OXFORD LAB FINE CHEM LLP
ISO 9001-2008 Certified Company

Regd Office: Unit no 12, 1st Floor,
Neminath Industrial Estate No.6,
Navghar, Vasai (East), Palghar - 410210.
Maharashtra, INDIA.

Tel: +91 250 2390032 / 2390989 / 2390990
Email: sales@oxfordlabchem.com /
info@oxfordlabchem.com
Web: www.oxfordlabchem.com

Oxford
Range of
Laboratory Chemicals

TECHNICAL DATA SHEET

MacConkey Agar w/o CV, NaCl & w/ 0.15% Bile Salts

Principle

MacConkey agar is a modification of the original bile salt-neutral red-lactose agar recommended by MacConkey (1905) and for selective isolation and differentiation of lactose fermenting and non-lactose fermenting enteric bacteria. Media consists of pancreatic digest of gelatin, lactose monohydrate, Bile salt, neutral red and agar. The pancreatic digest of gelatin provides essential nutrients, vitamins and nitrogenous factors and growth factors required for growth of microorganisms. Lactose monohydrate is a carbon and energy source for gram-negative lactose-fermenting *Escherichia coli* and other enteric bacteria. The Bile salt provides selectivity to media and inhibits the growth of most species of gram-positive organisms.Whereas, the neutral red is pH indicator, due to lactose fermentation, acid is produced and the absorption of neutral red and subsequent color change of the dye take place below pH 6.8. Lactose fermenting strains observed as red or pink colored.

Use: For the isolation and differentiation of lactose fermenting and lactose nonfermenting enteric bacteria

Contents*	
Ingredients	**Gram/Litre**
Pancreatic Digest of Gelatin	**20.000**
Lactose Monohydrate	**10.000**
Bile salt	**1.500**
Neutral Red	**0.075**
Agar	**12.000**
pH at 25˚C	**7.1 ±0.2**

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

Directions: Dissolve 43.57 grams in 1000 ml distilled water. Boil to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 min, cool it to 42-45 °C and distribute aseptically in petri plates and allow to solidify. Ensure complete solidification and inoculate test sample aseptically.

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Specimens' types analyzed
Pharmaceutical samples, clinical and non-clinical 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	**Pinkish beige colored free flowing, homogeneous powder**
Reaction of 4.37% solution	**7.1 ±0.2 at 25˚C**
pH	**6.90- 7.30**
Gelling	**Firm comparable with 1.2% agar gel**
Color and clarity of ready medium	**Orange red, slightly 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**

Different Microbial Response

Organism	ATCC	Inoculum CFU	Growth	Recovery	colony color
Escherichia coli	**8739**	**50-100**	**Luxurious**	**70-75%**	**Pink with bile ppt**
Enterobacter aerogenes	**13048**	**50-100**	**Luxurious**	**70-75%**	**Pink**
Salmonella enterica subsp.	**14028**	**50-100**	**Luxurious**	**70-75%**	**Colourless**
Staphylococcus aureus	**25923**	**50-100**	**Inhibited**	**--**	**---**

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Storage and Shelf Life: Hygroscopic; keep container tightly closed. Store in cool dry place.

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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