

m-Endo Agar,LES

Catalog : HB0161-2

m-Endo Agar,LES is used for detection of total coliforms in drinking water and water resource through membrane filtration.

Approximate Formula:

Ingredients	gm/liter	Ingredients	gm/liter
Yeast extract	1.2	Sodium chloride	3.7
Acid hydrolyzed casein	3.7	Deoxycholate	0.1
Peptone	3.7	Sodium lauryl sulfate	0.05
Proteose peptone	7.5	Sodium sulfite	1.0
Lactose	9.4	Basic fuchsin	0.8
Dipotassium phosphate	3.3	Agar	15.0
Monopotassium phosphate	1.0		

Final pH7.2±0.2 at 25 °C

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

Directions:

Suspend 51.0g of the medium, add 20ml of 95% ethanol and 980ml of distilled water. Mix well and heat with frequent agitation to completely dissolve the powder. DO NOT AUTOCLAVE. When cooling to 45-50 °C, pour into sterile petri dishes with a diameter of 50-60mm.

Principle and Interpretation:

m-Endo Agar,LES contains peptones as sources of carbon, nitrogen, vitamins and minerals. Yeast extract supplies B-complex vitamins, which stimulate bacterial growth. Lactose is the carbohydrate. Phosphates are buffering agents. Sodium chloride maintains the osmotic balance of the medium. Sodium desoxycholate and sodium lauryl sulfate are added as inhibitors. Basic fuchsin is a pH indicator. Sodium sulfite is added to decolorize the basic fuchsin solution. Agar is the solidifying agent. Lactose-fermenting bacteria produce acetaldehyde that reacts with the sodium sulfite and fuchsin to form red colonies. The development of a metallic sheen occurs when the organism produces aldehydes with the rapid fermentation of lactose. If the inoculum is too heavy, the sheen will be suppressed. Lactose-nonfermenting bacteria form clear, colorless colonies.

Appearance:

Dehydrated medium is a free-flowing rose-red powder. The prepared medium is a kind of orange-yellow transparent 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:

m-Endo Agar,LES 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 36±1 °C for 24±2 hours.

Microorganism	Strains Number	Inoculum (CFU)	Growth	Recovery	Remarks
<i>Escherichia coli</i>	ATCC 25922	10-100	Luxuriant	≥70%	Rose-red,green metallic sheen
<i>Enterococcus faecalis</i>	ATCC 43864	10-100	Luxuriant	≥70%	Pink to rose-red mucoid
<i>Escherichia coli</i>	ATCC 8739	10-100	Luxuriant	≥70%	Rose-red,green metallic sheen
<i>Salmonella typhimurium</i>	ATCC 14028	/	Luxuriant	/	Colorless to pale pink colonies
<i>Enterococcus faecalis</i>	ATCC 29212	/	Poor-inhibited	/	/

References:

- McCarthy, Delaney and Grasso. 1961. Water Sewage Works 108:238.
- Eaton, Rice and Baird (ed.). 2005. Standard methods for the examination of water and wastewater,21st ed., online. American Public Health Association, Washington, D.C.
- Kim and Feng. 2001. In Downes and Ito (ed.), Compendium of methods for the microbiological examination of foods, 4th ed. American Public Health Association, Washington, D.C.