

**BPL AGAR (BRILLIANT GREEN PHENOL RED LACTOSE AGAR) TM 045**

For isolation and identification of Salmonellae except *Salmonella typhi* in faeces, urine and milk and foodstuffs

Composition

Ingredients	Gms/Ltr.
Lactose	15.00
Agar	13.00
Peptone	7.00
Sodium chloride	5.00
Phenol red	0.04
Brilliant green	0.005

* Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 25°C and protect from direct Sunlight.

Instructions for Use

Dissolve 40.00gms in 1000 ml distilled water. Gently heat to boiling with gentle swirling and dissolve the medium completely. Sterilize by autoclaving at 15 psi (121°C) for 10 minutes. Cool to 45 - 50°C and pour into sterile Petri plates.

Appearance: Red - brown colour, clear gel

pH at 25°C: 6.5 ± 0.2

Principle

BPL AGAR (BRILLIANT GREEN PHENOL RED LACTOSE AGAR) is used for isolation and identification of Salmonellae except *Salmonella typhi* in faeces, urine and milk and foodstuffs by separating lactose and sucrose negative bacteria. The Peptone provides the essential nutrient nitrogen for growth of microorganisms. Brilliant green in the medium inhibits accompanying microorganisms. Medium contains Lactose, whose degradation to acid is indicated by the pH indicator Phenol red, which changes its colour to yellow. The indicator exhibits a deep red colour in the alkaline range. Agar is a solidifying agent. Sodium chloride maintains the osmotic balance of the medium. The growth of the accompanying Gram-positive microbial flora, *Salmonella typhi* and *Shigella* is largely inhibited by brilliant green. ADAM (1966) recommended that 0.2 % sodium deoxycholate should be added to the culture medium to inhibit the swarming of *Proteus* colonies.

Interpretation

Cultural characteristics observed after inoculation (10³CFU/ml), on incubation at temperature of 35°C ± 2°C for 18 - 24 hours.

Microorganisms	ATCC	Inoculum (CFU/ml)	Growth	Appearance of colony
<i>Escherichia coli</i>	25922	10 ³	Good	Yellow
<i>Salmonella enteritidis</i>	13076	10 ³	Fair to good	Pale pink, translucent & surrounded by red zone
<i>Salmonella typhimurium</i>	14028	10 ³	Fair to good	Pale pink, translucent & surrounded by red zone
<i>Staphylococcus aureus</i>	25923	10 ³	-	-----
<i>Proteus vulgaris</i>	13315	10 ³	Fair to good	Pale pink, translucent & surrounded by red zone, lactose negative

References

1. ADAM, D.: Zusatz von Natriumdesoxycholat zum Brilliantgrün-Phenolrot-Agar nach Kristensen-Kauffmann zur Hemmung des Schwärmvermögens von Proteuskeimen. - *Ärztl. Lab.* 12; 245-246. (1966).
2. KAUFFMANN, F.: Weitere Erfahrungen mit dem kombinierten Anreicherungsverfahren für Salmonellabacillen. - *Z. Hyg. Infekt. Kr.*, 177; 26-32. (1935).
3. M.A. Morinigo et al., Isolation of salmonellae from environmental samples, *J. Appl. Bact.* 66, 353. (1989).
4. United States Pharmacopeia XXIII, Chapter "Microbial Limit Tests". (1995).