



SBG Enrichment Broth, Modified (Twin Pack)

M1906

For Selective Enrichment of *Salmonella species*

Composition**

Ingredients	Gms / Litre
Part A	-
Peptone	5.000
D-Mannitol	5.000
Yeast extract	5.000
Dipotassium phosphate	2.650
Monopotassium phosphate	1.020
Brilliant green	0.005
Part B	-
Sodium selenite	4.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 18.67 grams of Part A in 1000 ml distilled water. Add 4 grams of Part B. Mix well. Heat to boiling for 5 to 10 minutes. DO NOT AUTOCLAVE OR OVERHEAT. Dispense in sterile tubes. 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.

Principle And Interpretation

SBG(Selenite Brilliant Green) Enrichment Broth, Modified is a selective enrichment for *Salmonella species*. They are gram-negative, facultatively anaerobic, non-sporulating, motile rods in the family *Enterobacteriaceae*. These organisms are difficult to differentiate biochemically from *Escherichia coli*. Leifsons Selenite Medium (1) and Kauffmanns Modified Tetrathionate Medium have been widely used as enrichment medium for the isolation of *Salmonella*. The medium is not as inhibitory since it has neither Sodium taurocholate nor Sodium sulfapyridine.(2)

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 and sodium hydrogen selenite, inhibit the growth of gram-positive organisms and enteric organisms except *Salmonella species*.

1 gram or 1 ml of test material is inoculated in 10 ml of the medium and incubated at 35-37°C for 18-24 hours. Following incubation, a loopful of the enriched culture is streaked on SS Agar (M108), MacConkey Agar (M081) or other plates for the isolation of *Salmonella*.

Quality Control

Appearance

Part A : Cream to greenish yellow homogeneous free flowing powder Part B : White to cream homogeneous free flowing powder

Colour and Clarity of prepared medium

Light green coloured clear to slightly opalescent solution

Reaction

Reaction of 1.87% w/v of Part A + 0.4% w/v of Part B at 25°C. pH : 7.4±0.2

pH

7.20-7.60

Cultural Response

Please refer disclaimer Overleaf.

M1906: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours when subcultured on MacConkey Agar (M081).

Organism	Inoculum (CFU)	Growth (on M081)	Recovery (on M081)	Colour of colony (on M081)
Cultural Response				
<i>Salmonella Choleraesuis</i> ATCC 12011	50-100	luxuriant	>=50%	colourless
<i>Salmonella Typhi</i> ATCC 6539	50-100	luxuriant	>=50%	colourless
<i>Salmonella Typhimurium</i> ATCC 14028	50-100	luxuriant	>=50%	colourless
<i>Enterobacter aerogenes</i> ATCC 13048	50-100	none-poor	<=10%	pink to colourless
<i>Escherichia coli</i> ATCC 25922	50-100	none-poor	<=10%	pink to colourless with bile precipitation

Storage and Shelf Life

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

Reference

1. Leifson, 1955, Appl. Microbiol. 3:295 2.Meal and meat products-detection of Salmonella(reference method).ISO 3565(1975).

Revision : 1 / 2011



Disclaimer :

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory, diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.