TM 280 - SBG ENRICHMENT BROTH

INTENDED USE

For selective enrichment of Salmonellae from clinical samples.

PRODUCT SUMMARY AND EXPLANATION

Salmonella are gram-negative, facultatively anaerobic, non-sporulating, motile rods in the family *Enterobacteriaceae.* They are widely distributed in animals affecting mainly the stomach and the intestines. These organisms are difficult to differentiate biochemically from *Escherichia coli*. Leifsons Selenite Medium and Kauffmanns Modified Tetrathionate Medium have been widely used as enrichment medium for the isolation of *Salmonella*. Selenite Medium used for enrichment of *Salmonella* inhibits *E. coli* but allows growth of *Proteus* and *Enterobacter*. To overcome this difficulty, Strokes and Osborne developed a more selective medium by adding brilliant green and sodium taurocholate to the Selenite Medium and showed that it was superior to the Selenite Medium for isolating *Salmonella* in patients with gastroenteritis and similar diseases.

SBG (Selenite Brilliant Green) Enrichment Broth is prepared as per the formulation described by Stokes and Osborne for selective enrichment of *Salmonella* from clinical specimens and egg products. Brilliant green and sodium selenite are neutralized by the egg constituents rendering the medium non-selective therefore sulfapyridine is added to the medium for isolation of *Salmonella* from eggs.

COMPOSITION

Ingredients	Gms / Ltr
Peptic digest of animal tissue	5.000
Yeast extract	5.000
Mannitol	5.000
Sodium taurocholate	1.000
Dipotassium phosphate	2.650
Monopotassium phosphate	1.020
Brilliant green	0.005
Sodium hydrogen selenite	4.000

PRINCIPLE

Peptic digest of animal tissue and yeast extract provide nitrogenous compounds, carbon, sulphur, vitamin B complex and trace elements necessary for the growth of organisms. Mannitol is the fermentable carbohydrate. Mannitol is utilized by *Salmonella* as an energy source, but it cannot be utilized by *Proteus*. Phosphates buffer the medium well. Brilliant green, sodium hydrogen selenite, sodium taurocholate inhibits the growth of gram-positive organisms and enteric organisms except *Salmonella* species. Whole egg and egg yolk reduces the selective properties of Selenite-Brilliant Green Enrichment. Addition of sulfapyridine restores the selective properties. This medium cannot be used for the isolation of *Salmonella Typhi*, *Salmonella Paratyphi A*, and *Salmonella Pullorum*.

INSTRUCTION FOR USE

- Dissolve 23.70 grams in 1000 ml distilled water. Mix well.
- Heat to boiling for 5 to 10 minutes, do not autoclave or overheat.
- Dispense in sterile tubes. Add 0.5 g/l sodium sulfapyridine if desired.

Caution: Sodium hydrogen selenite (Sodium biselenite) is very toxic, corrosive agent and causes teratogenicity. So it should be handled with great care. If there is contact with skin wash immediately with lot of water.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : White to cream, cream to greenish yellow homogeneous free flowing powder.
Appearance of prepared medium : Light green coloured clear to slightly opalescent solution.
pH (at 25°C) : 7.2±0.2

INTERPRETATION

Cultural characteristics observed after an incubation when subcultured on MacConkey Agar.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Color of the colony	Incubation Temperature	Incubation Period
Salmonella Choleraesuis	12011	50-100	Luxuriant	Colourless	35-37°C	18-24 Hours
Salmonella Typhi	6539	50-100	Luxuriant	Colourless	35-37°C	18-24 Hours
Salmonella Typhimurium	14028	50-100	Luxuriant	Colourless	35-37°C	18-24 Hours
Enterobacter aerogenes	13048	50-100	None-poor	Pink to colourless	35-37°C	18-24 Hours
Escherichia coli	25922	50-100	None-poor	Pink with Bile precipitation	35-37°C	18-24 Hours

PACKAGING:

In pack size of 100 gm bottles.

STORAGE

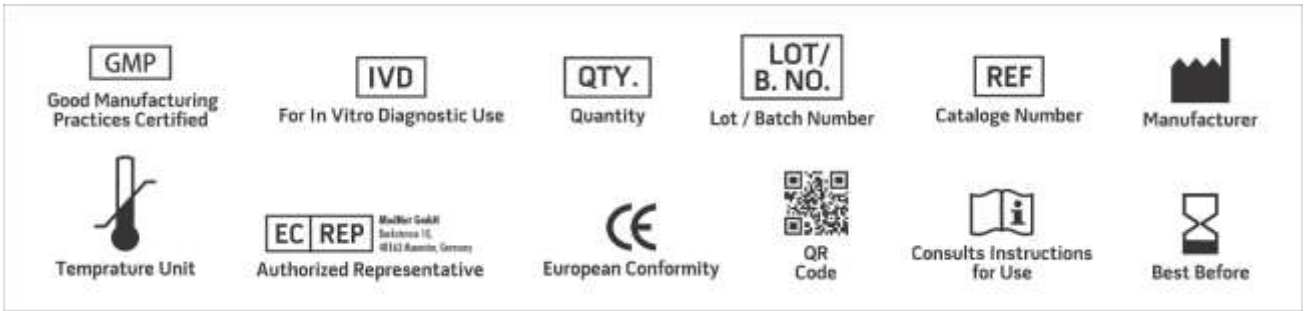
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Leifson, 1955, Appl. Microbiol. 3:295
2. Stokes and Osborne, 1955, Appl. Microbiol., 3:217.
3. Osborne and Stokes, 1955, Appl. Microbiol., 3:295.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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