OXFORD LAB FINE CHEM LLP
ISO 9001-2008 Certified Company

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Oxford
Range of
Laboratory Chemicals

TECHNICAL DATA SHEET

EMB Agar (Eosine methylene Blue Agar)

Principle

Eosine methylene blue agar composed of peptone, lactose, sucrose, dipotassium phosphate, Eosin Y, methylene blue and agar. Peptone as a source of carbon, nitrogen, vitamins and minerals. Lactose and sucrose are fermentable carbohydrates. Dipotassium 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. Hence, the sucrose is used as secondary carbohydrate source. While 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.

Use: Recommended for the differential isolation of the gram-negative Enteric Bacilli from clinical and nonclinical samples.

Contents*

Ingredients	Gram/Litre
Peptone	10.000
Lactose	5.000
Sucrose	5.000
Dipotassium Phosphate	2.000
Eosin Y	0.400
Methylene Blue	0.065
Agar	13.500
pH at 25˚C	7.2 ±0.2

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

Directions: Dissolve 36.00 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 3.6% solution	**7.2 ±0.2 at 25 ˚C**
pH	**7.00- 7.40**
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	Inoculum CFU	Growth	Recovery (%)	Colony Color
Escherichia coli	8739	50-100	Luxurious	70-80%	Black color with Shiny Metallic Green Sheen
Salmonella typhi	14028	50-100	Poor	50-60%	Translucent Amber Colored Colonies
Bacillus subtilis	6633	50-100	Inhibited	-	-
Staphylococcus aureus	6538	50-100	Inhibited	-	-

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

1. Atlas, R. M. (2004). Handbook of microbiological media. CRC press.
2. Atlas, R. M. (2005). Handbook of media for environmental microbiology. CRC press.
3. Difco Manual (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.
4. Rand, M. C., Arnold E. Greenberg, and Michael J. Taras. 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., 1976.

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