

Levine EMB Agar

Catalog : HB0107-9

Levine EMB Agar is used for the isolation and differentiation of *Escherichia Coli* and *Enterobacter* and for the Rapid Identification of *Candida Albicans* According to LEVINE.

Approximate Formula:

Ingredients	gm/liter
Peptone	10.0
Lactose	10.0
Di-potassium Hydrogen Phosphate	2.0
Agar	15.0
Eosin Y	0.40
Methylene Blue	0.065
Final pH 7.0±0.2 at 25 °C	

*Adjusted and/or supplemented as required to meet performance criteria.

Directions:

Suspend 37.4g of the medium in one liter of distilled water or deionized water. Mix well and heat with frequent agitation to completely dissolve the powder. Sterilize in an autoclave at 121 °C (15 lbs.) for 15 minutes.

Principle and Interpretation:

Eosin-Y and methylene blue makes the medium slightly selective and inhibit certain gram-positive bacteria. Both dyes act as indicator and inhibiting agent. These dyes differentiate between lactose fermenters and non-fermenters. Eosin Y and methylene blue forms a complex at acidic pH, which acts as inhibiting agent. Essential nutrients and growth factors are provided by Peptone. Phosphates acts as good buffering agent. *E.coli* forms colonies with green metallic sheen, indicating strong lactose fermentation. Agar is the solidifying reagent.

Appearance:

Dehydrated medium is a free-flowing purplish red powder. The prepared medium is a kind of purplish red brown gel.

Precautions:

This medium is for laboratory use only. Dried medium which is past shelf life, caking or color variation cannot be used.

Storage conditions and Shelf life:

Levine EMB Agar must be stored tightly capped in the original container at 5-30°C. The dehydrated medium has a shelf life of 5 years from date of manufacturing. Prepared medium may be stored, out of direct light at 2-8°C.

Quality control:

Prepare the culture medium as per label directions. Inoculate and incubate at 30-35 °C for 24-48 hours.

Microorganism	Strains Number	Inoculum (CFU)	Growth	Recovery	Remarks
<i>Escherichia coli</i>	ATCC 25922	10-100	luxuriant	≥50%	Green metallic sheen, blue-black colonies
<i>Staphylococcus Aureus</i>	ATCC 6538	100-1000	inhibited	<1%	/
<i>Escherichia coli</i>	ATCC 8739	10-100	luxuriant	≥50%	Green metallic sheen, blue-black colonies
<i>Salmonella typhimurium</i>	ATCC 14028	10-100	luxuriant	≥50%	Colorless colonies
<i>Enterobacter aerogenes</i>	ATCC 13048	10-100	luxuriant	≥50%	Pink colonies

Reference:

1. Levine. 1918. J. Infect. Dis. 23:43.
2. Endo. 1904. Zentralbl. Bakteriöl., Abt. 1, Orig. 35:109.
3. Wehr and Frank (ed.). 2004. Standard methods for the examination of dairy products, 17th ed. American Public Health Association, Washington, D.C.
4. Downes and Ito (ed.). 2001. Compendium of methods for the microbiological examination of foods, 4th ed. American Public Health Association, Washington, D.C.