

70134 Brilliant Green Agar, modified (Brilliant Green Agar with Phosphates, Brilliant Green Agar acc. SLMB)

A highly selective medium for the isolation and identification of *Salmonella* from water, sewage and foodstuffs except *S. typhosa* or *Shigella* species.

Composition:

Ingredients	Grams/Litre
Meat extract	5.0
Bacteriological peptone	10.0
Yeast extract	3.0
Disodium hydrogen phosphate	1.0
Sodium dihydrogen phosphate	0.6
Lactose	10.0
Sucrose	10.0
Phenol red	0.09
Brilliant green	0.0047
Agar	12.0
Final pH 6.9 +/- 0.2 at 25°C	

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C.

Directions:

Suspend 52 g in 1 litre of distilled water. Heat gently with occasional agitation and bring just to the boil to dissolve the medium completely. Do not autoclave! Cool to 50°C, mix well and pour plates.

Principle and Interpretation:

Brilliant Green Agar was first described by Kristensen et. al. and further modified by Kampelmacher. It is proposed as a selective medium to isolate *Salmonella* from meat.

These media contain brilliant green which inhibits growth of majority of gram-negative and gram-positive bacteria. *Salmonella typhi*, *Shigella* species *Escherichia coli*, *Proteus* species, *Pseudomonas* species, *Staphylococcus aureus* are mostly inhibited. Clinical specimens can be directly plated on this medium. However, being highly selective, it is recommended that this medium should be used along with a less inhibitory medium to increase the chances of recovery. Often cultures enriched in Selenite (Cat. No. 70153) or Tetrathionate Broth are plated on Brilliant Green Agar along with Bismuth Sulphite Agar (Cat. No. 95388), SS Agar (Cat. No. 85640), Mac Conkey Agar No 1 (Cat. No. 70143). Phenol red serves as an acid base indicator giving yellow colour to lactose and or sucrose fermenting bacteria. Lactose non-fermenting bacteria develop white to pinkish red colonies within 18 - 24 hours of incubation.

To make the media more selective the addition of sodium sulphacetamide (1g/l) and sodium (350mg/l) mandelate is recommended Vassiliadis et al. added 2.5 g of sodium desoxycholate to one litre of Brilliant Green Agar (modified) to prevent swarming by *Proteus hauseri*.



Cultural characteristics after 18-24 hours at 35-37°C.

Organisms (ATCC)	Growth	Colony Color
<i>Salmonella thiphimurium</i> (14028)	+++	red to pinkish white
<i>Salmonella enteritidis</i> (13076)	+++	red to pinkish white
<i>Salmonella typhi</i> (6539)	+	red to pink
<i>Staphylococcus aureus</i> (25923)	-	-
<i>Escherichia coli</i> (25922)	- or partial	green

References:

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Precautions and Disclaimer

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