PHENYLETHYL ALCOHOL AGAR (PEA)

INTENDED USE
Remel Phenylethyl Alcohol Agar (PEA) is a solid medium recommended for use in qualitative procedures for selective isolation of gram-positive cocci.

SUMMARY AND EXPLANATION
Lilley and Brewer developed Phenylethyl Alcohol Agar for isolation of gram-positive cocci, such as staphylococci and streptococci, from specimens containing mixed flora.[1] This medium permits the growth of gram-positive organisms while inhibiting most gram-negative organisms, especially the swarming of *Proteus* species.

PRINCIPLE
Peptones in this medium provide nitrogen, carbon, and sulfur nutrients necessary for bacterial growth. Sodium chloride supplies essential electrolytes and maintains osmotic equilibrium. Sheep blood, added to the prepared medium, provides enrichment by supplying essential growth factors. Phenylethyl alcohol inhibits gram-negative organisms by inhibiting DNA synthesis.

REAGENTS (CLASSICAL FORMULA)*

Casein Peptone	15.0 g	Phenylethyl Alcohol	2.5 g
Sodium Chloride	5.0 g	Agar	15.0 g
Soy Peptone	5.0 g	Demineralized Water	1000.0 ml

pH 7.3 ± 0.2 @ 25°C

*Adjusted as required to meet performance standards.

PRECAUTIONS
This product is For Laboratory Use only. It is not intended for use in the diagnosis of disease or other conditions.

PREPARATION OF DEHYDRATED CULTURE MEDIUM
1. Suspend 42.5 g of medium in 1000 ml of demineralized water.
2. Heat to boiling with agitation to completely dissolve.
3. Sterilize by autoclaving at 121°C for 15 minutes or following established laboratory procedures.
4. Cool to 45-50°C and aseptically add defibrinated sheep blood to a final concentration of 5%.
5. Dispense into appropriate containers.

PROCEDURE
1. Consult current editions of appropriate references for the recommended procedure for sample preparation, inoculation, testing, and interpretation.

QUALITY CONTROL
Each lot number of Phenylethyl Alcohol Agar (PEA) has been manufactured, packaged, and processed in accordance with current Good Manufacturing Practice regulations. All lot numbers have been tested using the following quality control organisms and have been found to be acceptable. Testing of control organisms should be performed in accordance with established laboratory quality control procedures. If aberrant quality control results are noted, sample results should not be reported.

CONTROL	INCUBATION	RESULTS
Enterococcus faecalis ATCC® 29212	Ambient, 18-24 h @ 33-37°C	Good growth
Staphylococcus aureus ATCC® 25923	Ambient, 18-24 h @ 33-37°C	Good growth
Streptococcus pyogenes ATCC® 19615	Ambient, 18-24 h @ 33-37°C	Good growth
Escherichia coli ATCC® 25922	Ambient, 18-24 h @ 33-37°C	Inhibition (partial)
Proteus mirabilis ATCC® 12453	Ambient, 18-24 h @ 33-37°C	Inhibition (partial)

LIMITATIONS
1. Hemolytic reactions are not reliable on PEA w/ Sheep Blood.[2]
2. Some gram-negative bacilli are not inhibited on PEA w/ Sheep Blood (e.g., *Pseudomonas aeruginosa*).[2]
3. Gram-positive organisms should be subcultured to a nonselective medium, prior to testing for identification.[2]

BIBLIOGRAPHY

1. Lilley, B.D. and J.H. Brewer. 1953. J. Am. Pharm. Assoc. 43:6-8.
2. MacFaddin, J.F. 1985. Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria. Vol. 1. Williams & Wilkins, Baltimore, MD.

Refer to the front of Remel *Technical Manual of Microbiological Media* for **General Information** regarding precautions, product storage and deterioration, sample collection, storage and transportation, materials required, quality control, and limitations.

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