PHENOL RED TREHALOSE BROTH TM 823

for determining the ability of microorganism to ferment trehalose

Composition

Ingredients	Gms/Ltr.
Proteose peptone	10.000
Sodium chloride	5.000
Trehalose	5.000
Beef extract	1.000
Phenol red	0.018

* Dehydrated powder, store in a dry place, in tightly-sealed containers at 24°C and protect from direct Sunlight.

Instructions for Use

Dissolve 21.00 gms in 1000ml of distilled water. Gently heat to boiling with gentle swirling and dissolve the medium completely. Dispense in fermentation tubes (tubes containing inverted Durham's tubes). Sterilize by autoclaving at 15 psi (121°C) for 15 minutes.

Appearance: Red coloured clear solution
PH (at 25°C): 7.4 ± 0.2

Principle

PHENOL RED INOSITOL BROTH is used for determining the ability of microorganism to ferment trehalose. Phenol red Trehalose Broth is formulated as per Vera. This medium with various carbohydrates serves as a differential medium by aiding in differentiation of various species and genera by their ability to ferment the specific carbohydrate, with the production of acid or acid and gas.

Beef extract and proteose peptone serve as nitrogen and carbon sources. Sodium chloride is the osmotic stabilizer. Phenol red is the pH indicator, which turns yellow at acidic pH i.e. on fermentation of adonitol. Gas formation is seen in Durham`s tubes. All of the *Enterobacteriaceae* grow well in this medium. In addition to producing a pH colour shift, the production of mixed acids, notably butyric acids, often results in a pungent, foul odour from the culture medium.

Interpretation

Cultural characteristics observed after incubation at 35 - 37°C for 18 - 24 hours.

Microorganisms	ATCC	Inoculum (CFU)	Growth	Acid	Gas

Citrobacter freundii	8090	10^3	Luxuriant	Positive reaction, yellow colour	Positive reaction
Escherichia coli	25922	10^3	Luxuriant	Positive reaction, yellow colour	Positive reaction
Enterobacter aerogenes	13048	10^3	Luxuriant	Positive reaction, yellow colour	Positive reaction
Klebsiella pneumoniae	13883	10^3	Luxuriant	Positive reaction, yellow colour	Positive reaction
Proteus vulgaris	13315	10^3	Luxuriant	Positive reaction, yellow colour	Positive reaction
Serratia marcescens	8100	10^3	Luxuriant	Positive reaction, yellow colour	Variable reaction
Salmonella Typhi	6539	10^3	Luxuriant	Positive reaction, yellow colour	Negative reaction
Salmonella Typhimurium	14028	10^3	Luxuriant	Positive reaction, yellow colour	Positive reaction
Shigella flexneri	12022	10^3	Luxuriant	Positive reaction, yellow colour	Negative reaction

References

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5. Koneman E. W., Allen S. D., Janda W.M., Schreckenberger P.C., Winn W.C. Jr., 1992, Colour Atlas and Textbook of Diagnostic Microbiology, 4th Ed., J. B. Lippinccott Company.
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