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

EMB Agar, Levine

Principle

EMB agar, Levine composed of peptone, lactose, dipotassium hydrogen phosphate, Eosin Y, methylene blue, and agar. Peptone as a source of carbon, nitrogen, vitamins and minerals. Lactose is fermentable carbohydrates. Dipotassium hydrogen phosphate act as buffer. Eosin and methylene blue are dyes provide selectivity to media and act as pH indicator and inhibitors. The media also differentiate between the lactose fermenters and non-lactose fermenters. Some gram-negative bacteria can not able to metabolize lactose or metabolize lactose very slowly. The lactose non-fermenters such as Salmonella sp. raise the pH of surrounding by deamination of protein thus resulting in change of pH, solubilize the Eosin Methyl red complex and grow as colorless colonies. While the coliforms or lactose fermenters produce acid and decrease pH abound the colonies, result in precipitation of both the dyes at acidic pH. produce black purple colonies, such as Escherichia coli forms characteristic green colored metallic sheen. Gram-positive bacteria are partially inhibited on the medium. Agar is a solidifying agent. For rapid identification of Candida albicans in clinical samples, EMB agar, Levine added with Chlortetracycline hydrochloride.

Use: Recommended for isolation, enumeration and differentiation of members of Enterobacteriaceae from pharma, dairy & food products

Contents*

Ingredients	Gram/Litre
Peptone	10.000
Lactose	10.000
Dipotassium hydrogen phosphate	2.000
Eosin Y	0.400
Methylene Blue	0.065
Agar	15.000
pH at 25˚C	7.1 ±0.2

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

Directions: Dissolve 37.46 grams in 1000 ml distilled water check. 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. Ensure complete solidification and inoculate test sample aseptically.

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Specimens types analyzed

The water samples, soil samples, food and dairy samples, pharmaceutical samples, 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 purple colored free flowing, homogeneous powder**
Reaction of 3.74% 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	**Purple with light greenish sheen colored opalescent gel**
Indicative properties	**Optimum at ≤ 100 CFU at 32-37 ºC for 18-48 h**
Growth Promotion properties	**Best at ≤ 100 CFU at 32-37 ºC for 18-72 h**
Negative control	**Performed using sterile distilled water**

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Different Microbial Response
Incubation Temperature - 33-37ºC & Incubation period - 18-48 h

Organism	ATCC	Growth	Recovery	Colony Color
Escherichia coli	8739	Luxuriant	≥ 60%	Bluish-black color with green metallic sheen
Escherichia coli	25922	Luxuriant	≥ 60%	Bluish-black color with metallic sheens
Klebsiella aerogenes	13048	Luxuriant	≥ 60%	Pinkish red, without sheen
Salmonella typhimurium	14028	Luxuriant	≥ 60%	Translucent Amber Colored Colonies
*Candida albicans**	10231	Luxuriant	≥ 60%	Colorless
Staphylococcus aureus	25923	None-poor	≤ 10%	Colorless

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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