TM 723 – EMB AGAR BASE

INTENDED USE

For study of different enteric bacteria by adding different carbohydrates.

PRODUCT SUMMARY AND EXPLANATION

Levine EMB Agar was developed by Levine and is used for the differentiation of *Escherichia coli* and *Enterobacter aerogenes* and also for the rapid identification of *Candida albicans*. This medium is recommended for the detection, enumeration and differentiation of members of the coliform group by American Public Health Association. Some gram-positive bacteria such as faecal Streptococci, yeasts grow on this medium and form pinpoint colonies. EMB Agar Base is a modification of EMB Agar, Levine without lactose. This facilitates the use of the medium as a basal agar to which desired carbohydrates could be added to differentiate between various enteric bacteria.

COMPOSITION

Ingredients	Gms / Ltr
Peptone	10.000
Dipotassium hydrogen phosphate	2.000
Eosin - Y	0.400
Methylene blue	0.065
Agar	15.000

PRINCIPLE

The medium consists of Peptone which serves as source of carbon, nitrogen, and other essential growth nutrients. Eosin-Y and methylene blue serve as differential indicators. Eosin-Y and methylene blue make the medium slightly selective and inhibit certain gram-positive bacteria. Phosphate buffers the medium.

INSTRUCTION FOR USE

- Dissolve 27.46 grams in 1000 ml purified / distilled water.
- Heat to boiling to dissolve the medium completely. Add desired carbohydrate or other test substance in desired concentration.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes. DO NOT OVERHEAT.
- Cool to 45-50°C and shake the medium in order to oxidize the methylene blue (i.e. restore its blue colour) and to suspend the precipitate, which is an essential part of the medium.
- Mix well and pour into sterile Petri plates.
  Precaution: Store the medium away from light to avoid photo oxidation.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Light pink to purple homogeneous free flowing powder.

Appearance of prepared medium : Reddish purple coloured, opalescent gel with greenish cast and finely dispersed precipitate forms in Petri plates.

pH (at 25°C) : 7.3 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Incubation Temperature	Incubation Period
Escherichia coli	25922	50-100	Luxuriant	>=70%	Blue-black with green metallic sheen	35-37°C	18-24 Hours
Enterobacter aerogenes	13048	50-100	Good-luxuriant	>=50%	Bink, red	35-37°C	18-24 Hours
Enterococcus faecalis	29212	50-100	None-poor	0-10%	Colourless	35-37°C	18-24 Hours
Pseudomonas aeruginosa	27853	50-100	Luxuriant	>=70%	Colourless	35-37°C	18-24 Hours
Salmonella Typhimurium	14028	50-100	Luxuriant	>=70%	Colourless	35-37°C	18-24 Hours
Saccharomyces cerevisiae	9763	10-100	None-poor	0-10%	Cream	25-30°C	24-48 Hours
Staphylococcus aureus subsp. aureus	25923	50-100	None-poor	0-10%	Colourless	35-37°C	18-24 Hours
Candida albicans	10231	10-100	Luxuriant (incubated in 10% CO_2)	>=70%	Colourless	25-30°C	24-48 Hours

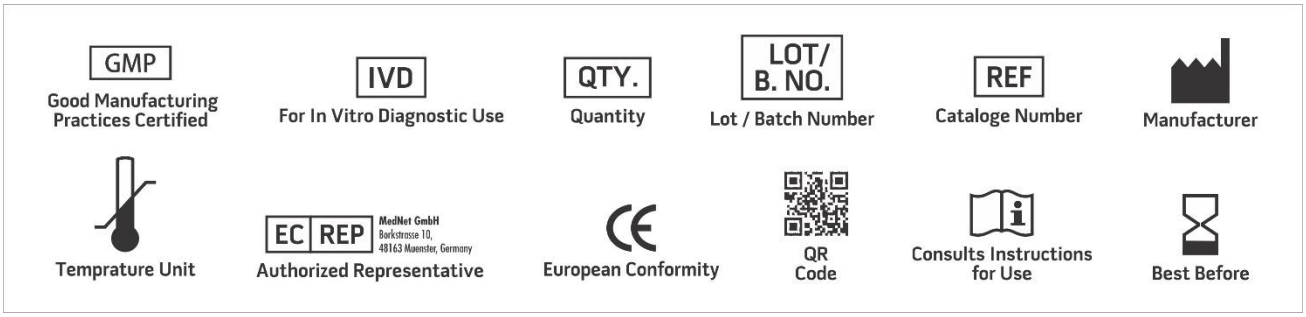
PACKAGING:
In pack size of 100 gm and 500 gm bottles.

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. Greenberg A. E., Trussell R. R. and Clesceri L. S. (Eds.), 1998, Standard Met for the Examination of Water and Wastewater, 20th ed., APHA, Washington, D.C.
2. Howard B. J., 1994, Clinical and Pathogenic Microbiology, 2nd Ed., Mosby Year Book, Inc
3. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
4. Levine M., 1918, J. Infect. Dis., 23:43.
5. Marshall R. (Ed.), 1992, Standard Methods for the Examination of Dairy ,, Products, 16th ed., APHA Inc., New York.
6. Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.



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

***For Lab Use Only**

Revision: 08 Nov., 2019