



## Phenol Red Broth Base

Liquid medium for carbohydrate fermentation studies.

### DESCRIPTION

Phenol Red Broth Base is a liquid medium used with an appropriate carbohydrate for the differentiation of microorganisms on the basis of fermentation reactions.

TYPICAL FORMULA	(g/l)
Casein Peptone	10.0
Meat Extract	3.0
Sodium Chloride	5.0
Phenol Red	0.018
Final pH 7.4 ± 0.2 at 25°C	

### METHOD PRINCIPLE

Casein peptone and meat extract provide nitrogen, vitamins, minerals and amino acids essential for growth. Sodium chloride maintains the osmotic balance of the medium. Phenol red is the pH indicator. Various fermentable substances may be added in any desired concentration. The concentration of carbohydrate generally employed for testing fermentation reactions of bacteria is 0.5 to 1%.

### PREPARATION

<u>Dehydrated medium</u>	Suspend 18 g of the powder in 1 liter of distilled or deionized water. Heat until completely dissolved. If desired, add 5 to 10 g of the specified carbohydrate(*). Mix well. Dispense into test tubes. If necessary, insert Durham tubes. Sterilize in autoclave at 121°C for 15 minutes.  *Alternatively, filtered sterilized carbohydrate solutions may be added to the cooled sterilized broth.
<u>Medium in tubes</u>	Under aseptic conditions, add a specific carbohydrate (final concentration 5-10 g/l) as filter-sterilized solution. If necessary, insert Durham tubes.  NOTE: Without the addition of carbohydrates, the medium can be used as negative control for fermentation studies.

### TEST PROCEDURE

Inoculate tubes with isolated colonies. Tubes without carbohydrates added should also be inoculated to serve as growth controls. Incubate at 35 ± 2°C for 18-48 h with loose caps.

### INTERPRETING RESULTS

Examine tubes for growth, acid production, and gas production (if Durham tube is used).

A yellow color in the medium indicates a positive reaction for carbohydrate fermentation. If a Durham tube is used, bubbles in the inverted tube is an indication of gas production. The presence of a single bubble is recorded as positive for the production of gas.

### APPEARANCE

Dehydrated medium: free-flowing, homogeneous, pinkish-beige.  
Prepared medium: clear, bright red to red-orange.

### STORAGE

The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment, in its original container tightly closed. Store tubes at 10-25°C away from light. Do not use the product beyond its expiry date on the label or if product shows any evidence of contamination or any sign of deterioration.

### SHELF LIFE

Dehydrated medium: 4 years.  
Medium in tubes: 2 year.

**QUALITY CONTROL**

The medium is inoculated with the microbial strains indicated in the QC table.

Inoculum for productivity:  $\leq 100$  CFU.

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

**QC Table.**

Microorganism		Specification with Glucose		
		Growth	Acid reaction	Gas formation
<i>Escherichia coli</i>	ATCC® 25922	Good	+	+
			(color change to yellow)	
<i>Shigella flexneri</i>	ATCC® 12022	Good	+	–
			(color change to yellow)	
<i>Pseudomonas aeruginosa</i>	ATCC® 27853	Good	–	–
			(red medium)	

**WARNING AND PRECAUTIONS**

The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. It is nevertheless recommended to consult the safety data sheet for its correct use. The product is intended for *In Vitro* Diagnostic use and must be used by properly trained operators.

**DISPOSAL OF WASTE**









Disposal of waste must be carried out according to national and local regulations in force.

**BIBLIOGRAPHY**

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4. MacFaddin, J.F. 2000. Biochemical tests for identification of medical bacteria, 3rd ed., Lippincott Williams & Wilkins, Baltimore.
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6. Ewing, W.H. 1986. Edwards and Ewing's identification of *Enterobacteriaceae*. 4th ed. Elsevier Science Publishing Co., New York.
7. Vera, H.D. 1950. Relation of peptones and other culture media ingredients to accuracy of fermentation tests. *Am.J.PublicHealth*, 40:1267-1272.

PRESENTATION	Category	Packaging	Ref.
Phenol Red Broth	Tubes	20 x 10 ml	24446
Phenol Red Broth Base	Dehydrated media	500 g	610174
Phenol Red Broth Base	Dehydrated media	100 g	620174

**TABLE OF SYMBOLS**

<b>LOT</b> Batch code	<b>IVD</b> In Vitro Diagnostic Medical Device	 Manufacturer	 Use by	 Fragile, handle with care	 Do not reuse
<b>REF</b> Catalogue number	 Temperature limitation	 Contains sufficient for <n> tests	 Caution, consult Instruction For Use	 Keep away from sunlight	



**LIOFILCHEM® s.r.l.**

Via Scozia zona ind.le, 64026 Roseto degli Abruzzi (Te) Italy  
Tel. +39 0858930745 Fax +39 0858930330 [www.liofilchem.com](http://www.liofilchem.com)