



## Brilliant Green Agar

Selective medium for isolation of *salmonellae* from clinical specimens and other materials of sanitary importance.

### DESCRIPTION

Brilliant Green Agar is a selective medium used for the isolation *Salmonella* spp, other than *S. Typhi* and *S. Paratyphi* from pathogen materials, stool, urine, environmental samples and food.

Brilliant Green Agar is recommended by APHA, FDA and USP.

### TYPICAL FORMULA

	(g/l)
Meat Peptone	5.0
Casein Peptone	5.0
Sodium Chloride	5.0
Yeast Extract	3.0
Lactose	10.0
Sucrose	10.0
Phenol Red	0.08
Brilliant Green	0.0125
Agar	20.0
Final pH 6.9 ± 0.2 at 25°C	

### METHOD PRINCIPLE

Peptones provide amino acids, carbon, nitrogen, vitamins and minerals for organisms growth. Sodium chloride maintains the osmotic balance of the medium. Yeast extract is a source of vitamins, particularly of B-group. Lactose and sucrose are the fermentable carbohydrates. Lysine is the decarboxylase substrate. Phenol red is the pH indicator. Brilliant green is the selective agent inhibiting Gram-positive bacteria and most Gram-negative bacteria, other than *Salmonella* spp. Agar is the solidifying agent.

### PREPARATION

<u>Dehydrated medium</u>	Suspend 58.1 g of the powder in 1 liter of distilled or deionized water. Mix well. Heat to boil shaking frequently until completely dissolved. Sterilize in autoclave at 121°C for 15 minutes.
<u>Medium in bottles</u>	Melt the content of the bottle in a water bath at 100°C (loosing the cap partially removed) until completely dissolved. Then screw the cap and check the homogeneity of the dissolved medium, if it is the case turning the bottle upside down. Cool at 45-50°C, mix well avoiding foam formation and aseptically distribute into Petri dishes.

### TEST PROCEDURE

Inoculate the plates by directly streaking the sample over the agar surface. Incubate aerobically at 35 ± 2°C for 18-24 hours.

### INTERPRETING RESULTS

After incubation observe the color of the colonies and interpret the results as indicated in the ID Table.

#### ID Table.

Microorganism	Appearance of colonies
<i>Salmonella</i> spp (excepted <i>S. Typhi</i> and <i>S. Paratyphi</i> )	White to pink, with red zone
<i>Escherichia coli</i> , <i>Enterobacter</i> , <i>Klebsiella</i> spp	Yellow-green
<i>Pseudomonas</i> spp	Pink to red

### APPEARANCE

Dehydrated medium: free-flowing, homogeneous, pink.

Prepared medium: slightly opalescent, orange-brown.

**STORAGE**

The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment, in its original container tightly closed. Store bottles, tubes and prepared plates at 10-25°C away from light. Do not use the product beyond its expiry date on the label or if product shows any evidence of contamination or any sign of deterioration.

**SHELF LIFE**

Dehydrated medium: 4 years.  
Medium in bottles: 2 years.  
Ready-to-use plates: 6 months.

**QUALITY CONTROL**

Plates are inoculated with the microbial strains indicated in the QC table.  
Inoculum for productivity: 50-100 CFU  
Inoculum for selectivity: 10<sup>4</sup>-10<sup>6</sup> CFU  
Incubation conditions: aerobically at 35 ± 2°C for 18-24 hours.

**QC Table.**

Microorganism		Growth	Specification
<i>Salmonella</i> Typhimurium	ATCC® 14028	Good	White to red colonies with red zone
<i>Salmonella</i> Enteritidis	ATCC® 13076	Good	White to red colonies with red zone
<i>Shigella flexneri</i>	ATCC® 12022	Inhibited	---
<i>Staphylococcus aureus</i>	ATCC® 25923	Inhibited	---
<i>Escherichia coli</i>	ATCC® 25922	Poor	Yellow-green colonies

**WARNING AND PRECAUTIONS**

The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. It is nevertheless recommended to consult the safety data sheet for its correct use. The product is intended for *in vitro* diagnostic use and must be used only by properly trained operators.

**DISPOSAL OF WASTE**

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








**BIBLIOGRAPHY**

- 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.
- Taylor W.J. (1965) Isolation of Shigellae I. Xylose lysine agars: new media for isolation of enteric pathogens. Am J Clin Pathol; 44:471-475.
- United States Pharmacopeial Convention (1995) Microbial Limit Test. The United States Pharmacopoeia 23<sup>rd</sup> ed. The United States Pharmacopeial Convention, Rockville MD, USA.
- US Food and Drug Administrations (1998) Bacteriological Analytical Manual 8<sup>th</sup> ed. AOAC International. Gaithersburg, MD, USA.

**PRESENTATION**

		Contents	Ref.
Brilliant Green Agar	90 mm ready-to-use plates	20 plates	10022
Brilliant Green Agar	90 mm ready-to-use plates	100 plates	10022*
Brilliant Green Agar	Bottles	6 x 100 ml bottles	402330
Brilliant Green Agar	Dehydrated medium	500 g of powder	610009
Brilliant Green Agar	Dehydrated medium	100 g of powder	620009

**TABLE OF SYMBOLS**

<b>LOT</b> Batch code	<b>IVD</b> <i>In vitro</i> Diagnostic Medical Device	 Manufacturer	 Use by	 Fragile, handle with care
<b>REF</b> Catalogue number	 Temperature limitation	 Contains sufficient for <n> tests	 Caution, consult Instruction For Use	 Do not reuse

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