

## Phenol Red Agar Base (i23401)

Used for the determination of fermentation reactions in the differentiation of microorganisms.

Industry: General Cultivation / Clinical

### Principles & Uses

Phenol Red Agar media, recommended for studying carbohydrate fermentation by microorganisms, employ peptone devoid of fermentable carbohydrates to prevent false-positive reactions. A positive fermentation reaction, indicated by a yellow agar color due to acid production, is observed when supplemented with specific carbohydrates. Gas production is evidenced by agar splitting or bubble formation. Incubation can be aerobic or anaerobic based on the test organism. Inoculating tubes with pure cultures of microorganisms for identification, growth controls without reactants are included.

### Composition (gr/L)

Peptone from Casein 10 g, Sodium Chloride 5 g, Phenol Red 0.018 g, Agar 15 g.  
Final pH at 25°C 7.4 ± 0.2

### Preparation from dehydrated Powder

Suspend 30 g of the powder in 1 L of purified water. Add carbohydrate, 5 - 10 g per L if desired. Mix thoroughly. If addition of carbohydrate causes a fall in pH, readjust. Dispense and autoclave at 121°C for 15 minutes. Alternatively, sterile carbohydrate solution may be added to cooled autoclaved solution.

### Quality Control

Dehydrated Appearance: Fine, homogeneous, free of extraneous material.

Prepared Appearance: Medium, orange-red to rose-red, clear to slightly hazy.

Reaction of 3.0% Solution at 25°C: pH 7.4 ± 0.2

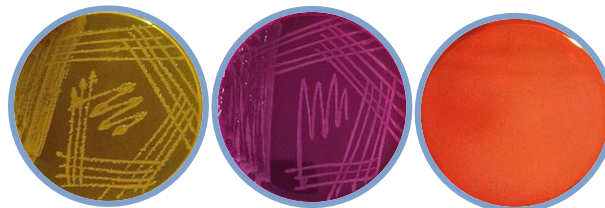
## Cultural Response

with fresh cultures and incubate at 35 ± 2°C for 42 - 48 hours.

Organism (ATCC*)	Base/Gas	Dextrose/Gas
<i>Escherichia coli</i> (25922)	K/-	A/+
<i>Alcaligenes faecalis</i> (8750)	K/-	K/-
<i>Proteus vulgaris</i> (8427)	K/-	A/+
<i>Pseudomonas aeruginosa</i> (27853)	K/-	K/-
<i>Salmonella typhimurium</i> (14028)	K/-	A/+
<i>Shigella flexneri</i> (12022)	K/-	A/-

\*ATCC is a registered trade mark of the American Type Culture Collection.

K = alkaline reaction, red medium, A = acid reaction, yellow medium



This medium has been prepared with 1% Dextrose. *Escherichia coli* (left). *Pseudomonas aeruginosa* (middle). Prepared Culture Medium (right). The background of cultured plates has been darkened for better visibility of colonies.

## Storage

Keep the container at 15-30 °C. Store prepared medium at 2-8 °C.