Technical Data

B.G. Sulpha HiVeg™ Agar (Brilliant Green Sulpha HiVeg™ Agar) MV492

Brilliant Green Sulpha HiVeg Agar is used for the selective isolation and detection of *Salmonella* species in foods especially from eggs and egg products.

Composition**

Ingredients	Gms / Litre
Yeast extract	3.000
HiVeg peptone No. 3	10.000
Lactose	10.000
Sucrose	10.000
Sodium sulphapyridine	1.000
Sodium chloride	5.000
Brilliant green	0.0125
Phenol red	0.080
Agar	20.000
Final pH (at 25°C)	6.9±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 59.09 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. To maintain selectivity of the medium, DO NOT OVER STERILIZE OR OVERHEAT the medium. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Brilliant Green Sulpha HiVeg Agar is prepared by replacing proteose peptone with HiVeg peptone No. 3 which makes the medium BSE/TSE risks free.

Salmonella species are ubiquitous in the environment. They enter the gastrointestinal tract of animals due to the consumption of contaminated feed. Meat and meat products , eggshell and its contents from these infected animals stands to be the major cause of salmonella pathogenesis (1- 5).

Salmonella species are usually the causative agents of a self-limiting gastroenteritis. In some cases they may also cause typhoid fever. Contamination with *Salmonella* is most frequently encountered in the poultry industry.

Brilliant Green Sulpha Agar is used for the selective isolation and detection of *Salmonella* species in foods especially from eggs and egg products. It was first formulated by Kristensen, Lester and Jargens (6). This was further modified by Osborne and Stokes (7) by the addition of 0.1% sodium sulphapyridine. Addition of this helped to increase the selectivity of the medium. B. G. Sulpha HiVeg Agar is the modification of B. G. Sulpha Agar recommended for same purpose. Colonies of *Salmonella* may sometimes vary from red to pink to white depending upon the strain and time of incubation. Do not autoclave the medium for more than 15 minutes as it decreases the selectivity of the medium (8).

Yeast extract and HiVeg peptone No. 3 provides essential growth nutrients, amino acids and vitamins. Brilliant green used in the medium is inhibitory to gram-positive and most gram-negative lactose/sucrose fermenting bacilli. Sulphapyridine enhances the selectivity of the medium. The medium does not support the growth of *Salmonella* Typhi as well as *Shigella* . Since Brilliant Green Sulpha HiVeg Agar is highly selective, a less inhibitory medium should be simultaneously used to recover organisms from the pre-enriched culture (Selenite Cystine HiVeg Medium).

Quality Control

Appearance

Light yellow to pinkish purple Homogeneous Free flowing powder

Gelling

Firm, comparable with 2.0% agar gel.

Colour and Clarity of Prepared Medium

Greenish brown clear to slightly opalescent

Reaction

Reaction of 5.91% w/v aqueous solution at 25°C. pH : 6.9±0.2

pH

6.70-7.10

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours.

Cultural Response

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony
Cultural Response				
Enterococcus faecalis ATCC 29212	100-1000	inhibited	0%	
Escherichia coli ATCC 25922	100-1000	none-poor	<20%	yellow green surrounded by intense yellow-green zone
Proteus vulgaris ATCC 13315	100-1000	inhibited	0%	
Salmonella Enteritidis ATCC 13076	100-1000	good	>50%	pink - white, surrounded by brilliant red zone.
Salmonella Typhimurium ATCC 14028	100-1000	good	>50%	pink - white
Staphylococcus aureus ATCC 25923	100-1000	inhibited	0%	

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

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3.Brooks and Taylor, Rep. Rd. Invest., Bd. 60, H. M. S. O., London, England.
4.Forsythe AaR, 1953, Food Technol., 7:49.
5.Stadelman I, Roop and Simmons, 1982, Poultry Sci., 61:388.
6.Kristensen M, Lester V, Jargens A. Brit J Exp Pathol. 1925;6.
7.Osborne W. W. and Stokes J. L., Ottawa; Food and Drug Laboratories.
8.MacFaddin JF. Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria Baltimore: Williams and Wlkins; 1985.

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