# EMB Agar (Eosin Methylene-blue Lactose Sucrose Agar)

Selective agar proposed by HOLT-HARRIS and TEAGUE (1916) for the detection and isolation of pathogenic Enterobacteriaceae.

IVD

*In Vitro Diagnostic Medical Device –*

*For professional use only*

CE

Version 17-10-2008
Merck KGaA, 64271 Darmstadt

*See also General Instruction for Use „How to use Dehydrated Culture Media"*

*For MSDS, warnings and precautions see our website: www.merck-chemicals.com*

## Principle

Microbiological method.

## Mode of Action

The lactose and sucrose contained in this medium 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 growth of undesired accompanying microorganisms, particularly Gram-positive bacteria, is largely inhibited by the dyes present in the medium.

## Typical Composition (g/litre)

Peptones 10.0; di-potassium hydrogen phosphate 2.0; lactose 5.0; sucrose 5.0; eosin Y, yellowish 0.4; methylene blue 0.07; agar-agar 13.5.

## Preparation

Suspend 36 g/litre, autoclave (15 min at 121 °C), pour plates.

pH: 7.1 ± 0.2 at 25 °C.

The plates are clear and reddish-brown to violet-brown.

## Storage

Usable up to the expiry date when stored dry and tightly closed at +15 to +25° C. Protect from light.

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.

## Specimen

e.g. Stool. Urine.

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

## Experimental Procedure and Evaluation

Inoculate by spreading the sample material thinly on the surface of the plates.

Incubation: 24 hours at 35 °C aerobically.

| Appearance of Colonies | Microorganisms |
|---|---|
| Translucent, amber coloured | Salmonella, Shigella |
| Greenish, metallic sheen in reflected light, blue-black centre in transmitted light | Escherichia coli |
| Colonies are larger than those of E. coli, mucoid, confluent, gray-brown centre in transmitted light | Enterobacter, Klebsiella and others |

## Literature

HOLT-HARRIS, J.E., a. TEAGUE, O.A.: A new culture medium for the isolation of Bacillus typhosus from stools. - **J. Infect. Dis., 18**; 596-600 (1916).

## Ordering Information

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

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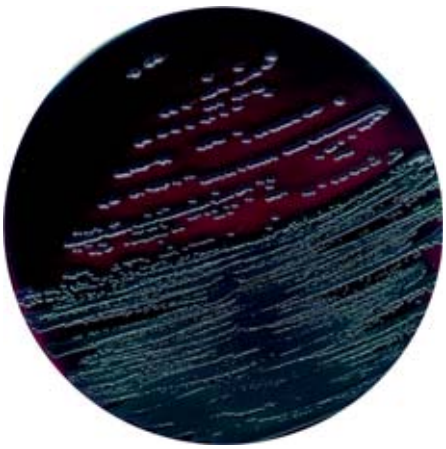
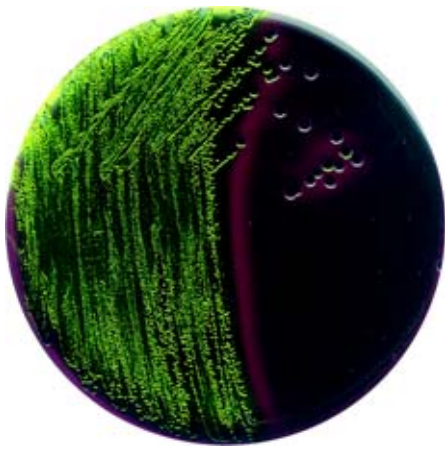
## Quality control

| Test strains | Growth | Colony colour | Metallic sheen |
|---|---|---|---|
| Escherichia coli ATCC 25922 | good / very good | violet | + |
| Escherichia coli ATC 11775 | good / very good | violet | + |
| Escherichia coli 194 | good / very good | violet | + |
| Escherichia coli ATCC 23716 | good / very good | violet | + |
| Escherichia coli ATCC 8739 | good / very good | violet | + |
| Enterobacter cloacae ATCC 13047 | fair / very good | pink, dark centre | + / - |
| Salmonella typhimurium ATCC 14028 | good / very good | colourless, transparent | - |
| Shigella flexneri ATCC 12022 | good / very good | colourless, transparent | - |
| Bacillus cereus ATCC 11778 | none / poor | | - |
| Klebsiella pneumoniae ATCC 13883 | fair / very good | pink, dark centre | + / - |



Enterobacter cloacae ATCC 13047



Escherichia coli ATCC 25922