Product :
PHENOL RED BROTH BASE

Specification

Liquid culture medium, suitable for sugar and other substrate fermentation studies.

Formula * in g/L

Casein peptone..... 10,000
Sodium chloride..... 5,000
Phenol red..... 0,018

Final pH 7,40 ±0,2 at 25 ºC

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

Directions

Dissolve 15 g of powder in 1 L of distilled water. Add sugar in the desired concentration and distribute into suitable containers with Durham tubes. Sterilize in the autoclave at 121ºC for 10 minutes. Pre heat the autoclave before putting the tubes into it to avoid sugar caramelization. Addition of some types of sugars may need a pH adjustment.

Description

Phenol Red Broth Base is a liquid version of the agar base for fermentation studies. Broth is preferred by many authors with the inclusion of Durham tubes, to verify gas production.
A sterile solution of sugar may be added after autoclaving the medium, or by adding impregnated discs to 10 mL of medium. Addition of some sugars may cause the acidification of the medium, in which case the original pH must be maintained by adding a few drops of 0,1 N NaOH.
For anaerobic bacteria, it is advisable to use freshly prepared medium, or place the medium in a boiling water bath for a few minutes, in order to eliminate dissolved oxygen. Many authors recommend the addition of 0,04% agar to avoid convection streams and subsequent incorporation of air.
The ISO standard 10273:1994 recommends adjustment of the final pH to 6,8 ± 0,2 to perform the auxonogram method for Yersinia identification.

Quality control

Incubation temperature: 37 °C ±1 **Incubation time:** 24 ± 3h

Inoculum: ≥ 10^3 CFU (specificity) according to ISO 11133:2014/Amd 1:2018. Add carbohydrate to study; D+ Glucose 5 g/L

Microorganism	Growth	Remarks
Escherichia coli ATCC® 25922	Good	Gas (+). Yellow medium
Salmonella typhimurium ATCC® 14028	Good	Gas (+). Yellow medium
Yersinia enterocolitica ATCC® 9610	Good	Gas (+). Yellow medium

References

· ATLAS, R.M. & L.C. PARKS (1993) Handbook of Microbiological Media. CRC Press, Inc. London.
· CRUIKSHANK, R. (1968) Medical Microbiology. 11th ed. Livingstone Ltd. London.
· DOWNES, F.P. & K. ITO (2001) Compendium of Methods for the Microbiological Examination of Foods. 4th ed. APHA. Washington.
· FDA (Food and Drug Adminstrations) (1998) Bacteriological Analytical Manual 8th ed. Revision A. AOAC International. Gaithersburg. MD.
· ISO 10273 Standard (1994) General guidance for the detection of presumptive pathogenic Yersinia enterocolitica.
. ISO 11133:2014/ Adm 1:2018. Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.
· ISO/TS 22964 (2006) Milk and milk products.- Detection of Enterobacter sakazakii.

Storage

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