



Reference : 01-203

Scharlau Microbiology - Technical data sheet

Product :
BRILLIANT GREEN AGAR (BGA)

Also known as

Brilliant Green Phenol Red Lactose Agar; BPLA

Specification

Medium for *Salmonella* isolation, according to the European Pharmacopoeia.

Formula * in 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

Final pH 6,9 ±0,2 at 25 °C

* Adjusted and /or supplemented as required to meet performance criteria

Directions

Suspend 53 g of powder in 1 L of distilled water and bring to the boil stirring constantly. Dispense into containers and sterilize in the autoclave at 121°C for 15 minutes.

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 (Art. No. 01-057), MacConkey Agar (Art. No. 01-118), *Salmonella-Shigella* Agar (Art. No. 01-555), Xylose Lysine Deoxycholate Agar (Art. No. 1-552) or Endo Agar Base (Art. No. 01-589), 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.



Reference : 01-203

Scharlau Microbiology - Technical data sheet

Product :
BRILLIANT GREEN AGAR (BGA)

Quality control

Incubation temperature: 35 °C ± 2.0

Incubation time: 24 ± 3 h

Inoculum: Pre-enrichment: 100 ± 20 CFU into R.V.B. (Productivity) according to Eur. Pharm. harm. Loop spreading.

Microorganism

Staphylococcus aureus ATCC® 6538

Escherichia coli ATCC® 8739

Salmonella abony NCTC® 6017

Salmonella typhimurium ATCC® 14028

Growth

Total inhibition

Partial inhibition

Productivity Good

Productivity Good

Remarks

Punctiform colonies w. yellowish halo

Green-Yellow colonies w. yellow halo

Colorless colonies ; Red medium

Colorless colonies ; Red medium



Salmonella typhimurium ATCC 14028

References

- ATLAS, R.M. & L.C.PARKS (1993) Handbook of Microbiological Media CRC Press. BocaRaton. Fla. USA.
- CLESCERI, L:S., A.E. GREENBERG & A.D. EATON (Eds) (1998) Standard Methods for the Examination of Water and Wastewater 20th ed. APHA- AWWA-WEF Washington DC. USA.
- DOWNES, F.P. & K. ITO (2001) Compendium of Methods for the Microbiological Examination of Foods.4th ed. APHA. Washington DC.
- EUROPEAN PHARMACOPOEIA (2007) 5th edition. Suppl. 5.6 EDQM. Council of Europe. Strasbourg. USA.
- FORBES, B.A., D.F SAHM & A.S. WEISSFELD (Eds) (1998) Bailey & Scott's Diagnostic Microbiology 10th ed. Mosby. St Louis, Mo. USA.
- HORWITZ, W. (2000). Official Methods of Analysis of the AOAC International 17th ed. Gaithersburg. MD. USA.
- ISO 11133:2014/ Adm 1:2018. Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.
- KAUFFMAN, F. (1935) Weitere Erfahrungen mit der kombinierten Anreicherung verfahren für Salmonella bazillen. Z. Hyg. Infekt. Krhn, 117; 26-32.
- MacFADDIN, J.F. (1985) Media for isolation-cultivation-identification- maintenance of medical bacteria. Williams & Wilkins. Baltimore. Md. USA.
- MURRAY, P.R., E.J. BARON, J.H. JORGENSEN, M.A. PFALLER & R.H. YOLKEN (Eds) (2003) Manual of Clinical Microbiology 8th ed. ASM Press. Washington DC, USA.
- OSBORN, W.W. and STOKES, J.L. (1955) The determination of Salmonellae in Foods. Ottawa: Food and Drug Laboratoires. 1962.
- US FDA (Food and Drug Administrations) (1998). Bacteriological Analytical Manual. 8th ed. AOAC International. Gaithersburg, MD. USA.

Storage

For laboratory use only. Keep tightly closed, away from bright light, in a cool dry place (+4 °C to 30 °C).