Salmonella Shigella (SS) Agar
SKU: 700003081, 700003082, 700003083, 700003084
NCM0046

Intended Use
Salmonella Shigella (SS) Agar is used for the isolation of *Salmonella* spp. and some strains of *Shigella* spp. Salmonella Shigella (SS) Agar is not intended for use in the diagnosis of disease or other conditions in humans.

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 food samples for the presence of *Salmonella* spp. and some *Shigella* spp.

Typical Formulation

Beef Extract	5.0 g/L
Enzymatic Digest of Casein	2.5 g/L
Enzymatic Digest of Animal Tissue	2.5 g/L
Lactose	10.0 g/L
Bile Salts	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	13.5 g/L

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

Precaution
Refer to SDS

Preparation
1. Suspend 60 g of the medium in one liter of purified water.
2. Heat with frequent agitation and boil for one minute to completely dissolve the medium.
3. DO NOT AUTOCLAVE
4. Cool to 45-50°C.

Test Procedure
Consult appropriate references for food testing.

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 18 - 48 hours.

Microorganism	Approx. Inoculum (CFU)	Expected Results	
		Recovery	Reaction
Enterococcus faecalis ATCC® 29212	$>10^4$	Partial to Complete Inhibition	If recovered, pink to rose-red colonies which may have bile precipitate
Escherichia coli ATCC® 25922	$>10^4$	Complete Inhibition	---
Proteus mirabilis ATCC® 12453	4 Quad Streak	Growth	Colorless colonies with black centers
Salmonella enteritidis ATCC® 13076	50-200	≥70%	Colorless colonies with black centers
Salmonella typhimurium ATCC® 14028	50-200	≥70%	Colorless colonies with black centers
Shigella sonnei NCTC 8574	4 Quad Streak	Growth	Colorless colonies

The organisms listed are the minimum that should be used for quality control testing.

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. 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.

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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.
5. Vanderzant, C., and D. F. Splittstoesser (eds.). 2015. Compendium of methods for the microbiological examination of foods, 4th ed. American Public Health Association, Washington, D.C.
6. Taylor, W. I., and B. Harris. 1965. Isolation of shigellae. II. Comparision of plating media and enrichment broths. Am. J. Clin. Pathol. 44:476.
7. McFaddin, J. F. 1985. Media for isolation-cultivation-identification-maintenance of medical bacteria, Vol. 1. Williams & Wilkins, Baltimore, MD.

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