

## SalEnrich Broth Base, Granulated

GM1685

SalEnrich Broth Base, granulated is used for two-step enrichment of sublethally injured *Salmonella* from foods and feeds.

### Composition\*\*

Ingredients	Gms / Litre
Casein enzymic hydrolysate	5.000
Meat peptone	5.000
Sodium chloride	5.000
Calcium carbonate	20.000
Final pH ( at 25°C)	7.1±0.2

\*\*Formula adjusted, standardized to suit performance parameters

### Directions

Suspend 35 grams in 1000 ml distilled water. Heat just to boiling. Mix well and dispense in tubes or flasks as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. After sterilization slight white precipitate may develop due to the presence of calcium carbonate which does not affect the performance of the medium. On prolonged storage of medium marginal pH may be increased.

Preliminary Enrichment:

Suspend 25 gms homogenized sample in sterile 225 ml broth base and incubate for 6-8 hours at 35-37°C. Dispense aseptically the incubated broth in 10 ml quantity to sterile test tubes.

Secondary Selective Enrichment:

Aseptically add 1ml of rehydrated contents of SalEnrich Selective Supplement (FD238) to each 10 ml of the primary enrichment culture and allow to stand for 30 minutes. Shake vigorously and then incubate for further 18-22 hours at 35-37°C. For further detection of *Salmonella*, streak a sample onto appropriate selective media.

### Principle And Interpretation

This medium is recommended as pre enrichment medium for *Salmonella* with added SalEnrich Selective Supplement (FD238) (1,2). Growth of contaminating flora is inhibited due to tetrathionate, brilliant green and ox bile.

Casein enzyme hydrolysate and meat peptone provides nitrogenous sources to the growing *Salmonellae*. Sodium chloride helps in maintaining osmotic equilibrium. The supplement contains potassium tetrathionate, ox bile, brilliant green and additional calcium carbonate. Brilliant green and ox-bile inhibits both gram-positive as well as some selected gram-negative organisms. Potassium tetrathionate inhibits accompanying microbial flora except *Salmonella*.

### Quality Control

#### Appearance

Cream to yellow coloured granular medium

#### Colour and Clarity of prepared medium

Preliminary Enrichment Broth Base: Light amber coloured clear solution.

Selective Enrichment Medium (with added supplement FD238): Bluish green coloured opalescent solution with white precipitate

#### Reaction

Reaction of 3.5% w/v aqueous solution at 25°C. pH : 7.1±0.2

#### pH

6.90-7.30

#### Cultural Response

Cultural characteristics observed when subcultured on MacConkey Agar (GM082/M082) after an incubation at 35-37°C for 18-24 hours.

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Organism	Inoculum (CFU)	Growth
<b>Cultural Response</b>		
<i>Escherichia coli</i> ATCC 25922	50-100	poor-fair
<i>Salmonella</i> Typhimurium ATCC 14028	50-100	good-luxuriant
<i>Staphylococcus aureus</i> ATCC 25923	$\geq 10^3$	inhibited

### Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label.

### Reference

1. Weber, A. Über die Brauchbarkeit von Salmosyst zur Anreicherung von Salmonellen aus Kotproben von Tieren-Berl. Munch Tierarztl, Wschr., 101:57-59 (1988)
2. Ossmer, R.: Salmosyst and Rambach agar, A rapid alternative for the detection of Salmonella, Congress-Poster-Salmonella and Salmonellosis-Ploufragan/Saint-Brieux-france, September, 1992.

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