



Phenylethyl Alcohol Agar

M269

Phenylethyl Alcohol Agar is a selective medium used for the isolation of gram- positive organisms like Staphylococci and Streptococci.

Composition**

Ingredients	Gms / Litre
Casein enzymic hydrolysate	15.000
Soya peptone	5.000
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 42.5 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 the preparation of blood agar add 5% v/v sterile defibrinated blood to the sterile molten medium cooled to 45-50°C. Mix well before pouring 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. Phenylethyl Alcohol Agar is formulated as per Lilley and Brewer (1) for the selective isolation of gram-positive bacteria. 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, Phenylethyl Alcohol Agar cant be used to study haemolytic reactions as the results are atypical.

Casein enzymic hydrolysate and soya peptone provide 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 phenylethanol 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

Basal medium: Light amber coloured clear to slightly opalescent gel. After addition of 5% v/v sterile defibrinated blood :
Cherry red coloured opaque gel forms in Petri plates

Reaction

Reaction of 4.25% w/v aqueous solution at 25°C. pH : 7.3±0.2

pH

7.10-7.50

Cultural Response

M269: Cultural characteristics observed with added 5% v/v sterile defibrinated blood, after an incubation at 35-37°C for 18-48 hours

Organism	Inoculum (CFU)	Growth	Colour of colony
----------	-------------------	--------	---------------------

Cultural Response

<i>Staphylococcus aureus</i> ATCC 25923	50-100	good-luxuriant	white to gray or cream to yellow
<i>Enterococcus faecalis</i> ATCC 29212	50-100	good-luxuriant	blue-gray
<i>Salmonella Typhi</i> ATCC 6539	50-100	none-poor	
<i>Escherichia coli</i> ATCC 25922	50-100	none-poor	
<i>Proteus mirabilis</i> ATCC 25933	50-100	none-poor	

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 : 02 / 2015



Disclaimer :

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory, diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.