

Selenite F Broth | Ready-to-use Media

a product by **Biomed MDX**

Effective Date: 22/12/2025

REF TB05S3001

Intended Use:

Selenite F Broth is an enrichment medium for the isolation of *Salmonella* species from fecal or urine samples.

Principle of the Procedure:

The principle of Selenite F Broth is based on the selective toxicity of sodium selenite toward most enteric flora while permitting the rapid multiplication of *Salmonella* species. Sodium selenite effectively inhibits the growth of gram-negative coliforms, such as *Escherichia coli*, and gram-positive fecal streptococci by reacting with bacterial enzymes and cellular components. The medium utilizes lactose as a fermentable carbohydrate to maintain a stable pH, as the acid produced during its fermentation counteracts the alkalinity generated when selenite is reduced by bacterial activity. This selective inhibition is most effective during the first 12 hours of incubation, after which the competing bacteria may begin to recover, necessitating a timely subculture onto solid selective media.

Product Summary:

Selenite F Broth is a selective enrichment medium used for the isolation of *Salmonella* species from clinical, food, and environmental specimens. It is composed of a specialized nutrient base including peptone for nitrogen, lactose for pH maintenance, and sodium phosphate as a buffer to stabilize the environment. The key active ingredient, sodium selenite, serves as a potent inhibitory agent that suppresses the growth of competing intestinal flora, such as *Escherichia coli* and fecal streptococci, while facilitating the rapid proliferation of *Salmonella*. To ensure maximum recovery of pathogens, the medium requires a specific incubation period followed by subculturing onto selective agar, as the inhibitory effectiveness of the selenite diminishes after 24 hours.

Formulation* (PER LITER):

Pancreatic Digest of Casein	5.0g
Lactose	4.0g
Sodium Selenite	4.0g
Sodium Phosphate	10.0g

pH 7.0 +/- 0.2

*Adjust and/or supplemental as required to meet performance criteria

Procedure

Materials Provided

5mL Selenite F Broth.

Materials Required But Not Provided

Ancillary culture media, reagents, and laboratory equipment as required.

Test Procedure

1. Inoculate and streak the specimen as soon as possible after it is received in the laboratory with an aseptic technique.
2. Incubate at $35 \pm 2^\circ\text{C}$ for up to 18 to 24 hours.
3. Observe the result according to user requirements.
4. Dispose of all used reagents and contaminated materials as infectious waste. Laboratories must handle and dispose of all waste safely according to regulations.

Results

Examine for colonies exhibiting typical microscopic and colonial morphology. Appropriate biochemical or immunological tests may be required for final identification

Quality Control

Inoculate representative samples with the following strains. Incubate the inoculated tubes at $35 \pm 2^\circ\text{C}$ for up to 18 to 24 hours.

Strains	ATCC®	Growth Results
<i>Escherichia coli</i>	25922	Partial inhibition or pink with precipitation
<i>Salmonella enterica subsp. enterica</i> <i>serotype Typhimurium</i>	14028	Good growth. Colorless
Negative Control	-	No growth

Transportation:

Temperature fluctuations may occur during transportation. However, these fluctuations do not affect the performance, quality, or safety of the media.

Storage and Shelf Life:

Upon receipt, store tubes at 2 to 8°C in their original sleeve wrapping until just before use. Avoid freezing and overheating. The tubes may be inoculated up to the expiration date (see package label) and incubated for the recommended incubation times.

Warning and Precautions:

For in vitro diagnostic use. For Professional Use Only. Do Not Reuse.
Do not use tubes if they show evidence of microbial contamination, discoloration, drying, cracking, or other signs of deterioration.













Limitations of the Procedure

This medium is for laboratory use only and is not intended for the diagnosis of disease or other conditions. Identifications are presumptive and colonies should be identified using appropriate methods

Reference

1. Donaldson, A., & Nicol, M. (2016). Evaluation of selenite F broth as an enrichment step for the isolation of 'Salmonella' and 'Shigella' in clinical faecal specimens-a retrospective study. *New Zealand Journal of Medical Laboratory Science*, 70(3), 92-94.

Packaging Symbol

Symbol	Definition
	Catalogue number
	In Vitro Diagnostic Medical Device
	Batch code
	Date of manufacture
	Temperature limit
	Use-by date
	Keep away from sunlight
	Do not re-use
	Fragile, handle with care
	Consult instructions for use or consult electronic instructions for use
	Do not use if packaging damaged and consult instructions for use
	Manufacturer

Further Information:

For further information please contact your Biomed MDX representative.

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