

Phenol Red Broth Base

For the study of carbohydrate fermentations

Formula in grams per liter:

Casein Peptone
Phenol Red

10,00
0,018

Sodium Chloride

5,00

Final pH: $7,4 \pm 0,2$ at 25 °C

Preparation:

Dissolve 15 grams of medium in one liter of distilled water. Add 5-10 g/l of the desired carbohydrate. (you may add 0,5-1,0 g/l of agar if the medium is going to be utilized for anaerobes). Heat with frequent agitation until complete dissolution. Dispense into tubes and add gas collecting tubes Durham for gas detection. Sterilize at 116-118°C (10-12 lbs. psi.) for 15 minutes.

Uses:

A basal medium for determining the fermentation reactions of microorganisms must be capable of supporting growth of test organisms and be free from fermentable carbohydrates. Vera used a fermentation test medium employing the pH indicator phenol red and obtained highly accurate results.

Phenol Red Broth Base is used for carbohydrate fermentation studies of many microorganisms. Control tubes of uninoculated medium should be run in parallel with inoculated tubes. Tubes should be examined frequently because different carbohydrates are utilized at variable speeds. The appearance of a yellow color is the indication of fermentation, with or without gas formation.

Phenol Red Broth Base is an excellent substrate for streptococci, as well for other less fastidious bacteria, the growth promotion on the medium can be greatly improved for fastidious, and microaerophilic.

For anaerobes the medium should be used on the day of preparation or the medium must be heated and cooled before use.

Microbiological Tests:

Microorganisms	Glucose		Lactose	
	Acid	Gas	Acid	Gas
<i>Escherechia coli</i> ATCC 25922	+	+	+	+
<i>Proteus vulgaris</i> ATCC 6380	+	+	-	-
<i>Salmonella typhimurium</i> ATCC 14028	+	+	-	-

