# Brilliant Green, Phenol Red, Lactose Monohydrate, Sucrose Agar (Agar Medium L) EP

## Intended Use
Brilliant Green, Phenol Red, Lactose Monohydrate, Sucrose Agar is used for selective isolation of Salmonellae other than *Salmonella typhi* from faeces, foods, dairy products and other samples in compliance with EP.

## Summary
Kristensen *et al.,* first described Brilliant Green Agar as a primary plating medium for isolation of *Salmonella*, which was further modified by Kauffmann. This medium is more selective than Deoxycholate Citrate Agar and other brilliant green media. The advantages claimed for the medium are that it inhibits the growth of *E. coli, Pseudomonas aeruginosa* and partially inhibits the growth of *Proteus* species, which may resemble *Salmonella. S. cholerasuis* grows well on this medium compared to Deoxycholate Citrate Agar. Brilliant Green Agar, is recommended by APHA for food testing, USP and IP.

## Principle
Peptone provides carbon, nitrogen and other growth factors while yeast extract provides B complex vitamins. Lactose and sucrose are the carbohydrate sources. Sodium chloride maintains the osmotic balance. Brilliant green inhibits majority of gram-positive and gram-negative bacteria, allowing *Salmonella* to grow. *S. typhi*, *E. coli*, *Staphylococcus aureus, Shigella, Pseudomonas* and *Proteus* species are mostly inhibited. In the presence of phenol red, lactose and sucrose, nonfermenting *Salmonella* will form white to pinkish red colonies while fermenters will form yellow colonies.

## Formula*

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

*Adjusted to suit performance parameters

## Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2ºC-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

## Type of specimen
Clinical samples – faeces
Food and dairy samples

## Specimen Collection and Handling
Ensure that all samples are properly labelled.
Follow appropriate techniques for handling samples as per established guidelines.
Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure.
The samples must be stored and tested within the permissible time duration.
After use, contaminated materials must be sterilized by autoclaving before discarding

## Directions
1. Suspend 58.09 g of powder in 1000 mL purified / distilled water and mix well.
2. Boil with frequent agitation to dissolve the powder completely. AVOID OVERHEATING.

3. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.
4. To increase the selectivity, aseptically add 2 vials of Sulpha Supplement (204191360005) and mix well before pouring into sterile petridishes.

## Quality Control

**Dehydrated Appearance**: Pink coloured, homogeneous, free flowing powder.
**Prepared Appearance**: Greenish brown to orange brown coloured, clear to slightly opalescent gel forms in petridishes.
**Cultural Response**: Cultural characteristics observed after incubation at 30°C-35°C for 24-48 hours.

| Organism (ATCC) | Growth | Colour of Colony |
|---|---|---|
| *Salmonella enterica* subsp. *enterica* serovar *Typhimurium* (14028) | Good | Pinkish white |
| *Escherichia coli* (25922) | Partial inhibition | Green |
| *Proteus mirabilis* (25933) | Partial inhibition | Red |

## Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:
1. Directions
2. Storage
3. Expiry

## Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

## Reference


1. Kristensen M; Lester V and Jurgens A; 1925, Brit. J. Exp. Pathol; 6; 291.
2. IP, 1996, Ministry of Health and Family Welfare, Govt. of India, Vol.2.
3. US Pharmacopeial Convention, Inc. 2001. The Unites States Pharmacopeia 25/NF20-2002. The US Pharmacopeia Convention, Inc; Rockville, Md.
4. Downes and Ito (ed.) 2001, Compedium Of Methods for The Microbiological Examination of Foods, 4th edition, APHA Washington DC.
5. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.


## Product Presentation:

| Cat No. | Product description | Pack Size |
|---|---|---|
| 201020290100 | Dehydrated Culture Media | 100 g |
| 201020290500 | Dehydrated Culture Media | 500 g |