Condalab

Reference: 0915 **Technical Data Sheet**

Product: **BRILLIANT GREEN AGAR (BGA)**

Specification

Medium for *Salmonella* isolation.

Presentation

	Packaging Details	Shelf Life	Storage
20 Prepared Plates 90 mm with: 21 ± 2 ml	1 box with 2 packs of 10 plates/pack. Single cellophane.	3 months	2-14°C

Composition

Composition (g/l):

Meat Peptone	5.0000
Casein Peptone	5.0000
Sodium chloride	5.0000
Yeast extract	3.0000
Lactose	10.0000
Sucrose	10.0000
Phenol Red	0.0800
Brilliant Green	0.0125
Agar	15.0000

Description /Technique

Description:

BGA is a differential selective medium, able to detect the presence of enteropathogenic bacteria in different samples. This medium is a modification to Kauffman's original formulation, and it complies with the WMO, Eur. Pharm., USP and APHA specifications.
Since it has a high brilliant green concentration, it inhibits the growth of most bacteria, except *Salmonella*. However, *S. typhi* and *S. paratyphi* are also inhibited. Therefore, when their presence or *Shigella* is suspected, it is recommended to use other media in parallel, such as Deoxycholate Lactose Agar, MacConkey Agar, *Salmonella-Shigella* Agar, Xylose Lysine Deoxycholate Agar or Endo Agar Base, which are less inhibitory.
The presence of lactose and sucrose allows a good differentiation between *Salmonella*, which produce pink or colourless colonies with a red halo or zone, and the companion microbiota, which produce smaller and green yellowish colonies with a yellow halo, due to acid created by lactose and/or sucrose fermentation.
Osborn and Stokes suggested the addition of 0,08 g/L of sulfadiazine or 1 g/L of sulfapyridine in order to make this medium more selective for *Salmonella* and therefore making the medium more suitable for the testing of food and eggs and their derivatives.

Tecnique:

Collect, dilute and prepare samples and volumes as required according to specifications, directives, official standard regulations and/or expected results.
Spread the plates by streaking methodology or by spiral method. Incubate the plates right side up aerobically at 30-35 °C for 24 -48hours (according to methods).
(Incubation times greater than those above or different incubation temperatures may be required on the sample, on the specifications,... This medium can be inoculated directly or after enrichment broth like MKTTn broth)
After incubation, enumertae all the colonies that have appeared onto the surface of the agar.
Salmonella produce pink to colourless colonies with a red halo; the accompanying flora produce smaller colonies with greenish to yellowish haloes.
Each laboratory must evaluate the results according to their specifications.
Presumptive isolation of Salmonella sp must be confirmed by further microbiological and biochemical tests.
Calculate total microbial count per ml of sample by multiplying the average number of colonies per plate by the inverse dilution factor if streaked a diluted sample. Report results as Colony Forming Unit (CFU's) per ml or g with incubation time and temperature.

Quality control

Physical/Chemical control

Color : Orange pH: 6.9 ± 0.2 at 25°C

Microbiological control

Spiral Spreading: Practical range 100±20 CFU; Min. 50 CFU (Productivity) / 10^4-10^6 CFU (Selectivity).
Aerobiosis. Incubation at 35 ± 2°C, reading at 24-48 hours.

Microorganism	Growth
Enterococcus faecalis ATCC® 19433, WDCM 00009	Inhibited
Salmonella enterica ATCC® 13076, WDCM 00030	Good
Salmonella typhimurium ATCC® 14028, WDCM 00031	Good
Stph. aureus ATCC® 25923, WDCM 00034	Inhibited

Sterility Control

Incubation 48 hours at 30-35°C and 48 hours at 20-25°C: NO GROWTH
Check at 7 days after incubation in same conditions

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