

**SHIGELLA BROTH BASE**
**TM 857**

For isolation and cultivation of *Shigella* species from foods

**Composition**

Ingredients	Gms/Ltr.
Casein enzymatic hydrolysate	20.00
Sodium chloride	5.00
Dipotassium hydrogen phosphate	2.00
Potassium dihydrogen phosphate	2.00
Dextrose	1.00
Polysorbate 80	1.50

\* Dehydrated powder, hygroscopic in nature, store, in a dry place in tightly- sealed containers below 25°C and protect from direct Sunlight.

**Instructions for Use**

Dissolve 31.50gms in 1000ml of distilled water. Gently heat to boiling with gentle swirling and dissolve the medium completely. Sterilize by autoclaving at 15 psi (at 121°C) for 15 minutes. Cool to 45-50°C and aseptically add 1 vial of Shigella selective supplement (TS 082). Mix well and dispense in sterile test tubes.

**Appearance:** Light amber in colour

**pH (at 25°C):** 7.0 ± 0.2

**Principle**

**SHIGELLA BROTH BASE** is used for differential and selective isolation of *Salmonella* and *Shigella* species. Standard for the detection of *Shigella* spp in food and animal feeding stuffs. This formulation, highly selective, is not recommended for the primary isolation of *Shigella* species. This medium consists of Casein enzymatic hydrolysate provide nitrogen, minerals for growth. Dextrose is the fermentable carbohydrate providing carbon and energy. Sodium chloride helps to maintain the osmotic balance. Dipotassium phosphate and Potassium phosphate provides the buffering capacity to the medium. Polysorbate 80 is used as an inhibitory agent for the growth of accompanying microflora besides providing growth factors. Novobiocin is inhibitory for gram-positive bacteria such as *S. aureus* and certain gram-negative organisms such as *H. influenzae* and some species of *Proteus* species.

**Interpretation**

Cultural characteristics observed after inoculating (10<sup>3</sup>CFU/ml), on incubation at 35 ± 2°C for 18 - 24 hours.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth
<i>Shigella flexneri</i>	12022	10 <sup>3</sup>	Good
<i>Shigella dysenteriae</i>	14028	10 <sup>3</sup>	Good
<i>Shigella sonnei</i>	25931	10 <sup>3</sup>	Good
<i>Staphylococcus aureus</i>	25923	10 <sup>3</sup>	Inhibited

**References**

1. ATLAS, R.M. Handbook of Microbiological Media for the Examination of Food. C.R.C Press. Boca Raton. Fla. USA. (1995).
2. FDA, Bacteriological Analytical Manual 8<sup>th</sup> edition. Revision A. AOAC International. Gaithersburg. Md. USA. (1998).