

SALMONELLA SHIGELLA AGAR / EMB AGAR

INTENDED USE:

A differential, selective medium recommended for the isolation of Salmonella and Shigella from stool, foods and clinical material.

EMB Agar (Eosin Methylene Blue Agar) is recommended for the isolation and differentiation of gram negative enteric bacteria from clinical and nonclinical specimens.

PRINCIPLE AND INTERPRETATION:

SS Agar was originally developed as a selective medium for the isolation of Salmonella and Shigella species. It was also developed to aid in the differentiation of lactose and non-lactose-fermenters from clinical specimens, suspected foods, and other such samples. Differentiation of enteric organisms is achieved by the incorporation of lactose in the medium. Organisms which ferment lactose produce acid which, in the presence of the neutral red indicator, results in the formation of red colonies. Lactose-nonfermenters form colorless colonies. The latter group contains the majority of the intestinal pathogens, including Salmonella and Shigella. The sodium thiosulfate and ferric citrate enable the detection of hydrogen sulfide production as evidenced by colonies with black centers.

EMB Agar (Levine) was developed by Levine and is used for the differentiation of Escherichia coli and Enterobacter aerogenes. It is also used for the rapid identification of Candida albicans. Eosin-Y and methylene blue make the medium slightly selective and inhibit some gram -positive bacteria.

Coliforms, being lactose-fermenting organisms, are identified as blue-black colonies, and colonies of Salmonella and Shigella, being lactose non-fermenters, are colorless, transparent or amber.

Some gram-positive bacteria, such as fecal streptococci, staphylococci and yeasts, will grow on this medium and usually form pinpoint colonies.

COMPOSITION:

Ingredients	Gr/Liter
`Lab-Lemco' powder	5 gr
Peptone	5 gr
Lactose	10 gr
Bile salts	8,5 gr
Sodium citrate	10 gr
Sodium thiosuphate	8,5 gr
Ferric citrate	1 gr
Brilliant green	0,00033 gr
Neutral red	0,025 gr
Agar	15 gr

***Formula adjusted, standardized to suit performance parameters

pH 7.0 ± 0.2

PRECAUTIONS:

For professional use only. Do not use plates if they show evidence of microbial contamination, discoloration, drying, cracking or other signs of deterioration.

TEST PROCEDURE:

Incubate plates at 35 ± 2°C in an aerobic atmosphere supplemented with carbon dioxide. Read plates after 18 to 24 and after 42 to 48 hours of incubation.

QUALITY CONTROL:**1.Sterility Control:**

Incubation 48 hours at 30-35°C and 72 hours at 20-25°C: NO GROWTH

2.Physical/Chemical Control

pH (Salmonella Shigella Agar): 7,0 ± 0,2 / pH (EMB Agar) : 6,8 ± 0,2

Apperance(Salmonella Shigella Agar): Red-Orange

Apperance(EMB Agar): Reddish purple

EMB AGAR	
Ingredients	Gr/Liter
Peptone	10 gr
Lactose	10 gr
Dipotassium hydrogen phosphate	2 gr
Eosin Y	0,4 gr
Methylene blue	0,065 gr
Agar	15 gr

***Formula adjusted, standardized to suit performance parameters

pH 6,8 ± 0.2

3.Microbiological Control: Cultural response on SS Agar /EMB Agar at 35± 2 C° after 24 and 48 hours incubation.

Microorganism	Inoculum (CFU)	Results	
		Salmonella Shigella Agar	EMB Agar
Escherichia coli ATCC 25922	10-100	Partial inhibition	Green metallic shine
Salmonella typhimurium ATCC 14028	10-100	Good	Good
Enterococcus faecalis ATCC 29212	100-1000	Partial inhibition	Partial Inhibition
Staphylococcus aureus ATCC 25923	100-1000	—	Inhibition

STORAGE CONDITIONS AND SHELF LIFE:

Store the prepared medium at 2-12°C. Use before expiry date on the label. Do not use beyond stated expiry date.

DISPOSAL:

Incubated prepared medium may contain active bacteria and micro-organisms. Do not open infected medium. Infected plate should be autoclaved, incinerated or opened and soaked in a chlorine-based disinfectant (liquid bleach) for 20 minutes prior to disposal.

PACKAGING:

Katalog Number: 03006

Packaging: Single wrap

Content: 10 plates/each package

REFERENCES:

SS Agar

- 1.Leifson, E. 1935. New culture media based on sodium desoxycholate for the isolation of intestinal pathogens and for the enumeration of colon bacilli in milk and water. J. Pathol. and Bacteriol. 40:581-599.
2. National Committee for Clinical Laboratory Standards. 2001. Approved Guideline M29-A2. Protection of laboratory workers from occupationally acquired infections, 2nd ed. NCCLS, Wayne, PA
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook, Vol. I, II & III. American Society for Microbiology, Washington, D.C.
4. MacFaddin, J.F. 1985. Media for Isolation, Cultivation, Identification, Maintenance of Bacteria, Vol. I. Williams & Wilkins, Baltimore, MD.

EMB Agar

1. Levine, 1918, J. Infect. Dis., 23:43.
2. Howard B.J., 1994, Clinical and Pathogenic Microbiology, 2nd ed., Mosby Year Book, Inc.



Aseptic Sterile



Batch Code



Catalogue Number



Negative Controls



Positive Controls



Use by



Temperature Limitation



Do not reuse



Contains sufficient for <n> tests



Look at user manual



Manufacturer