

Phenol Red Dextrose Broth

For sucrose fermentation studies

Formula in grams per liter:

Casein Peptone
Sodium Chloride

10,00 | Dextrose
5,00 | Phenol Red

5,00
0,018

Final pH: 7,4 ± 0,2 at 25 °C

Preparation:

Dissolve 20 grams of the medium in one liter of distilled water. If the medium is for the cultivation of anaerobes, add 0,5-1 grams of agar. Mix well. Heat with frequent agitation to dissolve the medium completely. Dispense in 5 ml amounts into test tubes with gas collecting tube (Durham). Sterilize at 116-118°C (12 lbs sp) for 15 minutes. **DO NOT OVERHEAT.**

Uses:

Phenol Red Dextrose Broth contains casein peptone which is rich in nutrients and is obtained by the enzymatic digestion of casein. It allows for abundant growth of a wide variety of fastidious microorganisms. Being free of carbohydrates it is useful in fermentation studies.

The complete medium functions very well in rapid bacterial susceptibility tests for antimicrobial agents. With pure cultures results can be obtained in approximately 3 hours. Some cases require up to 8 hours incubation.

Phenol red indicator changes to yellow in acid conditions as a result of bacterial fermentation. Durham tubes trap any gases produced during fermentation. Additional tubes of Phenol Red Broth Base without carbohydrates should be inoculated at the same time to avoid false positive results caused by fermentable material present in one or more of the components.

Microbiological Tests:

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

