



INTENDED USE

For differential isolation of gram-negative enteric bacilli from clinical & nonclinical samples

COMPOSITION

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

PRODUCT SUMMARY AND EXPLANATION

EMB AGAR or EOSIN METHYLENE BLUE AGAR is used for isolation and differentiation of gram negative enteric bacilli from clinical and non-clinical samples. Primarily this medium was used for the detection and confirmation of coliforms. Medium contains Lactose and Sucrose, due to these carbohydrates sources medium can be differential in primary culture: *salmonellas* and shigellas which are lactose-negative can be differentiated from other lactose - negative but sucrose - positive organisms such as *Proteus* sp.

PRINCIPLE

Peptone is the nitrogen source in EMB Agar. Agar is a solidifying agent. Dipotassium phosphate is the buffer. Eosin Y and Methylene Blue are the indicators. Methylene blue is also a selective agent. The accompanying micro flora which hinders the isolation of medically important organisms is inhibited by the dyes of the medium, especially gram -positives. The dyes in EMB agar, Eosin Y and Methylene blue are pH indicators and inhibitors of gram -positive bacteria and at an acid pH combine to form a green -metallic precipitate. Colonies of lactose fermenters are blue -black with or without a green metallic sheen. Sheen production appears to be sensitive to changes in pH, and the lack of sheen production could be due to the alkalinity of mastitic milk interfering with the acidic requirement of EMB agar for production of the green metallic sheen. Colonies of non -lactose fermenting bacteria are colourless and translucent.



INSTRUCTIONS FOR USE

1. Dissolve 36.0 gms in 1000ml of distilled water.
2. Gently heat to boiling with gentle swirling and dissolve the medium completely.
3. Sterilize by autoclaving at 15 psi (121°) for 15 minutes.
4. Cool to 45-50 °C and after mixing dispense as desired.

QUALITY CONTROL SPECIFICATIONS

Appearance Dehydrated powder: Light pink to purple colour, free flowing powder

Appearance of the prepared medium: Reddish purple colour, opalescent gel with greenish cast & finely dispersed ppt.

pH (at 25°C): 7.2 ± 0.2

INTERPRETATION:

Cultural characteristics observed after incubation at 35 ± 2°C for 18 - 24 hours.

Microorganisms	ATCC	Inoculum (CFU/ml)	Growth	Appearance of colony
<i>Escherichia coli</i>	25922	50-100	Good	Black with green metallic sheen
<i>Enterococcus faecalis</i>	29212	50-100	Partial inhibition	-----
<i>Pseudomonas aeruginosa</i>	27853	50-100	Fair - Good	Colourless
<i>Staphylococcus aureus</i>	13150	> 1000	Inhibited	Colourless

STORAGE & STABILITY

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 25°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.

REFERENCES

1. A.P.H.A Examination of dairy products. 10th Ed. APHA, Inc. New York, 1953. Society of American Bacteriologists. Manual of Microbiological Methods MacGraw -Hill New York, (1957).
2. Holt -Harris, J. E., and O. Teague. A new culture medium for the isolation of *Bacillus typhosa*

Manufacturer Address: Titan Biotech Limited, A- 902A, RIICO Industrial Area, Phase III, Bhiwadi-301019.

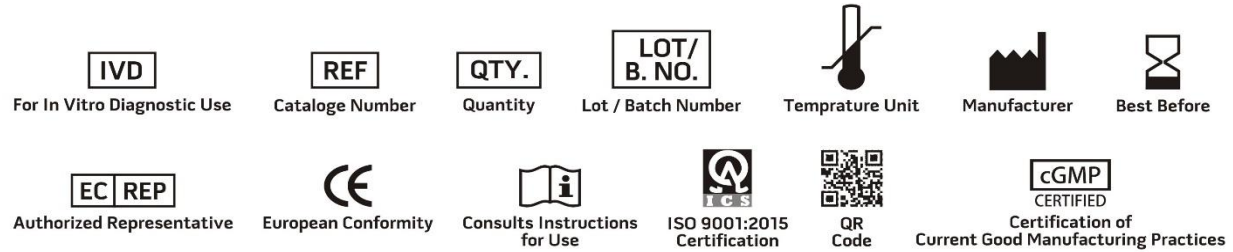
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PRODUCT DATA SHEET

from stools. J. Infect. Dis. 18 : 596. (1916).



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