

Bismuth sulphite Medium

MF005

(without Membrane Filter)

For detection and enumeration of *Salmonella*

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue	10.000
Beef extract	5.000
Dextrose	5.000
Disodium phosphate	4.000
Ferrous sulphate	0.300
Bismuth sulphite indicator	8.000
Brilliant green	0.025

**Formula adjusted, standardized to suit performance parameters

Directions

The test sample should be filtered through a sterile membrane filter having pore size of 0.22μ / 0.45μ . Rehydrate the nutrient pad with 2.0-2.5 ml sterile distilled / purified water. After filtration, remove the membrane filter aseptically using sterile forceps. Place the membrane filter on rehydrated nutrient pad. Incubate the inoculated nutrient. Interpret the results qualitatively by observing the presence or absence of growth and quantitatively by counting the number of colonies on the surface of the membrane filter and calculating CFU/ml.

Principle And Interpretation

Field of application: Water, food and other clinical samples. DriFilter Membrane Nutrient Pad Medium are ready to use sterile culture media in the form of a 50 mm biological inert absorbent pads impregnated with standard culture medium, then dried and sterilized in 55 mm Petri plate. They eliminate the need of laborious media preparation and autoclaving procedures. The nutrient pads are to be just rewetted with sterile distilled water and are ready to use. Use of nutrient pads allows larger sample volumes to be tested at a time. Interpretation of results is directly by counting the CFUs and also quantifies the microbial load present in the sample. Bismuth Sulphite Agar is a modification of original Wilson and Blair Medium (1-3). It is also recommended by various Associations (4-9) for the isolation and preliminary identification of *Salmonella typhi* and other Salmonellae from pathological materials, sewage, water, food and other products. This medium favors use of larger inoculum as compared to other selective media, as it has unique inhibitory action towards gram-positive organisms and coliforms. Peptic digest of animal tissue and beef extract serve as sources as carbon, nitrogen, vitamins and essential growth factors. Dextrose is the carbon source. Disodium phosphate maintains the osmotic equilibrium. Bismuth sulphite indicator along with brilliant green inhibits the intestinal gram-positive and gram-negative bacteria. Ferrous sulphate aids in detection of hydrogen sulphide production.

Quality Control

Appearance

Dry filter membrane pad of 50mm diameter

Colour

Pale coloured nutrient pad

Sterility test

Passes release criteria

Cultural response

Cultural characteristics observed after incubation at 35-37°C for 18-24 hours

Organism	Growth	Colour of colony
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<i>S. serotype Typhi</i> ATCC 19430	Luxuriant	Black with metallic sheen
<i>S. serotype Typhimurium</i> ATCC 14028	Luxuriant	Black with metallic sheen
<i>S. serotype Enteritidis</i> ATCC 13076	Luxuriant	Black with metallic sheen

Storage and Shelf Life

Store between 10-30°C. Use before expiry date on the label.

Reference

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