

Product Information

EMB BROTH (EOSIN METHYLENE BLUE BROTH)

Product Number **E 5149**

Product Description

EMB Broth is recommended for the isolation and differentiation of gram negative enteric bacteria from clinical and nonclinical specimens. Methylene blue and Eosin-Y inhibit gram positive bacteria. The ratio of eosin and methylene blue is adjusted to 6:1. Sucrose is added to the medium as an alternative carbohydrate source for typically lactose-fermenting, gram -negative bacilli. The coliforms produce purplish black colonies due to taking up of methylene blue-eosin when the pH drops.

Nonfermenters raise the pH of the medium by oxidative deamination of protein, which solubilizes the methylene blue-eosin resulting in colorless colonies.

Components

Item	g/L
Peptic Digest of Animal Tissue	10.00
Dipotassium Phosphate	2.00
Lactose	5.00
Sucrose	5.00
Eosin-Y	0.40
Methylene Blue	0.065

Final pH (at 25°C) 7.2 ± 0.2

Precautions and Disclaimer For laboratory use only. Not for drug, household or other uses.

Preparation Instructions

Suspend 22.5 grams of EMB Broth in 1000 mls of distilled water. Heat to dissolve the medium completely. Dispense and sterilize by autoclaving at

15 lbs. pressure (121°C) for 15 minutes. Avoid overheating. Cool to 50°C and shake the medium in order to oxidize the methylene blue (i.e. to restore its blue color) and to suspend the flocculent precipitate.

Storage

Store the dehydrated medium at 24°C and the prepared medium at 2-8°C.

Product Profile

Appearance	Light purple colored, homogeneous, free flowing powder.
Color and Clarity	Reddish-purple colored opalescent solution.
Cultural Response	Cultural characteristics observed after 18-24 hours at 35°C.

Organisms (ATCC)	Growth
<i>Escherichia coli</i> (25922)	luxuriant
<i>Klebsiella pneumoniae</i> (13883)	good
<i>Proteus mirabilis</i> (25933)	luxuriant
<i>Salmonella typhimurium</i> (14028)	luxuriant
<i>Enterobacter aerogenes</i> (13048)	good
<i>Staphylococcus aureus</i> (25923)	inhibited

References:

- Howard, B.J., (1994). Clinical and Pathogenic Microbiology, 2nd Edition. Mosby Year Book, Inc.
- American Type Culture Collection, Manassas Va., U.S.A

E5149 4/99

Sigma brand products are sold through Sigma-Aldrich, Inc.

Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.