Technical Information

Brilliant Green Agar with Phosphates

Product Code: DM 1971S

Application: - Brilliant Green Agar with Phosphates is used for the selective isolation of bacteria responsible for food poisoning.

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue	10.000
Meat extract	5.000
Yeast extract	3.000
Lactose	10.000
Sucrose	10.000
Disodium phosphate	1.000
Monosodium phosphate	0.600
Phenol red	0.090
Brilliant green	0.0047
Agar	12.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

This medium is formulated as per the recommendation of Rijks Institute Voorde Volksgezondheld (National Institute for Public Health), Utrecht [1, 2]. Because of its improved performance with respect to recovery of smaller numbers of *Salmonella* species, of *Escherichia coli, Proteus* species and *Pseudomonas* species It is extensively used in ISO Standards [3-6]. It is also recommended by BIS as a solid selective medium for the detection of *Salmonella* from food [7]. In which the growth from Fluid Selenite Cystine Broth (DM1025I) and Modified Rappaport Vassiliadis Medium (DM2137I) is subcultured on Brilliant Green Agar with phosphates (DM1971S).

Typical colonies from the plates are used for further confirmation. The medium can be further supplemented with sulphacetamide (1 g/l) and sodium mandelate (0.25 g/l) to inhibit contaminating microorganisms when the sample is suspected to be containing large number of competing organisms along with *Salmonella* species [8].

Methodology

Suspend 52 grams of powder media in 1000 ml distilled water. Shake well & heat with occasional agitation and bring just to the boil to dissolve the medium completely. DO NOT AUTOCLAVE. For maximum recovery, Sulpha Supplement (MS2068) may be aseptically added. Cool to 50°C. Mix well and pour into sterile petriplates.

Quality Control

Physical Appearance
Pink coloured homogeneous free flowing powder

Gelling
Firm, comparable with 1.2% Agar gel.

Colour and Clarity of prepared medium
Greenish brown coloured clear to slightly opalescent gel forms in petri plates.

Reaction
Reaction of 5.2% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH Range 6.80-7.20

Cultural Response/Characteristics
DM 1971S: Cultural characteristics observed after an incubation at 35 - 37°C for 18 - 24 hours.

Organism	Inoculum (CFU)	Recovery	Colour of colony	Colour of colony
Escherichia coli ATCC 25922	>=10^3	inhibited	0%	
Proteus vulgaris ATCC 13315	50-100	none-poor	<=10%	**Red**
Pseudomonas aeruginosa ATCC 10145	50-100	none-poor	<=10%	**Red**
Salmonella Enteritidis ATCC 13076	50-100	Luxuriant	>=50%	bright red
Salmonella Typhimurium ATCC 14028	50-100	luxuriant	>=50%	bright red

Storage and Shelf Life

Dried media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.
Prepared Media: 2-8^0 in sealable plastic bags for 2-5 days.

Further Reading

3. Anon, 1975, International Organization for Standardization, Meat and Meat products. Ref. Method, ISO:3 565.
4. Anon, 1981, International Organization for Standardization, Microbiology Ref. Methods, ISO: 6579.
5. Anon, 1985, International Organization for Standardization, Milk and Milk Products, Ref. Method, ISO: 6785.
6. Read R. B. and Reyes A.L., 1968, Appl. Microbiol., 16:746. 7. Bureau of
Indian Standards IS : 5887 (Part 3) 1999.
8. Watson U.C. and Walker A.P., 1978, J. Appl. Bact., 45:195.

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