

TMV 336 – EMB AGAR (VEG.)

INTENDED USE

For differential isolation of gram-negative enteric bacteria from clinical and nonclinical samples.

PRODUCT SUMMARY AND EXPLANATION

These media are prepared by using Veg peptone in place of peptic digest of animal tissue which is free of BSE/TSE risks. EMB Veg Media are the modification of Eosin Methylene Blue (EMB) Media which are originally devised by Holt-Harris and Teague and further modified by Levine.

Methylene blue and Eosin-Y inhibit gram positive bacteria to a limited degree. These dyes serve as differential indicators in response to the fermentation of carbohydrates. The ratio of eosin and methylene blue is adjusted approximately to 6:1. Sucrose is added to the medium as an alternative carbohydrate source for typically lactose fermenting, gram-negative bacilli, which on occasion do not ferment lactose or do so slowly. The coliforms produce purplish black colonies due to taking up of methylene blue eosin dye complex, when the pH drops. The dye complex is absorbed into the colony. Non-fermenters probably raise the pH of surrounding medium by oxidative deamination of protein, which solubilizes the methylene blue-eosin complex resulting in colourless colonies.

COMPOSITION

Ingredients	Gms / Ltr
Veg Peptone	10.000
Dipotassium phosphate	2.000
Lactose	5.000
Sucrose	5.000
Eosin - Y	0.400
Methylene blue	0.065
Agar	13.500

PRINCIPLE

The medium consists of Veg Peptone which serves as source of carbon, nitrogen, and other essential growth nutrients. Lactose and sucrose are the sources of energy by being fermentable carbohydrates. Eosin-Y and methylene blue serve as differential indicators. Phosphate buffers the medium.

INSTRUCTION FOR USE

- Dissolve 36.0 grams in 1000 ml purified / distilled water.
- Mix until suspension is uniform. Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes. AVOID OVERHEATING.
- Cool to 45-50°C and shake the medium in order to oxidize the methylene blue (i.e. to restore its blue colour) and to suspend the flocculent precipitate. (If EMB Agar is inoculated on the same day, it may be used without autoclave sterilization).

Precaution: Store the medium away from light to avoid photo-oxidation.

QUALITY CONTROL SPECIFICATIONS



Appearance of Powder	: Light purple coloured, homogeneous, free flowing powder, may contain minute to small dark red purple particles.
Appearance of prepared medium	: Reddish-purple coloured, opalescent gel or solution having greenish cast forms in petri plates.
pH (at 25°C)	: 7.2 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Incubation Temperature	Incubation Period
<i>Escherichia coli</i>	25922	50-100	Luxuriant	>=70%	Purple with black centre and green metallic sheen	35-37°C	18-24 Hours
<i>Proteus mirabilis</i>	25933	50-100	Luxuriant	>=70%	Colourless	35-37°C	18-24 Hours
<i>Salmonella</i> serotype Typhimurium	14028	50-100	Luxuriant	>=70%	Colourless	35-37°C	18-24 Hours
<i>Enterobacter aerogenes</i>	13048	50-100	Good	40-50%	Pink, without sheen	35-37°C	18-24 Hours
<i>Klebsiella pneumoniae</i>	13883	50-100	Good	40-50%	Pink, mucoid	35-37°C	18-24 Hours
<i>Staphylococcus aureus</i>	25923	50-100	Inhibited	0%	-	35-37°C	18-24 Hours

PACKAGING:

In pack size of 100 gm and 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.













DISPOSAL



After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Holt-Harris and Teague, 1916, J. Infect. Dis., 18: 596.
2. Howard B.J., 1994, Clinical and Pathogenic Microbiology, 2nd ed., Mosby Year Book, Inc.
3. Levine, 1918, J. Infect. Dis., 23:43.

 GMP Good Manufacturing Practices Certified	 IVD For In Vitro Diagnostic Use	 QTY. Quantity	 LOT/ B. NO. Lot / Batch Number	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 EC REP MediNet GmbH Bockstrasse 10 48163 Münster, Germany Authorized Representative	 European Conformity	 QR Code	 Consults Instructions for Use	 Best Before

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**
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