Phenol Red Agar Base

Intended Use
Phenol Red Agar Base is used as a basal medium to which carbohydrates may be added for use in fermentation studies of microorganisms.

Summary
Phenol Red Agar media are recommended for studying the fermentation of various carbohydrates individually by the pure cultures of microorganisms.

Principle
Proteose peptone which is free from fermentable carbohydrates is added in the medium thereby preventing the production of false positive reactions. Phenol Red Agar when supplemented with a specific carbohydrate, a positive carbohydrate fermentation reaction is indicated by the production of a yellow colour in agar due to the effect of acid production. Gas production is indicated by the splitting of agar or by the bubbles formation. Plates or tubes may be incubated aerobically or anaerobically depending on the type of the test organism. Addition of some carbohydrates may result in an acid reaction and hence 0.1N sodium hydroxide can be added drop wise to restore the original colour taking care not to obtain too deep red or cerise colour.

Formula*

Ingredients	**g/L**
Proteose peptone	10.0
Beef extract	1.0
Sodium chloride	5.0
Phenol red	0.025
Agar	15.0
Final pH (at 25°C)	7.4 ± 0.2

*Adjusted to suit performance parameters.

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 31.02 g of the powder in 1000 mL purified / distilled water.
2. Add 5-10 g of carbohydrate as desired.
3. Heat to boiling to dissolve the powder completely. Dispense in tubes or flasks as desired.
4. Sterilize by autoclaving at 121°C (15psi) for 15 minutes as per validated cycle.
5. Allow the tubed media to cool in slanted position to form slants with deep butts.
6. For critical studies, it is recommended to use filter sterilized carbohydrate which is to be incorporated aseptically in sterile medium base.

Quality Control
Dehydrated Appearance: Light yellow to pink coloured, homogenous, free flowing powder.
Prepared Appearance: Red coloured, clear to slightly opalescent gel forms in petridishes.
Cultural Response: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism (ATCC)	Growth	without Carbohydrate, (Acid)	without Carbohydrate, (Gas)	with Dextrose, (Acid)	with Dextrose, (Gas)
Alcaligenes faecalis (8750)	Good	Negative reaction, no Colour change	Negative reaction	Negative reaction, no Colour change	Negative reaction
Escherichia coli (25922)	Good	Negative reaction, no Colour change	Negative reaction	Positive reaction, Yellow colour	Positive reaction
Klebsiella pneumoniae (13883)	Good	Negative reaction, no Colour change	Negative reaction	Positive reaction, Yellow colour	Positive reaction
Proteus hauseri (13315)	Good	Negative reaction, no Colour change	Negative reaction	Positive reaction, Yellow colour	Positive reaction
Salmonella enterica subsp. *enterica* serovar *Typhimurium* (14028)	Good	Negative Reaction, no Colour change	Negative reaction	Positive reaction, Yellow colour	Positive reaction
Shigella flexneri 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. MacFaddin J., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.
2. Finegold and Baron, 1986, Bailey and Scotts Diagnostic Microbiology, 7th ed., The C.V. Mosby Co., St. Louis.
3. Ewing, 1986, Edwards and Ewings Identification of *Enterobacteriaceae*, 4th ed., Elsevier Science Publishing Co., Inc., New York
4. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201160080500	Dehydrated Culture Media	500 g