BROMO CRESOL PURPLE AZIDE BROTH TM 049

For confirmation of the presence of faecal *Streptococci* in water

Composition

Ingredients	Gms/Ltr.
Casein enzymatic hydrolysate	10.00
Yeast extract	10.00
Sodium chloride	5.00
D (+)-Glucose	5.00
Dipotassium hydrogen phosphate	2.70
Potassium dihydrogen phosphate	2.70
Sodium azide	0.50
Bromo cresol purple	0.032

* 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 36.0gms in 1000 ml distilled water. Gently heat to boiling with gentle swirling and dissolve the medium completely. Add 5ml of glycerol and mix well. Dispense in tubes. Sterilize by autoclaving at 15 psi (115°C) for 15 minutes.

Appearance: Violet colour, clear
pH (at 25°C): 7.0 ± 0.2

Principle

BROMO CRESOL PURPLE AZIDE BROTH is used for confirmation of the presence of faecal Streptococci. Casein enzymatic hydrolysate provides the nitrogen source. Yeast extract provide essential growth nutrients for bacterial metabolism. Bromo cresol purple acts as a pH indicator which turns yellow in acidic conditions. Sodium chloride maintains the osmotic balance of the medium. Sodium azide inhibits the bacterial flora grown during the preliminary test, except for enterococci. Glucose fermentation causes medium acidification with consequent medium color change from purple to yellow. The addition of glycerol increases glucose fermentation by enterococci. Group of *Escherichia*, *Enterobacter*, *Citrobacter*, and *Klebsiella* microorganisms, all ferment lactose with acid and gas production. When lactose is fermented it produces acid that changes the colour from purple (alkaline) to yellow (acid). Violet to Blue colonies is lactose-negative and yellow colonies are lactose-positive. The evidence of turbidity and the colour change from purple to yellow of the tube of Bromocresol Purple Azide Broth confirm enteroccocci presence.

Interpretation

Cultural characteristics observed after inoculating (10^3CFU / ml), on incubation at 35º C for 24 - 48 hours.

Microorganisms	ATCC	Inoculum (CFU/ml)	Growth	Acid*/Gas*
Escherichia coli	25922	10^3	Luxuriant	+ve / +ve
Klebsiella pneumoniae	13833	10^3	Luxuriant	+ve / +ve
Salmonella typhimurim	14028	10^3	Luxuriant	-ve / -ve
Enterococcus faecalis	29212	10^3	Luxuriant	+ve / -ve

Enterococcus faecalis	11700	10^3	Luxuriant	+ve/-ve
Staphylococcus aureus	25923	80	Inhibited	-

References

1. HAJNA, A.A.: A buffered azide glucose-glycerol broth for presumptive and confirmative tests for faecal Streptococci- Publ.Health Lab., 9; 80 - 814, (1951).
2. HAJNA, A.A., a. PERRY, C.A.: Comparative Study of Presumptive and Confirmative Media for Bacteria of the Coliform Group and for Fecal Streptococci. - Am. J. Publ. Health, 33; 550-556, (1943).