Brilliant-green Phenol-red Lactose Sucrose Agar (i23470)

A selective culture medium for the isolation of *Salmonella* with the exception of *S. typhosa* and *Shigella* from pathological material, feces, urine and foodstuffs.

Industry: Dairy products / Clinical / Food

Principles & Uses

Brilliant-green Phenol-red Lactose Sucrose agar (BPLS) -also known as Brilliant-green agar (BGA)- is a key medium for isolating *Salmonella* species. This medium is highly selective due to the presence of brilliant green, inhibiting most Gram-positive and most Gram-negative bacilli, making it an excellent primary plating medium for *Salmonella*. It's often recommended to use BPLS alongside less inhibitory media for higher recovery chances, such as Selenite or Tetrathionate Broth.

The medium's components include peptones for essential nutrients, lactose and sucrose as energy sources, phenol red as a pH indicator, and sodium chloride for osmotic balance. You can supplement it with sulphacetamide and sodium mandelate when dealing with samples containing competing organisms. Non-lactose fermenting bacteria produce white to pinkish-red colonies.

BPLS inhibits the growth of Gram-positive flora but enhances the growth of *Salmonella* due to its rich nutrient base. The lactose and sucrose differentiation can identify weakly lactose-positive or lactose-negative but sucrose-positive microorganisms. Red-colored colonies and culture indicate potential *Salmonella* presence in the sample.

Composition (gr/L)

Peptones 10, Meat Extract 5, Lactose 10, Sucrose 10, Disodium Hydrogen Phosphate 2, Sodium Chloride 3, Phenol Red 0.08, Brilliant Green 0.0125, Agar 12.

Final pH at 25°C 6.9 ± 0.2

Preparation from dehydrated Powder

Suspend 52 g of the powder in 1 L of distilled water. Autoclave at 121°C for 15 minutes.

Quality Control

Dehydrated Appearance: Pink, free-flowing, homogeneous

Prepared Appearance: The prepared medium is clear and red.

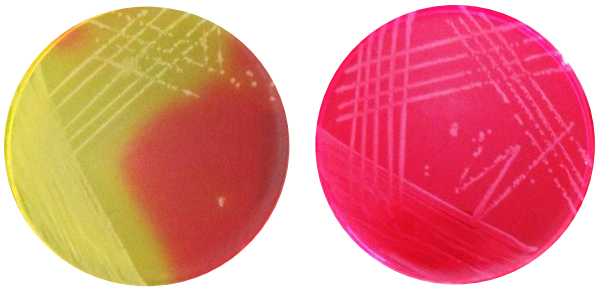
Reaction of 5.2 % Solution at 25°C: pH 6.9 ± 0.2

Cultural Response

Inoculate and incubate at 35 ± 2°C for 24 hours.

Organism (ATCC*)	Recovery	*Colony color*	*Culture color*
Escherichia coli (25922)	Good	Yellow	Yellow
Salmonella typhimurium (14028)	Good	Pink	Red
Staphylococcus aureus (25923)	Inhibited	-	-
Enterococcus faecalis (33186)	Inhibited	-	-
Bacillus subtilis (6633)	Inhibited	-	-

*ATCC is a registered trade mark of the American Type Culture Collection.



E. coli with yellow-colored colonies and culture medium (left). *Salmonella typhimurium* with red-colored colonies and culture (right)

Storage

Keep the container at 15-30 °C. Store prepared medium at 2-8 °C.