



Technical Data

M1979

SS Agar w/sucrose

Intended Use:

It is used for the selective isolation and differentiation of *Salmonella* and *Shigella* species from clinical and non-clinical samples.

Composition**

Ingredients	Gms / Litre
HM extract ⊖	3.000
Tryptone \$	4.000
Peptone	4.000
Sodium citrate	5.000
Sodium thiosulphate	2.000
Ferric ammonium citrate	1.000
Lactose	10.000
Saccharose(Sucrose)	10.000
Bile salt	5.000
Neutral red	0.020
Agar	15.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

⊖ - Equivalent to Meat extract

\$ - Equivalent to Pancreatic digest of casein

Directions

Suspend 59.03 grams in 1000 ml purified / distilled water. Heat to boiling with frequent agitation to dissolve the medium completely. Cool to 45-50°C. Mix and pour into sterile Petri plates. DO NOT AUTOCLAVE OR OVERHEAT. Overheating may destroy the selectivity of the medium.

Principle And Interpretation

Salmonella and *Shigella* are gram-negative, facultatively anaerobic, non-sporulating rods in the family *Enterobacteriaceae*. The media is recommended as differential and selective medium for the isolation of *Salmonella* and *Shigella* species from pathological specimens (5), suspected foodstuffs (2, 7, 9, 10) and for microbial limit test (8). SS

Agar is a moderately selective medium in which gram-positive bacteria are inhibited by bile salts.

HM extract, tryptone and peptone provides nitrogen, vitamins, minerals and amino acids essential for growth. Lactose and sucrose are the fermentable carbohydrates providing carbon and energy. Bile salts selectively inhibit gram-positive and coliform organisms. Sodium thiosulphate is reduced by certain species of enteric organisms to sulphite and H₂S gas. This reductive enzymatic process is attributed to thiosulphate reductase. Production of H₂S gas is detected as an insoluble black precipitate of ferrous sulphide, formed upon reaction of H₂S with ferric ions or ferric citrate, indicated by black centered colonies. On fermentation of lactose by few lactose-fermenting normal intestinal flora, acid is produced which is indicated by change of colour from yellow to red by the pH indicator neutral red. Thus these organisms grow as red-pigmented colonies. Lactose non-fermenting organisms grow as translucent colourless colonies with or without black centers. *Salmonella* species exhibit colourless colonies with black centers resulting from H₂S production. *Shigella* species form colourless colonies, which do not produce H₂S. Agar acts as a solidifying agent.

Type of specimen

Clinical samples - Stool; Food and dairy samples.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (3,4).

For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (1,7,9).

After use, contaminated materials must be sterilized by autoclaving before discarding.

Limitations :

1. This medium is general purpose medium and may not support the growth of fastidious organisms.
2. Further biochemical and serological tests must be carried out for further identification.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Light yellow to pink homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of Prepared Medium

Reddish orange coloured clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 5.93% w/v aqueous solution at 25°C. pH : 7.4±0.2

pH

7.20-7.60

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony
<i>Escherichia coli</i> ATCC 25922 (00013*)	50-100	luxuriant	≥70%	pink with bile precipitate
<i>Salmonella</i> Typhimurium ATCC 14028 (00031*)	50-100	good-luxuriant	≥50%	colourless with black centre
<i>Shigella sonnei</i> ATCC 25931	50-100	luxuriant	50-70%	colourless

Key : *Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,4).

Reference

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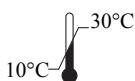
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CE Marking



Storage temperature



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