

Selenite Broth

Liquid medium for selective enrichment of *Salmonella* spp,
from clinical and nonclinical samples, according to APHA.

DESCRIPTION

Selenite Broth is an enrichment medium used for the selective isolation of *Salmonella* and some species of *Shigella*.

This medium is prepared according to the original formula described as Selenite F Broth by Leifson and recommended by the American Public Health Association for the examination of food.

TYPICAL FORMULA

	(g/l)
Enzymatic Digest of Casein	5.0
Lactose	4.0
Sodium Phosphate	10.0
Sodium Selenite	4.0
Final pH 7.0 ± 0.2 at 25°C	

METHOD PRINCIPLE

Enzymatic digest of casein provides amino acids, nitrogen, carbon, vitamins and minerals for organisms growth. Lactose is the fermentable carbohydrate. Sodium phosphate is the buffer. Sodium selenite is the selective agent inhibiting many species of Gram-positive and Gram-negative bacteria including enterococci and coliforms.

PREPARATION

Dehydrated medium Suspend 23 g of the powder in 1 liter of distilled or deionized water. Mix well. Heat to boil shaking frequently until completely dissolved. Dispense into suitable containers (bottles or tubes). A depth of at least 5 cm is recommended, as salmonellae survive better at low oxygen tensions. DO NOT AUTOCLAVE.

TEST PROCEDURE

Inoculate the tube with 1-2 g of stool specimen or other solid material (approximately 10-15% by volume) and emulsify in the broth. For urines, the broth should be used at double concentration and inoculated with its own volume of the specimen. Incubate at 35 ± 2°C for 12-24 hours (coliforms may overgrow the pathogens if incubated for longer than 24 hours).

INTERPRETING RESULTS

Turbidity indicates microbial growth.

Subculture to a selective and differential enteric plated medium, such as XLD Agar (ref. 10056), Hektoen Enteric Agar (ref. 10043) or MacConkey Agar (ref. 10029), streaking for isolation. Examine for typical colony morphology. Confirm with further biochemical tests.

APPEARANCE

Dehydrated medium: free-flowing, homogeneous, white to light beige.
Prepared medium: clear, very pale yellow.

STORAGE

The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment, in its original container tightly closed. Store bottles and tubes at 2-8°C away from light. Do not use the product beyond its expiry date on the label or if product shows any evidence of contamination or any sign of deterioration.

SHELF LIFE

Dehydrated medium: 4 years.
Medium in tubes/bottles: 1 year.

Distribué par :

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QUALITY CONTROL

The medium is inoculated with the microbial strains indicated in the QC table.

Inoculum for productivity: ≤ 100 CFU.

Inoculum for selectivity: $> 10^3$ CFU.

Incubation conditions: aerobically at $35 \pm 2^\circ\text{C}$ for 18-24 hours.

QC Table.

Microorganism		Growth
<i>Salmonella</i> Typhimurium	ATCC® 14028	Good
<i>Shigella sonnei</i>	ATCC® 25931	Good
<i>Escherichia coli</i>	ATCC® 25922	Partially to completely inhibited

WARNING AND PRECAUTIONS

The product contains hazardous substances and is classified as dangerous. It is recommended to consult the safety data sheet for its correct use. The product is intended for *In vitro* diagnostic use and must be used only by properly trained operators.

DISPOSAL OF WASTE








Disposal of waste must be carried out according to national and local regulations in force.

BIBLIOGRAPHY

1. Versalovic, J., K.C. Carroll, G. Funke, J.H. Jorgensen, M.L. Landry, and D.W. Warnock (2011) Manual of Clinical Microbiology. 10th ed. ASM Press, Washington, D.C.
2. Quality Control for Commercially Prepared Microbiological Media (2004) - 3rd ed. M22-A3. Clinical and Laboratory Standards Institute - CLSI (NCCLS), Wayne, PA.
3. Vanderzant, C., and D.F. Splittstoesser (eds.). Compendium of methods for the microbiological examination of foods, 3rd ed. American Public Health Association, Washington, D.C.
4. Leifson, E. (1939) New selenite selective enrichment medium for the isolation of typhoid and paratyphoid bacilli. Am. J. Hyg. 24:423-432.

PRESENTATION		Contents	Ref.
Selenite Broth	Tubes	20 x 10 ml tubes	24110
Selenite Broth	Tubes	20 x 5 ml tubes	24143
Selenite Broth	Bottles	6 x 100 ml bottles	402050
Selenite Broth	Bottles	6 x 200 ml bottles	412050
Selenite Broth (Double Concentration)	Bottles	6 x 200 ml bottles	432050
Selenite Broth	Bottles	6 x 500 ml bottles	470020
Selenite Broth	Bottles	6 x 1000 ml bottles	463130
Selenite Broth	Dehydrated medium	500 g of powder	610145
Selenite Broth	Dehydrated medium	100 g of powder	620145
Selenite Broth	Dehydrated medium	5 kg of powder	6101455

TABLE OF SYMBOLS

LOT Batch code	IVD <i>In vitro</i> Diagnostic Medical Device	 Manufacturer	 Use by	 Fragile, handle with care
REF Catalogue number	 Temperature limitation	 Contains sufficient for <n> tests	 Caution, consult Instruction For Use	 Do not reuse

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