Salmonella Selective Enrichment Broth

Intended Use
Salmonella Selective Enrichment Broth is recommended for selective enrichment of *Salmonella* species.

Summary
Salmonella Enrichment Broth Base is recommended for the selective enrichment of *Salmonella* species within 18-24 hours. *Salmonella* are ubiquitous in the environment and are usually present in small numbers compared to coliforms therefore it is necessary to examine a relatively large sample to isolate the organisms. *Salmonella* present in food samples may be sub lethally damaged during various stages of food processing where they may be exposed to low temperatures, heat drying, radiations, and various chemicals. These damaged cells are able to cause spoilage, and if ingested cause diseases under favourable conditions. Therefore, it is important to resuscitate these damaged bacteria before enumeration. Peptone, Yeast extract provides essential growth nutrients.

Principle
Peptic digest of animal tissue, beef extract provides essential growth nutrients. Brilliant green, bile salts, thiosulphate and citrates selectively inhibit Gram-positive and coliform organisms. Lactose is the fermentable carbohydrate and differentiation of enteric organisms is achieved based on lactose fermentation in the presence of neutral red. On fermentation of lactose by a few lactose fermenting normal intestinal flora, acid is produced, which is indicated by change in colour from yellow to red by the pH indicator neutral red and these organisms grow as red pigmented colonies. Non-lactose fermenters grow as translucent colourless colonies. Sodium thiosulphate and ferric citrate enable the detection of H_2S production. Sodium thiosulphate is reduced by certain species of enteric organisms to sulphite and H_2S gas and this reductive enzyme process is attributed by thiosulphate reductase. Production of H_2S gas is detected as an insoluble black precipitate of ferrous sulphide, formed upon reaction of H_2S with ferric ions or ferric citrate, indicated in the centre of the colonies.

Formula*

Ingredients	**g/L**
Peptone	5.0
Yeast extract	5.0
Buffer mixture	10.0
Growth mixture	5.0
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
Water and Waste Water samples; Food and Dairy 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 25.00 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 to 45°C-50°C and aseptically add the rehydrated contents of one vial of Salmonella Selective Enrichment Supplement.
5. Mix well and dispense as desired.

Quality Control

Dehydrated Appearance: Cream to yellow coloured, homogeneous, free flowing powder.
Prepared Appearance: Light yellow coloured, clear solution without any precipitate.
Cultural Response: Cultural characteristics observed with added Salmonella Selective Enrichment Supplement, after an incubation of 18-24 hours at 35°C-37°C.

Organism (ATCC)	**Growth**
Salmonella enterica subsp. *enterica* serovar *Typhimurium* (14028)	Good
Salmonella Enteritidis (13076)	Good
Salmonella enterica subsp. *enterica* serovar *Abony (*NCTC 6017)	Good
Staphylococcus aureus subsp. *aureus* (25923)	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. Cherry et al, 1972, Appl. Microbiol., 24:334
2. Hartman and Minich, 1981, J. Food and Prot., 44:385
3. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	**Product description**	**Pack Size**
201190300100	Dehydrated Culture Media	100 g
201190300500	Dehydrated Culture Media	500 g