

SALMONELLA SHIGELLA (SS) AGAR

INTENDED USE

Remel Salmonella Shigella (SS) Agar is a solid medium recommended for use in qualitative procedures for selective and differential isolation of *Salmonella* and, to a lesser degree, *Shigella*.

SUMMARY AND EXPLANATION

SS Agar is a modification of Desoxycholate-Citrate Agar described by Leifson which was used for the detection of enteric pathogens.¹ The modified medium contains a bile salts mixture to inhibit the growth of gram-positive organisms. SS Agar is recommended for isolation and differentiation of pathogenic enteric bacilli, especially *Salmonella* and *Shigella* from clinical specimens, including feces, and food samples.²

PRINCIPLE

Differentiation of gram-negative bacilli on SS Agar is based on the fermentation of lactose and subsequent absorption of neutral red; gram-negative bacilli which ferment lactose produce pink to red colonies. Lactose-nonfermenters, such as *Salmonella* and *Shigella*, form transparent, colorless colonies. Bile salts, brilliant green, and citrates are selective agents which inhibit gram-positive bacteria and coliforms. Sodium thiosulfate, a sulfur source, and ferric ammonium citrate, an indicator, are added to enable organisms which produce H₂S to form black-centered colonies, including some strains of *Salmonella*.

REAGENTS (CLASSICAL FORMULA)*

Lactose.....	10.0 g	Meat Peptone.....	2.5 g
Bile Salts.....	8.5 g	Ferric Citrate.....	1.0 g
Sodium Citrate.....	8.5 g	Neutral Red.....	25.0 mg
Sodium Thiosulfate.....	8.5 g	Brilliant Green.....	0.33 mg
Beef Extract.....	5.0 g	Agar.....	13.5 g
Casein Peptone.....	2.5 g	Demineralized Water.....	1000.0 ml

pH 7.0 ± 0.2 @ 25°C

*Adjusted as required to meet performance standards.

PRECAUTIONS

This product is For Laboratory Use only. It is not intended for use in the diagnosis of disease or other conditions.

PREPARATION OF DEHYDRATED CULTURE MEDIUM

1. Suspend 60 g of medium in 1000 ml of demineralized water.
2. Heat to boiling with agitation to completely dissolve. **Do not autoclave.**
3. Dispense into appropriate containers.

PROCEDURE

1. Consult current editions of appropriate references for the recommended procedure for sample preparation, inoculation, testing, and interpretation.

QUALITY CONTROL

Each lot number of Salmonella Shigella Agar has been manufactured, packaged, and processed in accordance with current Good Manufacturing Practice regulations. All lot numbers have been tested using the following quality control organisms and have been found to be acceptable. Testing of control organisms should be performed in accordance with established laboratory quality control procedures. If aberrant quality control results are noted, sample results should not be reported.

CONTROL

Salmonella enterica serovar Typhimurium ATCC® 14028
Shigella flexneri ATCC® 12022
Enterococcus faecalis ATCC® 29212
Escherichia coli ATCC® 25922
Staphylococcus aureus ATCC® 25923

INCUBATION

Ambient, 18-24 h @ 33-37°C
Ambient, 18-24 h @ 33-37°C
Ambient, 18-24 h @ 33-37°C
Ambient, 18-24 h @ 33-37°C
Ambient, 18-24 h @ 33-37°C

RESULTS

Growth, clear colonies w/ black centers
Growth, clear colonies
Inhibition (partial to complete)
Inhibition (partial); pink to rose-red colonies
Inhibition (partial to complete)

LIMITATIONS

1. Organisms other than *Salmonella* and *Shigella* which grow on this medium may be differentiated by their ability to ferment lactose and form pink or red colonies.²
2. SS Agar is not recommended for primary isolation of *Shigella* spp. because it is highly selective and may inhibit some strains.²

BIBLIOGRAPHY

1. Leifson, E., 1935. J. Pathol. Bacteriol. 40:581.
2. MacFaddin, J.F. 1985. Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria. Vol. 1. Williams & Wilkins, Baltimore, MD.

Refer to the front of Remel *Technical Manual of Microbiological Media* for **General Information** regarding precautions, product storage and deterioration, sample collection, storage and transportation, materials required, quality control, and limitations.

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