red is pH indicator dye. The medium turns pink in case of lactose fermenters and yellow in case of non-lactose fermenters.

Use: For the selective enrichment and enumeration of coliforms from water.

Contents*

Ingredients	Gram/Litre
Peptone	20.000
Lactose	10.000
Bile Salt	5.000
Sodium Chloride	5.000
Neutral Red	0.070
pH at 25˚C	7.4 ±0.2

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

Directions: Dissolve 40.10 grams in 1000 ml distilled water. Boil to dissolve the medium completely and distribute in test tubes containing inverted Durham's tube. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 min, cool it to 42-45 °C and inoculate test sample aseptically.

Specimens' types analyzed

Pharmaceutical samples, clinical and non-clinical samples. food, dairy and water 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	**Light pink colored free flowing, homogeneous powder**
Reaction of 4.01% solution	**7.4 ±0.2 at 25 ˚C**
pH	**7.20- 7.60**
Color and clarity of ready medium	**Red colored clear solution**
Growth Promotion properties	**Best at ≤ 100 CFU at 32-37 ºC for 18-24 h**
Indicative properties	**Optimum at ≤ 100 CFU at 32-37 ºC for 18-24 h**
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	Acid production	Gas production
Escherichia coli	**8739**	**Luxuriant**	**Positive**	**Positive**
Escherichia coli	**25922**	**Luxuriant**	**Positive**	**Positive**
Klebsiella aerogenes	**13048**	**Luxuriant**	**Positive**	**Positive**
Proteus mirabilis	**12453**	**Luxuriant**	**Negative**	**Negative**
Salmonella typhimurium	**14028**	**Poor to Good**	**Negative**	**Negative**
Enterococcus faecalis	**14506**	**Poor to Good**	**Positive**	**Negative**
Staphylococcus aureus	**25923**	**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

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5. **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.**

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