75028 Shigella Broth Base

Shigella Broth Base is used for the isolation and cultivation of Shigella species from food acc. ISO 21567:2004.

Composition*:

Ingredients	Grams/Litre
Casein Peptone	20.0
Dextrose	1.0
Potassium hydrogen phosphate	2.0
Potassium dihydrogen phosphate	2.0
Sodium chloride	5.0
Polysorbate 80	1.5
Final pH 7.0 +/- 0.2 at 25°C	

*Formula adjusted and/or supplemented as required to meet performance criteria

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at room temperature.

Appearance: Faint yellow, faint beige to faint brown coloured, homogeneous, free flowing powder.

Color and Clarity: Light yellow to light brown coloured clear solution.

Directions:

Suspend 31.5 grams in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool medium to 45-50°C and add novobiocin (500 µg/L) under aseptic conditions. Mix well and dispense in sterile test tubes.

Principle and Interpretation:

Shigella Broth is a liquid culture medium that complies with ISO standard 21567:2004 for the detection of *Shigella spp.* in food and animal feeding stuffs. It is used for the preparation and dilution of the sample and as the selective enrichment media.

Casein peptone provide the essential growth nutrients along with nitrogenous and carbonaceous compounds. Glucose is the fermentable carbohydrate source. The medium has a strong phosphate buffer. Sodium chloride maintains the osmotic balance. Polysorbate act as a neutralizer for toxic substances and as a surfactant which allows a good growth for Shigella. The novobiocin, at low concentration, does not inhibit *Shigella* but inhibits the accompanying flora.

Cultural characteristics after 16-20 hours at 41.5±1°C.

Inoculum: Practical range 100±20 CFU. Min. 50 CFU (Productivity) / 10^4-10^6 CFU (Selectivity) according to ISO 11133:2014/Amd 1:2018 .

Organisms (ATCC)	Growth	Recovery
Shigella flexneri (12022)	+++	in XLD
Shigella sonnei (9290)	+++	in XLD
Salmonella typhimurium (14028)	+++	in XLD
Escherichia coli (8739)	+++ (w/o antibiotics)	in XLD
Enterococcus faecalis (29212)	-	in XLD

References:
1. R.M. Atlas, Handbook of Microbiological Media for the Examination of Food. C.R.C Press. Boca Raton. Fla. USA. (1995)
2. H. van der Zee, Media for the isolation of Shigella spp. In "Handbook of Culture Media for Food Microbiology" (Corry et al. Eds.) Elsevier-Sci B.V. Amsterdam (2003)
3. FDA (Food and Drug Adminstrations), Bacteriological Analytical Manual 8th ed. Revision A. AOAC International. Gaithersburg. MD. USA (1998)
4. ISO 11133:2014. Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.
5. ISO 21567:2004 Microbiology of food and animal feeding stuffs - Horizontal method for the detection of Shigella spp.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.