Product :
PURPLE BROTH BASE

Specification

Broth base used for the biochemical differentiation of *Shigella spp.*, based on carbohydrate fermentation according to 21567:2004 ISO standard.

Formula * in g/L

Peptone..... 10,00
Meat extract..... 3,00
Sodium chloride..... 5,00
Bromocresol purple..... 0,04

Final pH 7,0 ±0,2 at 25 ºC

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

Directions

Dissolve 18 g of the powder in 1 L of distilled water, heating if necessary. Distribute in suitable containers and sterilize in the autoclave at 121ºC for 15 minutes. Cool and aseptically add the appropriate amount of carbohydrate substrate in order to reach a final concentration of 1%. After the addition verify the sterility.

Description

The peptone and meat extract act as nitrogen and growth factors sources. The sodium chloride maintains the osmotic pressure and the Bromocresol Purple is a pH indicator. The main carbon and energy source is the carbohydrate substrate added. When the substrate is utilised by the microorganisms, the medium acidifies and the indicator turns from purple to yellow.

Technique

The 21567:2004 ISO Standard describes the inoculation of each of the prepared carbohydrate broths with a small inoculum and incubation at 37 ± 1ºC for 24 ± 3 hours. A positive reaction when carbohydrate is fermented gives a change in the pH indicator from purple to yellow.

Quality control

Incubation temperature: 37ºC ±1,0 **Incubation time:** 24±3h

Inoculum: ≥ 10^3 CFU (specificity) according to ISO 11133:2014/Amd 1:2018 & Adm 2:2021. (Sugar: Dextrose)

Microorganism	Growth	Remarks
Shigella flexneri ATCC® 12022	Good	Yelow medium
Shigella sonnei ATCC® 9290	Good	Yelow medium
Salmonella typhimurium ATCC® 14028	Good	Yelow medium
Escherichia coli ATCC® 8739	Good	Yelow medium

References

· EWING, W.H. & A.A. LINDBERG (1984) Serology of the Shigella. In "Methods in Microbiology". Ed. Bergan T. Vol 14. Acadeic Press.
· ISO 21567 (2004) Microbiology of food and animal feeding stuffs - Horizontal method for the detection of Shigella spp.
. ISO 11133:2014/ Adm 1:2018. Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.

Storage

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