Salmonella Shigella (SS) Agar CE (NCM2019)

Intended Use
Salmonella Shigella (SS) Agar is used for the isolation of *Salmonella* spp. and some strains of *Shigella* spp.

Description
Salmonella Shigella (SS) Agar is a modification of the Deoxycholate Citrate Agar described by Leifson. Salmonella Shigella Agar is superior to a number of other media for the isolation of *Salmonella* spp. and *Shigella* spp. Salmonella Shigella (SS) Agar is recommended for testing clinical samples for the presence of *Salmonella* spp. and some *Shigella* spp.

Typical Formulation

Beef Extract	5.0 g/L
Balanced Peptone No. 1	5.0 g/L
Lactose	10.0 g/L
Bile Salts No. 3	8.5 g/L
Sodium Citrate	8.5 g/L
Sodium Thiosulfate	8.5 g/L
Ferric Citrate	1.0 g/L
Brilliant Green	0.00033 g/L
Neutral Red	0.025 g/L
Agar No. 2	13.5 g/L

Final pH: 7.0 ± 0.2 at 25°C
Formula may be adjusted and/or supplemented as required to meet performance specifications.

Precaution
Refer to SDS

Preparation
1. Disperse 60g in one liter of deionized water.
2. Soak for 10 minutes, swirl to mix and sterilize by bringing to the boil. DO NOT AUTOCLAVE OR OVERHEAT THIS MEDIUM.
3. Cool to 45-50°C and mix before pouring into Petri dishes and dry the agar surface.

Test Procedure
Consult appropriate references for testing protocols for clinical samples.

Quality Control Specifications
Dehydrated Appearance: Powder is homogeneous, free-flowing, and light to medium pinkish-beige.

Prepared Appearance: Prepared medium is red-orange to peach and trace to slightly hazy.

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Expected Cultural Response: Cultural response incubated aerobically at 37 ± 1°C and examined for growth after 24 ± 3 hours.

Microorganism	Expected Results	
	Recovery	Reaction
Enterococcus faecalis ATCC® 29212	Partial to Complete Inhibition	N/A
Escherichia coli ATCC® 25922	Partial to Complete Inhibition	If recovered, pink to rose-red colonies
Salmonella Enteritidis ATCC® 13076	Good Growth	Colorless colonies with black centers
Salmonella Typhimurium ATCC® 14028	Good Growth	Colorless colonies with black centers
Shigella sonnei NCTC® 8574	Good Growth	Colorless colonies

Results

Enteric organisms are differentiated by their ability to ferment lactose. *Salmonella* spp. and *Shigella* spp. are non-lactose fermenters and form colorless colonies on Salmonella Shigella Agar. H_2S positive *Salmonella* spp. produce black-center colonies. Some *Shigella* spp. are inhibited on Salmonella Shigella Agar. *E. coli* produces pink to red colonies and may have some bile precipitation.

Expiration

Refer to expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if appearance has changed from the original color.

Limitations of the Procedure

1. Salmonella Shigella Agar is highly selective and not recommended as the primary isolation of *Shigella.* Some *Shigella* spp. may be inhibited.
2. As it is unlikely that a single medium will recover all potential target pathogens in a sample it is highly advisable to also inoculate other suitable media for the isolation of Salmonella and/or Shigella in parallel with SS agar.
3. A few nonpathogenic organisms may grow on Salmonella Shigella Agar. These organisms can be differentiated by their ability to ferment lactose and other confirmatory tests.

Storage

Store dehydrated culture media at 2–30°C away from direct sunlight. Once opened and recapped, place the container in a low humidity environment at the same storage temperature. Protect from moisture and light by keeping container tightly closed.

References

1. P. R. Murray, E. J. Baron, M. A. Pfaller, F. C. Tenover, and R. H. Yolken (eds.). Manual of clinical microbiology, 6th ed. American Society for Microbiology, Washington, D. C.
2. 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. Bacteriol 40:581.
3. Rose, H. M., and M. H. Kolodny. 1942. The use of SS (*Shigella-Salmonella*) Agar for the isolation of Flexner Dysentery bacilli from the feces. J. Lab. Clin. Med. 27:1081-1083.
4. Isenberg, H. D. (ed.). 1992. Interpretation of aerobic bacterial growth on primary culture media, Clinical microbiology procedures handbook, vol. 1 p. 1.61-1.67. American Society for Microbiology, Washington, D.C.

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5. Taylor, W. I., and B. Harris. 1965. Isolation of shigellae. II. Comparision of plating media and enrichment broths. Am. J. Clin. Pathol. 44:476.
6. McFaddin, J. F. 1985. Media for isolation-cultivation-identification-maintenance of medical bacteria, Vol. 1. Williams & Wilkins, Baltimore, MD.

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