

## Shigella Broth Base

### Intended Use

Shigella Broth Base is a medium used for the isolation and cultivation of *Shigella* species from food.

### Summary

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.

*Shigella* is a Gram-negative, non-motile, non-spore forming rod-shaped bacteria closely related to *Escherichia coli* and *Salmonella*. *Shigella* infection is typically via ingestion (faecal-oral contamination), depending on age and condition of the host, as few as 10 bacterial cells can be enough to cause an infection. Shigella Broth Base is used for the isolation and cultivation of *Shigella* species, as recommended by APHA.

### Principle

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.

### Formula\*

Ingredients	g/L
Casein Enzymic Hydrolysate	20.0
Sodium Chloride	5.0
Dipotassium Hydrogen Phosphate	2.0
Potassium Dihydrogen Phosphate	2.0
Dextrose	1.0
Polysorbate 80	1.5
Final pH (at 25°C)	7.0 ± 0.2

\*Adjusted to suit performance parameters

### Storage and Stability

Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

### Type of specimen

Food samples

### Specimen Collection and Handling

Ensure that all samples are properly labelled.

Follow appropriate techniques for handling samples as per established guidelines.

Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure. The samples must be stored and tested within the permissible time duration.

After use, contaminated materials must be sterilized by autoclaving before discarding.

### Directions

1. Suspend 31.50 g of the powder in 1000 mL purified / distilled water.
2. Heat if necessary, to dissolve the powder completely.
3. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.
4. Cool the medium to 45°C-50°C and add rehydrated content of 1 vial of Shigella Selective supplement (204191470005) under aseptic conditions.
5. Mix well and dispense in sterile test tubes.

### Quality Control

**Dehydrated Appearance:** Cream to yellow coloured, homogeneous, free flowing powder.

**Prepared Appearance:** Light amber coloured, clear solution.

**Cultural Response:** Cultural characteristics observed after an incubation of 18-24 hours at 35°C-37°C with added Shigella Selective Supplement (204191470005).

### Organisms (ATCC)

*Shigella dysenteriae* (13313)

*Shigella flexneri* (12022)

*Shigella sonnei* (12030)

*Staphylococcus aureus* (25923)

### Growth

Good

Good

Good

Inhibited

### Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

### Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

### Reference

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 8th edition. Revision A. AOAC International. Gaithersburg. Md. USA. (1998).
3. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

### Product Presentation:

#### Cat No.

201191480500

#### Product description

Dehydrated Culture Media

#### Pack Size

500 g

### Disclaimer

Information provided is based on our inhouse technical data on file, it is recommended that user should validate at his end for suitable use of the product.

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