

Phenol Red Broth Base

Intended Use

Phenol Red Broth Base is used for determination of fermentation reactions of pure cultures of microorganisms.

Summary

Phenol Red Broth Medium is formulated as per Vera and is recommended to determine the fermentation reaction of carbohydrates for the differentiation of microorganisms. 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.

Principle

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 cara beef extract 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. Gas formation is seen in Durham's tubes. 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.

Formula*

Ingredients	g/L
Proteose Peptone	10.0
Cara Beef Extract#	1.0
Sodium Chloride	5.0
Phenol Red	0.018
Final pH (at 25°C)	7.4 ± 0.2

*Adjusted to suit performance parameters.

Equivalent to Beef Extract.

Storage and Stability

Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines.

For food and dairy samples, follow appropriate techniques for handling specimens as per established guidelines.

For water samples, follow appropriate techniques for handling specimens as per established guidelines and local standards.

Specimens should be obtained before antimicrobial agents have been administered.

After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions

1. Suspend 16.02 g of the powder in 1000 mL purified / distilled water. Mix well.
2. Heat if necessary, to ensure complete solution.
3. Distribute in fermentation tubes (tubes containing inverted Durham's tubes).
4. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.
5. Aseptically add filter sterilized or autoclave sterilized carbohydrate solution to sterile basal medium.

Quality Control

Dehydrated Appearance: Light pink to red coloured, homogenous, free flowing powder.

Prepared Appearance: Red coloured, clear solution without any precipitate.

Cultural Response: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours. (longer if necessary).

Organism (ATCC)	Growth	without Carbohydrate, (Acid)	without Carbohydrate, (Gas)	with Dextrose, (Acid)	with Dextrose, (Gas)
<i>Citrobacter freundii</i> (8090)	Good	negative reaction no colour change	Negative reaction	Positive reaction Yellow colour	positive reaction
<i>Escherichia coli</i> (25922)	Good	negative reaction no colour change	Negative reaction	Positive reaction Yellow colour	positive reaction
<i>Klebsiella aerogenes</i> (13048)	Good	negative reaction no colour change	Negative reaction	Positive reaction Yellow colour	positive reaction
<i>Klebsiella pneumoniae</i> (13883)	Good	negative reaction no colour change	Negative reaction	Positive reaction Yellow colour	positive reaction
<i>Proteus hauseri</i> (13315)	Good	negative reaction no colour change	Negative reaction	Positive reaction Yellow colour	positive reaction
<i>Salmonella Typhi</i> (6539)	Good	negative reaction no colour change	Negative reaction	Positive reaction Yellow colour	positive reaction
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhimurium</i> (14028)	Good	negative reaction no colour change	Negative reaction	Positive reaction Yellow colour	positive reaction
<i>Serratia marcescens</i> (8100)	Good	negative reaction no colour change	Negative reaction	Positive reaction Yellow colour	positive reaction
<i>Shigella flexneri</i> serotype 2b (12022)	Good	negative reaction no colour change	Negative reaction	Positive reaction Yellow colour	Negative reaction

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. Koneman E. W., Allen S. D., Janda W.M., Schreckenberger P.C., Winn W.C. Jr., 1992, Colour Atlas and Textbook of Diagnostic Microbiology, 4th Ed., J. B. Lippincott Company
2. Vera H. D., 1950, Am. J. Public Health, 40, 1267
3. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification –Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.
4. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.
201160090500

Product description
Dehydrated Culture Media

Pack Size
500 g

 Temperature Limit	 Manufacturer	 LOT	Batch Code	 Date of Manufacture	 This way up	 RO Received on
REF Catalogue Number	 Consult Instructions for use	 Use-by Date	 Hygroscopic keep container tightly closed	OO Opened on		

Revision: 0825/VER-03

Disclaimer

Information provided is based on our inhouse technical data on file, it is recommended that user should validate at his end for suitable use of the product.