



MWE Selenite Broth

Product Code	Description
MWSEL	2ml of Selenite Broth in vial with white screw cap

1. Intended Use

MWE Selenite Broth is an enrichment medium for the isolation of *Salmonella* species from faecal specimens. It can also be used for water, foods for the isolation of *Salmonella* species. It is intended to be used in the clinical microbiology laboratory to process specimens collected using Fecal Transwabs, or directly using faecal specimens. Following incubation, Selenite Broth specimens can be processed manually or on a compatible automated plating systems.

2. Background

Leifson demonstrated that selenite is inhibitory for coliforms, and certain other enteric microorganisms such as faecal streptococci. It assists in the recovery of *Salmonella* without overgrowth of other enteric bacteria.

3. Formulation

Peptone

Lactose

Sodium selenite

Sodium phosphate

4. Appearance

Medium has clear straw colour. There may be some light precipitate present and a faint red colouring. This does not interfere with performance.

5. Warnings and precautions

For *in vitro* diagnostic use

Do not use tubes if they show evidence of bacterial contamination, discoloration or leakage.

After use inoculated tubes should be sterilised by autoclaving before discarding. Treat as hazardous infectious clinical waste.

6. Storage

Store tubes in dark at 2-25°C. Avoid freezing or overheating. Allow medium to warm to room temperature before using. Tubes stored as labelled can be used up to the expiration date printed on the tube.

7. Specimens

MWE Selenite Broth is can be used with faecal specimens (typically 0.2 – 0.5g), or with the swabs from Fecal Transwab.

8. Procedure

Material provided: Selenite Broth

Materials required but not provided: Collection device for faecal specimen (eg Fecal Transwab®), culture media, laboratory equipment as required

A Procedure for using with Fecal Transwab® specimens.

1. Vortex Fecal Transwab tube.
2. Remove cap from Selenite Broth tube.
3. Loosen cap from Fecal Transwab and remove cap with captured swab.

4. Using cap as holder, insert the captured swab into the Selenite Broth, and screw on cap until secure.
5. Screw cap from Selenite Broth tube onto the Fecal Transwab® tube.
6. Gently mix Selenite Broth using vortex.
7. Incubate at 37C for 18-24 hours.
8. After incubation period, use the swab to plate out broth onto a suitable agar medium (e.g. MacConkey Agar, XLD Agar, XLT-4 Agar, or a chromogenic agar) or use a pipette to remove a 100µl aliquot of selenite broth from the tube, and plate out in the same way. Alternatively the tubes can be processed on an automated plating system in accordance with the manufacturer's instructions.
9. Incubate plates for 24 hours before counting and interpreting colonies.

B Procedure for using with Stool specimens

1. Suspend 0.2 – 0.5g of specimen in the broth and emulsify by vortexing.
2. Alternatively moisten a swab (with sterile buffer, water or saline), use to rub stool specimen until saturated then place in broth. Either use swab from Fecal Transwab®, or from Sigma Swab (as these will break to correct length for swab capture).
3. Gently mix Selenite Broth using vortex.
4. Incubate at 37C for 18-24 hours.
5. After incubation period, use the swab to plate out broth onto a suitable agar medium (e.g. MacConkey Agar, XLD Agar, XLT-4 Agar, or a chromogenic agar), or use a pipette to remove a 100µl aliquot of selenite broth from the tube, and plate out in the same way. Alternatively the tubes can be processed on an automated plating system in accordance with the manufacturer's instructions.
6. Incubate plates for 24 hours before counting and interpreting colonies.

9. Results

After incubation there should be an increase in the numbers of Salmonella, and any other target pathogens, with inhibition of non-target organisms such as E. coli.

10. Reference

Leifson, E., 1936, New Selenite Selective Enrichment Media for the Isolation of typhoid and paratyphoid Salmonella bacilli, *American Journal of Hygiene*, **24**:423-432

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