



## Phenylethanol Agar Base

M269A

This medium is used for the selective isolation of gram positive organisms like Staphylococci and Streptococci.

### Composition\*\*

Ingredients	Gms / Litre
Casein enzymic hydrolysate	10.000
Beef extract	3.000
Sodium chloride	5.000
Phenylethyl alcohol	2.500
Agar	15.000
Final pH ( at 25°C)	7.3±0.2

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

### Directions

Suspend 35.5 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. For preparing Blood agar, cool the medium to 45°C and aseptically add 5% v/v sterile defibrinated blood. Mix well and pour into sterile Petri plates.

### Principle And Interpretation

Phenylethyl alcohol is a chemical agent that exhibits inhibitory action against gram-negative and certain gram-positive bacteria.

Phenylethanol Agar Base is formulated for the selective isolation of gram-positive bacteria(1). This medium can be supplemented with 5 % sheep blood. This medium is especially useful when specimens are contaminated with

swarming Proteus species. It is also useful in the diagnostic studies of wounds and exudate cultures (2). However, Phenylethanol Agar Base cant be used to study haemolytic reactions as the results are atypical.

Casein enzymic hydrolysate provides nitrogen, carbon, sulfur and trace elements to the growing organisms. Addition of sheep blood provides many growth factors. Sodium chloride maintains osmotic equilibrium.

Addition of phenylethyl alcohol to a nutritive medium permits the growth of gram-positive organisms but inhibits the gram-negative organisms found in the same specimen (1). Phenylethyl alcohol exerts inhibitory bacteriostatic action on gram-negative bacteria by inhibiting their DNA synthesis (3).

### Quality Control

#### Appearance

Cream to yellow homogeneous free flowing powder

#### Gelling

Firm, comparable with 1.5% Agar gel

#### Colour and Clarity of prepared medium

Light amber coloured clear to slightly opalescent gel forms in Petri plates

#### Reaction

Reaction of 3.55% w/v aqueous solution at 25°C. pH : 7.3±0.2

#### pH

7.10-7.50

#### Cultural Response

M269A: Cultural characteristics observed after an incubation at 35 - 37°C for 18 - 48 hours

Organism	Inoculum (CFU)	Growth	Growth w/ 5% blood	Colour of Colony
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Cultural Response

<i>Escherichia coli</i> ATCC 25922	50-100	none - poor	none - poor	-
<i>Enterococcus faecalis</i> ATCC 29212	50-100	fair-good	good-luxuriant	blue-grey
<i>Salmonella typhi</i> ATCC 6539	50-100	none - fair	none - fair	-
<i>Staphylococcus aureus</i> ATCC 25923	50-100	none - poor	good-luxuriant	white to grey or cream to yellow

### Storage and Shelf Life

Store dehydrated medium in tightly closed container and prepared medium at 2-8°C. Use before expiry date on the label

### Reference

1. Lilley B. D. and Brewer J. H., 1953, J. Am. Pharm. Assoc., 42:6.
2. Holzman J. A., 1958, Am. J. Med. Technol., 24 (5), 327,342
3. Dowell, Hill and Altemeier, 1964, J. Bacteriol., 88:1811.

Revision : 1 / 2011



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