

# Phenol Red Sucrose Broth

Cat. 1239

For the differentiation of bacteria based on sucrose fermentation

## Practical information

Applications	Categories
Differentiation	Sucrosa fermenters

## Principles and uses

Phenol Red Sucrose Broth is the same as Phenol Red Broth Base (Cat. 1115) with the addition of sucrose for fermentation studies.

Casein peptone provides nitrogen, vitamins, minerals and amino acids essential for growth, and allows the abundant growth of a wide variety of fastidious microorganisms. Sodium chloride supplies essential electrolytes for transport and osmotic balance. Phenol red is the pH indicator. Sucrose is the fermentable carbohydrate providing carbon and energy. Vera recommended using Casein peptone in fermentation test media since she found that it could be used with the pH indicator Phenol red in fermentation tests with a high degree of accuracy.

## Formula in g/L

Casein peptone	10	Phenol red	0,018
Sodium chloride	5	Sucrose	5

## Preparation

Suspend 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 and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Dispense in amounts of 5 ml into tubes with Durham gas collecting tubes for gas detection. Sterilize in autoclave at 118°C for 15 minutes. DO NOT OVERHEAT.

For anaerobes the medium should be used on the day of preparation. If not, the medium must be heated and cooled before use.

## Instructions for use

- Inoculate tubes with test organism and incubate at  $35 \pm 2^\circ\text{C}$  for 18 - 48 hours.
- Observe for color change. The appearance of a yellow color is the indication of fermentation, with or without gas production.
- Control tubes of the uninoculated medium should be run parallel with inoculated tubes.
- Tubes should be examined frequently because different carbohydrates are utilized at variable speeds.

## Quality control

Solubility	Appearance	Color of the dehydrated medium	Color of the prepared medium	Final pH (25°C)
w/o rests	Fine powder	Pink	Red-orange	$7,4 \pm 0,2$

## Microbiological test

Incubation conditions: ( $35 \pm 2^\circ\text{C}$  / 18-48 h)

Microrganisms	Specification
Proteus vulgaris ATCC 13315	Acid production (+), Gas (+)
Salmonella typhimurium ATCC 14028	Acid production (-), Gas (-)
Escherichia coli ATCC 25922	Acid production (-), Gas (-)

## Storage

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Temp. Min.:2 °C  
Temp. Max.:25 °C

## Bibliography

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Rogers, Ryan and Severans. Antibiotic and Chemother 5:382. 1955

Association of Official Analytical Chemists. 1995 official methods of analysis of AOAC Arlington, VA:

Baron EJ LR Peterson and S.M. Finegold 1994. Bailey & Scott's diagnostic microbiology, 9th edition. Mosby-Year Book, Inc. St. Louis, MO. Murray, PR., E.J. Baron M.A. Pfaller F.C. Tenover and R.H. Tenover (ed) 1995. Manual of clinical microbiology, 6th edition. American Society for Microbiology, Washington DC.