OXFORD LAB FINE CHEM LLP
ISO 9001-2008 Certified Company

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Oxford
Range of
Laboratory Chemicals

TECHNICAL DATA SHEET

Bismuth Sulphite Agar

Principle

Bismuth Sulphite agar is composed of meat extract (equivalent to beef extract), peptone, dextrose, ferrous sulfate, bismuth Sulphate indicator, brilliant green and agar. Meat extract and peptone provide nitrogen and minerals. Dextrose is an energy source. Disodium phosphate is a buffering agent. Bismuth sulfite indicator and brilliant green inhibits gram-positive bacteria and some coliforms and *Salmonella* to grow luxuriantly. Ferrous sulfate is used for detection of production. The hydrogen sulfide producer's forms precipitate with ferrous sulfate givers brown to black color with metallic sheen to the positive cultures. Agar is a solidifying agent.

Use: Recommended for isolating *Salmonella spp,* (*Salmonella typhi*) from food and clinical specimens.

Contents*

Ingredients	Gram/Litre
Meat Extract#	5.00
Peptone	10.00
Dextrose	5.00
Ferrous Sulphate	4.00
Bismuth Sulphate Indicator	8.00
Brilliant Green	0.30
Agar	20.00
pH at 25˚C	7.7 ±0.2

*** Formula adjusted for optimum performance and parameters**
 # Equivalent to beef extract

Directions: Dissolve 52.30 grams in 1000 ml distilled water. Boil for 1 to minutes to dissolve the medium completely. AVOID OVERHEATING and DO NOT AUTOCLAVE, cool it to 42-45 °C and distribute aseptically in petri plates with gentile shaking for equal distribution of flocculent. Ensure complete solidification and inoculate test sample aseptically.

Specimens types analyzed

Pharmaceutical samples, clinical and non-clinical samples etc.

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Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	**Light beige colored free flowing, homogeneous powder**
Reaction of 5.2% solution	**7.7 ±0.2 at 25 ˚C**
pH	**7.50- 7.90**
Gelling	**Firm comparable with 2% agar gel**
Color and clarity of ready medium	**Light greenish yellow colored opalescent gel**
Growth Promotion properties	**Best at ≤ 100 CFU at 32-37 ºC for 18-72 h**
Indicative properties	**Optimum at ≤ 100 CFU at 32-37 ºC for 18-48 h**
Negative control	**Performed using sterile distilled water**

Different Microbial Response

Organism	Inoculum	Growth	Colony color	Incubation
Salmonella typhimurium **(ATCC 14028)**	**50-100**	**Luxurious**	**Grey to black with greenish metallic sheen**	**33-37 ºC, 18-48 h**
Escherichia coli **(ATCC 8739)**	**50-100**	**Poor**	**brown with metallic sheen**	**33-37 ºC, 18-48 h**

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Storage and Shelf Life

Hygroscopic; keep container tightly closed. Store in cool dry place.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. Atlas, R. M. (2005). Handbook of media for environmental microbiology. CRC press.
2. Difco Manual (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.

Disclaimer:

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