PHENYLALANINE AGAR TM 260

INTENDED USE

For differentiation of *Proteus* & *Providencia* from other members of Enterobacteriaceae on the basis of their ability to form phenyl pyruvic acid from phenylalanine

COMPOSITION

Ingredients	Gms/Ltr.
Agar	15.000
Sodium chloride	5.000
Yeast extract	3.000
DL-Phenylalanine	2.000
Disodium phosphate	1.000

PRODUCT SUMMARY AND EXPLANATION

The ability of *Proteus* species to convert phenylalanine to phenylpyruvic acid is an important reaction in the differentiation of Enterobacteriaceae. Based on this criterion, Buttiaux developed Phenylalanine Agar for differentiation of Proteus and Providencia group from other members of Enterobacteriaceae by the ability of organism in the genera within Proteus to deaminate phenylalanine. Phenylalanine Agar is the modification of the medium originally developed by Ewing et al.

PRINCIPLE

Yeast extract in the medium supports the growth of the organisms. Sodium chloride maintains osmotic equilibrium. The phenylalanine serves as the substrate for enzymes, which are able to deaminate it to form phenylpyruvic acid.

INSTRUCTION FOR USE

1. Dissolve 26 grams in 1000 ml distilled water.
2. Gently heat to boiling to dissolve the medium completely.
3. Dispense in tubes and sterilize by autoclaving at 15 psi (121°C) for 15 minutes.
4. Allow the tubed medium to cool in a slanting position.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder: Cream to yellow colour, homogeneous free flowing powder

Appearance of prepared medium: Light amber colour, slightly opalescent gel

pH (at 25°C): 7.3 ± 0.2

INTERPRETATION:

Cultural characteristics observed after an incubation period of 18-24 hours at 35 ± 2°C.

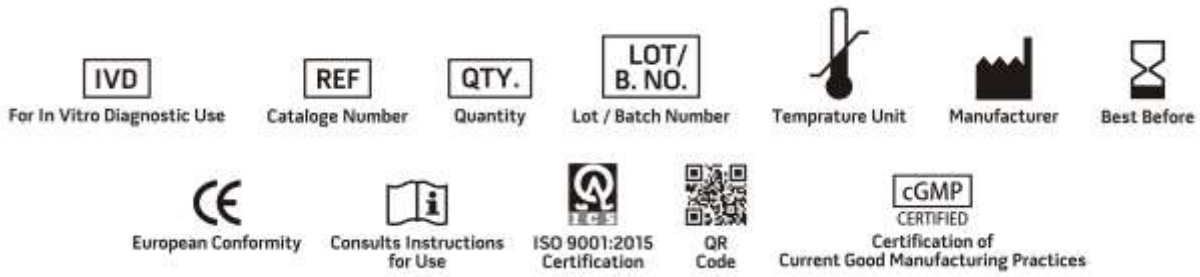
Microorganisms	ATCC	Inoculum (CFU)	Growth	Phenylalanine deaminase
Enterobacter aerogenes	13048	50-100	Luxuriant	Negative reaction
Escherichia coli	25922	50-100	Luxuriant	Negative reaction
Proteus mirabilis	25933	50-100	Luxuriant	Positive reaction, green colour after addition of 10% ferric chloride
Proteus vulgaris	13315	50-100	Luxuriant	Positive reaction, green colour after addition of 10% ferric chloride

STORAGE & STABILITY

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 25°C and protect from direct Sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

REFERENCES

1. J. Singer, B.E. Volcani, An improved ferric chloride test for differentiating Proteus-Providence group from other Enterobacteriaceae, J. Bacteriol., 69, 255 (1955).
2. Henrikson S. D., 1950, J. Bacteriol., 60:225.
3. Buttiaux R., Osteux R., Fresnoy R. and Moriamez J., 1954, Ann. Inst. Pasteur Lille., 87:375.
4. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams & Wilkins, Baltimore, Md.
5. Ewing W. H., Davis B. R. and Reavis R. W., 1957, Public Health Lab., 15:153



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.