

SELENITE BROTH

Ready to use tubes

INTENDED USE

Ready to use enrichment liquid medium for the detection of *Salmonella* spp. in clinical specimens.

TYPICAL FORMULA (g/l)

Tryptone	5
Lactose	4
Sodium Phosphate Bibasic	10
Sodium Acid Selenite	4

Final pH 7.0 ± 0.1

DESCRIPTION

Selenite Broth is recommended for the selective enrichment of *Salmonella* spp. in clinical specimens. The medium is prepared in accordance with the formula described by Leifson and recommended by the APHA. Sodium Selenite possesses a high level of toxicity at a neutral pH for *Escherichia coli*, but not for the major part of microorganisms belonging to the *Salmonella* group. A buffer system is present in the medium, which tends to minimise the alkalinising effects induced by the reduction of sodium selenite. These alkalinising effects would notably diminish the selective properties of the medium. The acids produced by the microorganisms from lactose also contribute by neutralising the alkaline reactions of the medium. The preliminary enrichment of samples to be examined in Selenite Broth followed by inoculation onto plates of one or more selective media considerably increases the number of positive results with regard to the isolation of *Salmonella*.

TECHNIQUE

For faeces examination, inoculate test tubes containing 8-10ml of medium with 1g of faeces, or 1ml of faecal suspension. It is common practice to emulsify 2-3g of solid specimen to 15ml of saline solution and then withdraw approximately 1ml of the supernatant and inoculate 10ml of Selenite Broth. For the examination of urine samples, Selenite Broth must be used at double concentration dispensed in amounts of 5 - 7.5ml for each test tube, and inoculated with an equal volume of sample.

After a vigorous emulsification of the inoculum, incubate for 6-12 and if necessary for 18-24 hours at 35-37° then streak onto two selective plating media: Bismuth Sulphite Agar, MacConkey Agar, Desoxycholate Citrate Agar, SS Agar, XLD Agar, Hektoen Enteric Agar. The plating media should be chosen as a combination of greater and little selectivity. For the isolation of *Salmonella*, including *Salmonella typhi*, it is advisable to use as plating medium Bismuth Sulphite Agar, and to inoculate two plates, the first by streaking the inoculum on the surface and the second with a poured plate technique. Selenite Broth, after the growth of *Salmonella*, presents a pink colour.

LIMITATION

Discard media if selenite oxidizes and forms large amounts of a red precipitate. Do not incubate over 24 hours. Selenite Broth doesn't inhibit *E.coli* and *Proteus* spp.

STORAGE

Store at 2-8° away from direct light - When stored as directed the tubed media remain stable until the expiry date shown on the label. Do not use beyond stated expiry date. Media should not be used if there are any signs of deterioration or contamination.

PRECAUTIONS

For *in vitro* diagnostic use only. Observe approved biohazard precautions and aseptic techniques. To be used only by adequately trained and qualified laboratory personnel. Sterilize all biohazard waste before disposal.

REFERENCES

- APHA (1963) - Diagnostic Procedures and Reagents, 4th Ed.
- Leifson, E. (1936) - New Selenite Enrichment Media for the isolation of Typhoid and Paratyphoid (salmonella) Bacilli. Am. J. Hyg. 24, 423-432.
- Price, T.H. (1976) - Isolation of *Shigella sonnei* by fluid media. J. Hyg. Camb. 77, 341-348.

PACKAGING

552025

Selenite Broth

20 x 9 ml ready to use tubes