

Also known as

BGA Modified

Specification

Solid culture medium for the selective isolation of salmonellae in food (except *S. typhi*) according to ISO & IDF standards.

Formula * in g/L

Peptone.....	10,000		
Meat extract.....	5,000	Sodium phosphate.....	0,600
Yeast extract.....	3,000	Phenol red.....	0,090
Lactose.....	10,000	Brilliant green.....	0,005
Sucrose.....	10,000	Agar.....	15,000
Disodium phosphate.....	1,000		

Final pH 6,9 ±0,2 at 25 °C

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

Directions

Suspend 54,7 g of powder in 1 L of distilled water. Let it soak and heat to boiling point stirring constantly. Distribute in plates. Do not autoclave.

Description

In this modification of the classical medium for *Salmonella*, the concentration of brilliant green has been reduced to obtain a less inhibitory medium. At the same time, the nutrient basis has been enriched to enhance the recovery of those microorganisms that are stressed during the food production process.

This formulation was subsequently adopted by the ISO and DIN official method for detecting *Salmonella* in meat.

Technique

A prior enrichment in Tetrathionate Broth Base is recommended. Inoculate on the surface of the plate medium in order to obtain individual colonies. Incubate at 35-37°C for 18-24 hours.

Salmonella colonies (except *S. typhi*) are red, pinkish or white, and they are always surrounded by a red halo or zone, which demonstrates non- lactose or sucrose fermentation. Colonies of lactose and/or sucrose fermenting bacteria produce yellow-green colonies surrounded by a yellow halo. Sometimes, Proteus or Pseudomonas may appear, and they produce red pointed colonies.

In very polluted samples, the addition of 1 g/L of sodium sulfacetamide and 250 mg/L of sodium mandelate is recommended.

Quality control
Incubation temperature: 37 °C ± 1.0

Incubation time: 24 ± 3 h

Inoculum: Practical range 100 ±20 CFU. min. 50 CFU (productivity)/10⁴-10⁶ CFU (selectivity), according to ISO 11133:2014/Amd 1:2018 .

Microorganism
Growth
Remarks

<i>Enterococcus faecalis</i> ATCC® 29212	Total inhibition	-
<i>Escherichia coli</i> ATCC® 25922	Partial inhibition	Green colonies / Yellow medium
<i>Salmonella enteritidis</i> ATCC® 13076	Good to very good	Pink-red colonies / orange-brown medium
<i>Salmonella abony</i> NCTC® 6017	Good to very good	Pink-red colonies / orange-brown medium
<i>Salmonella typhimurium</i> ATCC® 14028	Good to very good	Pink-red colonies / orange-brown medium

References

- ATLAS, R.M., L.C. PARKS (1993) Handbook of Microbiological Media. CRC Press, Inc. London.
- DIN 10160 Norme. Untersuchung von fleisch und fleischerzeugnissen. Nachweis von Salmonellen. Referenzverfahren.
- DIN 10181 Norme. Mikrobiologische Milchuntersuchung Nachweis von Salmonellen. Referenzverfahren.
- FIL-IDF 93 Standard (2001) Milk and Milk products - Detection of Salmonella spp.
- ISO 6340 Standard (1995) Water Quality.Detection of Salmonella.
- ISO 6785 Standard (2001) Milk and Milk products.- Detection of Salmonella spp.
- ISO 11133:2014/ Adm 1:2018. Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.
- PASCUAL ANDERSON. M^a.R^o. (1992) Microbiología Alimentaria. Díaz de Santos, S.A. Madrid.

Storage

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