Brilliant-green Phenol-red Lactose Sucrose (BPLS) Agar | AS-1147

a selective culture medium for isolating *Salmonella* from pathological material, feces, urine, and foodstuffs, excluding *S. typhosa* and *Shigella*.

Brilliant Green Agar (BGA), sometimes referred to as BPLS agar, is a selective culture medium that is mostly used for *Salmonella* species isolation. Brilliant green, which inhibits the growth of most Gram-positive and many Gram-negative bacteria, is thought to be responsible for its selective properties. BPLS is frequently used in tandem with less inhibitory enrichment broths, such as selenite or tetrathionate, to improve recovery rates. Peptones supply vital nutrients, lactose and sucrose offer energy from carbohydrates, phenol red indicates pH, and sodium chloride preserves osmotic balance are the components of the medium.

Bacteria that do not ferment lactose or sucrose, like *Salmonella*, usually form pink to red colonies on BPLS agar. Conversely, because lactose and/or sucrose fermenters produce acid, their colonies appear yellow to green. Even though BPLS is quite selective, to ensure proper identification of suspected *Salmonella* isolates, confirmation testing must be carried out.

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

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

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

Microbial Test Results

For 24 hours, incubate at 35 ± 2°.

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	-	-

Storage

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