

Salmonella Shigella Agar (SS Agar)

Use and description:

For the selective isolation of pathogenic enterobacteriaceae, especially *Salmonella* spp. and *Shigella* spp. from food and clinical specimens. The high concentration of citrate and sodium thiosulphate highly repress the growth of coliform bacteria and suppress the swarming of *Proteus*. Gram-positive bacteria are inhibited by bile salts and brilliant green, some coliforms may still grow on this medium. Lactose-negative bacteria form colorless colonies and the medium turns yellow. Sodium citrate inhibits Gram-positive bacteria. Those bacteria which ferment lactose produce pink colonies. H₂S positive organisms because of the precipitated ferrous sulphide form black centered colonies. It is recommended to inoculate other less selective media (Hektoen Enteric Agar, XLD Agar) simultaneously because some *Shigella* sp. will grow poorly.

Composition per liter:

Peptones.....	7.000 g
Yeast Extract	5.00g
Beef extract.....	5.000 g
Lactose.....	9.000 g
Brilliant green.....	0.330 mg
Bile salts.....	3.000 g
Na ₂ S ₂ O ₃	5.00 g
Sodium citrate.....	5.00 g
Ferric citrate.....	1.000 g
Neutral red.....	0.025 g
Amino Acids	2.500 g
Agar.....	12.000 g

Final pH of the ready to use medium: 7.0 ± 0.2

Medium preparation:

Add 54,5 grams of dehydrated culture medium to 1 liter of distilled water, and allow to soak for 10 minutes. Swirl to mix, then bring to the boil and allow to cool to 47°C. Mix well then pour plates. Dry the surface before incubation. DO NOT AUTOCLAVE THIS MEDIUM.

Quality specifications:

Dehydrated medium: homogeneous, light pinkish fine powder.

Ready to use medium: orange-pink agar, very slightly opalescent.

Microbiological response:

Organism	Result
<i>Enterococcus faecalis</i> ATCC 29212	Inhibited
<i>Escherichia coli</i> ATCC 25922	Inhibited, red colonies
<i>Salmonella typhimurium</i> ATCC 14028	Growth, clear colonies with black centers
<i>Shigella flexneri</i> ATCC 12022	Growth, clear colonies

Storage:

Dehydrated medium should be stored between 10 to 25°C. Once opened, place the container in a dark, dry place. The dehydrated medium should not be used if there is any lump or if color has changed from the original.