

Technical Data Sheet

☒ Eosin Methylene-Blue (EMB) Lactose Sucrose Agar

Ordering number: 1.01347.0500

Eosin methylene-blue (EMB) lactose sucrose agar is a selective agar proposed by Holt-Harris and Teague (1916) for the detection and isolation of pathogenic Gram-negative *Enterobacteriaceae*.

EMB Agar is recommended for use in examining clinical specimens for enteric pathogens.

IVD in vitro diagnosticum - For professional use only

Mode of Action

EMB Agar is a low selective medium containing lactose and sucrose, which allow lactose- and sucrose-negative salmonellae and shigellae to be distinguished from lactose- positive coliform organisms and lactose-negative, sucrose-positive, accompanying flora (e.g. *Proteus vulgaris*, *Citrobacter*, *Aeromonas hydrophila*). The use of Eosin Y and Methylene Blue as indicators allows differentiation between colonies of lactose fermenting and non-fermenting organisms. Growth of undesired accompanying microorganisms, particularly Gram-positive bacteria, is largely inhibited by the dyes present in the medium.

Typical Composition

Peptones	10 g/l
K ₂ HPO ₄	2 g/l
Lactose	5 g/l
Sucrose	5 g/l
Eosin Y, yellowish	0.4 g/l
Methylene Blue	0.07 g/l
Agar-Agar	13.5 g/l

Preparation

Suspend 36 g/l. Autoclave 15 min at 121 °C and pour plates.

The appearance of the plates is clear and reddish-brown to violet-brown.

The pH value at 25 °C is in the range of 6.9-7.3.

Specimen

e.g. Stool.

Clinical specimen collection, handling and processing, see general instructions of use.

Experimental Procedure and Evaluation

Inoculate by thinly spreading the sample material on the surface of the culture medium.

Incubation: 24 h at 35 °C aerobically.

Appearance of Colonies	Microorganisms
Translucent, amber coloured	<i>Salmonella</i> and <i>Shigella</i>
Greenish, metallic sheen in reflected light, blue-black centre in transmitted light	<i>Escherichia coli</i>
Colonies are larger than those of <i>Escherichia coli</i> , mucoid, confluent, grey-brown centre in transmitted light	<i>Enterobacter</i> , <i>Klebsiella</i> and others



Escherichia coli, *Serratia marcescens*

Storage

The product can be used for sampling until the expiry date if stored upright, protected from light and properly sealed at +15 °C to +25 °C.

After first opening of the bottle the content can be used up to the expiry date when stored dry and tightly closed at +15 to +25° C.

Disposal

Please mind the respective regulations for the disposal of used culture medium (e.g. autoclave for 20 min at 121 °C, disinfect, incinerate etc.).



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Quality Control

Control Strains	ATCC #	Incubation	Expected Results
<i>Escherichia coli</i>	25922	24 h at 35 °C	Growth good to very good, metallic lustre
<i>Escherichia coli</i>	11775	24 h at 35 °C	Growth good to very good, metallic lustre
<i>Escherichia coli</i>	194	24 h at 35 °C	Growth good to very good, metallic lustre
<i>Escherichia coli</i>	23716	24 h at 35 °C	Growth good to very good, metallic lustre
<i>Escherichia coli</i>	8739	24 h at 35 °C	Growth good to very good, metallic lustre
<i>Enterobacter cloacae</i>	13047	24 h at 35 °C	Growth fair to very good, no or poor metallic lustre
<i>Salmonella typhimurium</i>	14028	24 h at 35 °C	Growth good to very good, no metallic lustre
<i>Shigella flexneri</i>	12022	24 h at 35 °C	Growth good to very good, no metallic lustre
<i>Bacillus cereus</i>	11778	24 h at 35 °C	No to poor growth, no metallic lustre

Please refer to the actual batch related Certificate of Analysis.

Literature

Holt-Harris, J.E. and Teague, O.A. (1916). A new culture medium for the isolation of *Bacillus typhosus* from stools. J. Infect. Dis. **18**: 596-600.

Murray, P. R., Baron E.J., Tenover F.C. and Tenover F.C. and Tenover R.H. (eds.) (1995). Manual of clinical microbiology, 6th edition. American Society for Microbiology, Washington, D.C.

Pezzlo, M. (1992). Aerobic bacteriology, p. 1.0.1 – 1.20.47. In H. D. Isenberg (ed.). Clinical microbiology procedures handbook, vol. 1. American Society for Microbiology, Washington, D.C.

Ordering Information

Product	Cat. No.	Pack size
EMB Agar (Eosin Methylene-blue Lactose Sucrose Agar)	1.01347.0500	500 g

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