Eosin Methylene Blue Agar, EMB | AS-1223

A slightly selective and differential medium for isolating gram-negative enteric bacteria.

Enterobacteriaceae family members are isolated and differentiated using Eosin Methylene Blue (EMB) agar, a selective and differential culture medium. Lactose and sucrose are added to the medium as carbohydrate substrates, along with methylene blue and eosin Y dyes. These elements allow lactose and/or sucrose fermenters to be distinguished from non-fermenters. Dipotassium phosphate stabilizes pH while peptones supply vital nutrients. Because of dye precipitation, *coliform* bacteria display distinctive blue-black colonies; *Escherichia coli* frequently produces a metallic sheen. Colonies of non-fermenting organisms are usually colorless.

Composition (gr/L)	
Peptone	10
Lactose	10
Dipotassium Phosphate	2
Eosin Y	0.4
Methylene Blue	0.065
Agar	13.5
Final pH at 25°C	7.1 ± 0.2

Preparation

Dissolve 36 g of the powder into 1 litter distilled water. Autoclave at 121 °C for 15 minutes.

Quality Control

Dehydrated Appearance: Fine, homogeneous, may contain up to a large amount of minute to small dark red purple particles.

Prepared Appearance: Medium to dark, green orange brown, hazy.

Reaction of 3.6% Solution at 25°C: pH 7.1 ± 0.2

Microbial Test Results

Incubate at 35±2 °C for 24 hours.

Organism (ATCC)	Recovery	Reaction
Escherichia coli (25922)	Good	Metallic sheen
Enterococcus faecalis (29212)	Partial inhibition	-
Salmonella enterica subsp. enterica serotype Typhi (19430)	Good	No metallic sheen
Shigella flexneri (12022)	Good	No metallic sheen

Storage

Keep the container at 15-30 °C and prepared medium at 2-8 °C.