Brilliant Green Agar w/ Sulfapyridine

Highly selective medium for detection of *Salmonella* spp.

TYPICAL FORMULA	(g/l)
Enzymatic Digest of Animal Tissue	5.0
Enzymatic Digest of Casein	5.0
Yeast Extract	3.0
Sodium Chloride	5.0
Lactose	10.0
Sucrose	10.0
Brilliant Green	0.0125
Phenol Red	0.08
Sodium Sulfapyridine	1.0
Agar	20.0
Final pH 6.9 ± 0.2 at 25°C	

DESCRIPTION

Brilliant Green Agar w/ Sulfapyridine is a selective medium used for the isolation of *Salmonella* spp, other than *S*. Typhi and *S*. Paratyphi, from food, animal feed, and other materials.

PRINCIPLE

Enzymatic digest of animal tissue and enzymatic digest of casein provide amino acids, nitrogen, carbon, minerals, vitamins and other nutrients for organisms growth. Yeast extract is a source of vitamins, particularly of B-group. Sodium chloride maintains the osmotic balance of the medium. Lactose and sucrose are the fermentable carbohydrates. Brilliant green and sulfapyridine are selective agents, inhibiting Gram-positive bacteria and many Gram-negative organisms, except *Salmonella* spp. Phenol red is the pH indicator. Agar is the solidifying agent.

PREPARATION

Suspend 59 g of powder in 1 liter of deionized or distilled water. Bring to boil and shake until completely dissolved. Sterilize at 121°C for 15 minutes. Cool up to 45-50°C. Mix well and pour in Petri dishes.

TECHNIQUE

Inoculate Brilliant Green Agar w/ Sulfapyridine from a selective enrichment broth, e.g. Tetrathionate Broth (ref. 24451) or Selenite Cystine Broth (ref. 24510), or by direct streaking of the sample onto the plate.

Incubate the plates aerobically at 35 ± 2°C for 18-24 h. If growth is not observed, extend the incubation for an additional 24 h.

NOTE: For best results in isolating all enteric pathogens, a less selective medium, such as MacConkey Agar (ref. 10029) or Hektoen Enteric Agar (ref. 10043), should be used simultaneously.

INTERPRETATION OF RESULTS

Typical *Salmonella* colonies on Brilliant Green Agar w/ Sulfapyridine appear as red to pink-white with red zones. The red coloration of the medium indicates that lactose or sucrose was not utilized.

Lactose or sucrose fermenting microorganisms not completely inhibited will produce yellow to yellow-green colonies with a yellow-green or green halo.

Escherichia coli may be partially inhibited and present as yellow to yellow-green colonies surrounded by a green halo.

Shigella spp. may exhibit partial to complete inhibition with colorless colonies.

Other non-lactose fermenting microorganisms may mimic enteric pathogens and present as red to pink-white colonies surrounded by red zones. Further biochemical testing is needed to fully identify these strains.

NOTE: For final confirmation, additional tests should be performed on colonies from pure culture on non-selective media.

STORAGE

The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident. Store prepared plates at 2-8°C away from light.

WARNING AND PRECAUTIONS

The product contains hazardous substances and is classified as dangerous. It is recommended to consult the safety data sheet for its correct use. The product is designed for professional use only and must be used by properly trained operators.

DISPOSAL OF WASTE

Disposal of waste must be carried out according to the national and local regulations in force.

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REFERENCES

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- Vanderzant, C., and D. F. Splittstoesser (eds.). Compendium of methods for the microbiological examination of foods, 3rd ed. American Public Health Association, Washington, D.C.
- Eaton, A. D., L. S. Clesceri, and A. E. Greenberg (eds.). 1995. Standard methods for the examination of water and wastewater,19th ed. American Public Health Association, Washington, D.C.
- Cunnif, P. (ed.). 1995. Official Methods of Analysis AOAC International, 16th ed. AOAC International, Gaithersburg, MD.
- Osborne, W. W., and J. L. Stokes. 1955. The determinations of Salmonellae in foods. Ottawa: Food and Drug Laboratories.
- Kristensen, M., V. Lester, and A. Jurgens. 1925. On the use of trypsinized casein, bromthymol blue, bromcresol purple, phenol red and brilliant green for bacteriological nutrient media. Br. J. Exp. Pathol. 6:291.

PRODUCT SPECIFICATIONS

NAME
Brilliant Green Agar w/ Sulfapyridine

PRESENTATION
Dehydrated medium

STORAGE
10-30°C

PACKAGING

Ref.	Content	Packaging
610394	500 g	500 g of powder in plastic bottle
620394	100 g	100 g of powder in plastic bottle

pH OF THE MEDIUM
6.9 ± 0.2

USE
Brilliant Green Agar w/ Sulfapyridine is a highly selective medium used for isolation of *Salmonella* spp from food and other samples

TECHNIQUE
Refer to technical sheet of the product

APPEARANCE OF THE MEDIUM
Powder medium
Appearance: free-flowing, homogeneous
Colour: beige to pink
Ready-to-use medium
Appearance: slightly opalescent
Colour: orange-brown to dark-reddish amber

SHELFLIFE
4 years

QUALITY CONTROL
1. Control of general characteristics, label and print
2. Microbiological control
   Inoculum for productivity: 50-100 CFU
   Inoculum for selectivity: 10^4-10^6 CFU
   Incubation Conditions: 18-24 h / 35 ± 2°C

Microorganism		Growth	Specification
Salmonella Typhimurium	ATCC® 14028	Good	Red to pink-white colonies with a red halo
Escherichia coli	ATCC® 25922	Partially inhibited	Yellow to yellow-green colonies with a green halo
Enterococcus faecalis	ATCC® 29212	Inhibited	---
Proteus mirabilis	ATCC® 12453	Inhibited	---

TABLE OF SYMBOLS

LOT Batch code	Keep away from Sunlight	Manufacturer	Use by	Fragile, handle with care
REF Catalogue number	Temperature limitation	Contains sufficient for <n> tests	Caution, consult instructions for use	Do not reuse

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