Selenite F Broth

Intended Use
Selenite F Broth is an enrichment medium used for isolation of *Salmonella* species from faeces, urine or other pathological materials.

Summary
Selenite F Broth is based on the formulation devised by Leifson, who showed that selenite was beneficial in the isolation of *Salmonella* species while inhibiting coliforms and certain other microbial species like faecal Streptococci, present in faecal specimens. An enrichment medium is routinely employed to detect pathogens in faecal specimens since the pathogens are generally present in a very small number compared to the intestinal flora. This medium is useful in detecting *Salmonella* in the non-acute stages of illness when the organisms occur in faeces in low numbers and for epidemiological studies to enhance the detection of low numbers of organisms from asymptomatic or convalescent patients. Selenite F broth is used in the recovery of *Salmonella* with subcultures being made after 12-18 hours of incubation.

Principle
Tryptone provides nitrogenous substances and other amino acids. Lactose maintains the pH in the medium as selenite is reduced by bacterial growth and alkali is produced. An increase in pH lessens the toxicity of selenite and results in the overgrowth of other bacteria. The acid produced by bacteria due to lactose fermentation helps to maintain a neutral pH. Sodium phosphate buffers the medium to maintain the pH and also lessens the toxicity of selenite, thus increasing the capacity of the medium. Sodium selenite inhibits Gram-positive bacteria and suppresses the growth of most Gram-negative bacteria and Enterococci other than *Salmonella*.

Formula*

Ingredients	g/L
Tryptone	5.0
Lactose	4.0
Sodium Phosphate	10.0
Sodium Hydrogen Selenite	4.0
Final pH (at 25°C)	7.0 ± 0.2

*Adjusted to suit performance parameters.

Directions
1. Bring the Selenite F Broth vial to the room temperature 22°C-30°C.
2. Use Selenite F Broth as per required application.

Quality Control
Appearance: Light amber coloured, clear solution.
Cultural Response: Cultural characteristics observed after an incubation of 18-24 hours at 30°C-35°C and recovery on MacConkey agar and incubated at 30°C-35°C for 18-24 hours.

Organism (ATCC)	Growth	Colour of Colony
Salmonella enterica subsp. *enterica* serovar *Typhimurium* (14028)	Good	Colourless
Salmonella enterica subsp. *enterica* serovar *Choleraesuis* (12011)	Good	Colourless
Escherichia coli (25922)	Partial Inhibition	Pink with bile precipitate
Salmonella serotype Typhi (786)	Good	Colourless

Remarks

1. Do not use media bottles that exhibit any damage, cracks, microbial contamination, discoloration, drying or other sign of deterioration.
2. Ensure that the temperature of water bath is at 100°C so that the medium melts completely. Cooler water baths give rise to lumpy, uneven medium.
3. Before pouring into sterile petriplates, gently swirl the bottle to check whether the entire contents are properly mixed and melted.
4. Good laboratory practices and hazard precautions must be observed at all times.
5. After use media containers, prepared plates, sample, sample containers and other contaminated materials must be sterilized or incinerated before discarding.

Storage and Stability

1. Store the ready to use Selenite F Broth at 2°C-8°C in a cool, dry place away from light.
2. Stability of the kit is as per expiry date mentioned on the label.

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.

References

1. Leifson E; 1936, Am. J. Hyg; 24(2): 423.
2. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat. No.	Product Description	Pack Size
203190530010	Ready Prepared Tube	25 x 10 mL

	Temperature Limit		Manufacturer	LOT	Batch Code		Date of Manufacture
REF	Catalogue Number		Consult Instructions for use		Use-by Date		This way up

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