

## Phenol Red Broth Base

LQ173

### Intended Use:

As a base for carbohydrate fermentation reaction study of pure cultures of microorganisms.

### Composition\*\*

Ingredients	g / L
Proteose peptone	10.000
HM peptone B #	1.000
Sodium chloride	5.000
Phenol red	0.018
Final pH ( at 25°C)	7.4±0.2

\*\*Formula adjusted, standardized to suit performance parameters

# Equivalent to Beef extract

### Directions

Label the ready to use LQ173 bottle. Inoculate 50-100 cfu sample and Incubate at specified temperature and time.

### Principle And Interpretation

Phenol Red Broth Medium is formulated as per Vera (1) and is recommended to determine the fermentation reaction of carbohydrates for the differentiation of microorganisms (2,3,4). Phenol Red Broth Medium with various added carbohydrates serves as a differential medium by aiding in differentiation of various species and genera by their ability to ferment the specific carbohydrate, with the production of acid or acid and gas (5). Phenol Red Broth Base is a complete medium without added carbohydrate, which can be used with the addition of 5-10 % desired carbohydrate. It is used as a negative control for studying fermentations or as a base for the addition of carbohydrates. Proteose peptone and HM peptone B serve as sources for carbon and nitrogen. Sodium chloride is the osmotic stabilizer. Phenol red is the pH indicator, which turns yellow at acidic pH. All of the *Enterobacteriaceae* grow well in this medium. In addition to producing a pH colour shift, the production of mixed acids, notably butyric acids, often results in a pungent, foul odour from the culture medium (6).

### Type of specimen

Isolated Microorganisms from clinical and non-clinical samples.

### Specimen Collection and Handling:

For isolated microorganisms samples follow appropriate techniques for handling specimens as per established guidelines (7,8). After use, contaminated materials must be sterilized by autoclaving before discarding.

### Warning and Precautions :

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

### Limitations :

1. In addition to producing a pH colour shift, the production of mixed acids, notably butyric acids, often results in a pungent, foul odour from the culture medium (2).

### Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

### Quality Control

#### Appearance

Sterile Phenol red broth in bottles.

#### Colour

Red coloured medium.

**Quantity of Medium**

5 ml of medium in bottles.

**pH**

7.20-7.60

**Sterility Check**

Passes release criteria

**Cultural Response**

Cultural characteristics observed after an incubation at 35 - 37°C for 18 - 24 hours.

<b>Organism</b>	<b>Inoculum (CFU)</b>	<b>Growth</b>	<b>without carbohydrate, (Acid)</b>	<b>with dextrose, (Acid)</b>
<i>Citrobacter freundii</i> ATCC 8090	50-100	luxuriant	Negative reaction, no colour change	Positive reaction, yellow colour
<i>Escherichia coli</i> ATCC 25922 (00013*)	50-100	luxuriant	Negative reaction, no colour change	Positive reaction, yellow colour
# <i>Klebsiella aerogenes</i> ATCC 13048 (00175*)	50-100	luxuriant	Negative reaction, no colour change	Positive reaction, yellow colour
<i>Klebsiella pneumoniae</i> ATCC 13883 (00097*)	50-100	luxuriant	Negative reaction, no colour change	Positive reaction, yellow colour
## <i>Proteus hauseri</i> ATCC 13315	50-100	luxuriant	Negative reaction, no colour change	Positive reaction, yellow colour
<i>Salmonella</i> Typhi ATCC 6539	50-100	luxuriant	Negative reaction, no colour change	Positive reaction, yellow colour
<i>Salmonella</i> Typhimurium ATCC 14028 (00031*)	50-100	luxuriant	Negative reaction, no colour change	Positive reaction, yellow colour
<i>Serratia marcescens</i> ATCC 8100	50-100	luxuriant	Negative reaction, no colour change	Positive reaction, yellow colour
<i>Shigella flexneri</i> ATCC 12022 (00126*)	50-100	luxuriant	Negative reaction, no colour change	Positive reaction, yellow colour

Key : (\*) Corresponding WDCM numbers.

(#) Formerly known as *Enterobacter aerogenes*

## Formerly known as *Proteus vulgaris*

**Storage and Shelf Life**

On receipt store between 2-8°C. Use before expiry date on the label. Product performance is best if used stated expiry within period.

**Disposal**

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (7,8).

**Reference**

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4. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification -Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.

5. MacFaddin J. F., 2000, Biochemical tests for Identification of Medical Bacteria, 3rd edi., Lippincott, Williams and Wilkins, Baltimore.
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7. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
8. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

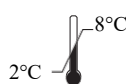
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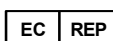
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