

Salmonella Shigella Broth

Cat. 1463

For the cultivation of Salmonella and Shigella

Practical information

Applications	Categories
Selective enrichment	Salmonella
Selective enrichment	Shigella

Industry: Clinical

Principles and uses

SALMONELLA SHIGELLA BROTH is a selective and differential medium used in sanitary bacteriology to enrichment Salmonella and Shigella from feces, urine, and fresh and canned foods.

Beef extract and Peptone mixture provide nitrogen, vitamins, minerals and amino acids essential for growth. Lactose is the fermentable carbohydrate providing carbon and energy. Bile Salts Mixture, Sodium citrate and Brilliant green inhibit Gram-positive bacteria, most coliform bacteria and swarming Proteus spp., while allowing Salmonella spp to grow. Neutral red is the pH indicator. Sodium thiosulfate and Ferric citrate allow the detection of the H₂S producing bacteria.

Formula in g/L

Beef extract	5	Bile salts	8,5
Brilliant green	0,0003	Lactose	10
Neutral red	0,025	Peptone mixture	5
Sodium citrate	8,5	Sodium thiosulfate	8,5
Ferric citrate	1		

Typical formula g/L * Adjusted and/or supplemented as required to meet performance criteria.

Preparation

Suspend 46.5 grams of the medium in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. DO NOT AUTOCLAVE. Cool to 45–50 °C and distribute into tubes.

Instructions for use

- Inoculate and incubate at 35±2 °C for 18-24 h.
- Subculture these inoculations to the differential solid media, such as SS Agar (Cat. 1064), MacConkey Agar (Cat. 1052), XLD Agar (Cat. 1080) and Chromogenic Salmonella Agar (Cat. 1122).

Quality control

Solubility	Appearance	Color of the dehydrated medium	Color of the prepared medium	Final pH (25°C)
w/o rests	Fine powder	Beige	Red orange	7,0 ± 0,2

Microbiological test

Incubation conditions: (35±2 °C / 18-24 h)

Microorganisms	Specification
Shigella flexneri ATCC 12022	Good growth

Klebsiella aerogenes ATCC 13048
Salmonella enteritidis ATCC 13076
Salmonella typhimurium ATCC 14028
Enterococcus faecalis ATCC 19433
Escherichia coli ATCC 25922
Proteus mirabilis ATCC 25933
Salmonella typhi ATCC 6539

Partial inhibition
Good growth
Good growth
Total inhibition
Total inhibition
Partial inhibition
Good growth

Storage

Temp. Min.:2 °C
Temp. Max.:25 °C

Bibliography

Pub. Health Reports. 65:1075. 1950. Paper Read at Microbiological Congress, 1950. Proc. 22nd Ann. Meet. Northeastern Conf. Lab. Workers in Pullorum Disease Control Burlington, Vermont, June 20-21. 1950.