TM 824 – PHENOLPHTHALEIN PHOSPHATE AGAR

INTENDED USE

For identification of phosphatase positive *Staphylococcus aureus.*

PRODUCT SUMMARY AND EXPLANATION

Bacteria in the genus *Staphylococcus* are pathogens of man and other mammals. Traditionally they were divided into two groups on the basis of their ability to clot blood plasma (the coagulase reaction). The coagulase-positive staphylococci constitute the most pathogenic species *Staphylococcus aureus*. The presence of staphylococci in a lesion might first be suspected after examination of a direct gram stain. However, small numbers of bacteria in blood preclude microscopic examination and require culturing first. Phosphatase has been implicated as a virulence factor for *S. aureus*. The organisms produce both an acid and alkaline phosphates, the latter being repressed in the presence of inorganic phosphate in the medium.

Phenolphthalein Phosphate Agar is used for the identification of phosphatase-positive colonies of *S. aureus*, which is a coagulase-positive pathogenic strain.

COMPOSITION

Ingredients	Gms / Ltr
Peptic Digest of animal tissues	5.000
Beef extract	3.000
Sodium chloride	5.000
Sodium phenolphthalein phosphate	0.012
Agar	15.000

PRINCIPLE

Peptic digest of animal tissue and beef extract supply the nitrogenous compounds, growth factors and trace ingredients essential for the growth of *Staphylococcus aureus*. Sodium phenolphthalein phosphate serves as a substrate for the phosphatase enzyme. Sodium chloride maintains osmotic equilibrium. Phosphatase production is determined by the liberation of phenolphthalein, which is indicated by the change in colour of the medium. When alkali is added to this medium, the liberated phenolphthalein gives a bright pink-red coloration. Alternatively, phosphatase production can be determined by following technique. Technique: Grow staphylococci overnight at 37°C on the medium. Invert the plate and pour few drops of ammonia solution into the lid, read a positive culture whose colonies turn bright pink within a few minutes. The colour soon fades.

INSTRUCTION FOR USE

- Dissolve 28.00 grams in 1000 ml distilled water.
- Heat to boiling to dissolve the medium completely.
- Do not autoclave. Mix well and dispense as desired.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Yellow coloured clear to slightly opalescent gel forms in tubes as slants.
pH (at 25°C) : 7.4 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Phosphatase	Incubation Temperature	Incubation Period
Escherichia coli	25922	50-100	Luxuriant	Negative, no bright pink colour on addition of alkali	35-37°C	18-24 Hours
Staphylococcus aureus	25923	50-100	Luxuriant	Positive, bright pink colour on addition of alkali	35-37°C	18-24 Hours
Staphylococcus epidermidis	12228	50-100	Luxuriant	Positive, bright pink colour on addition of alkali	35-37°C	18-24 Hours

PACKAGING:

In pack size of 100 gm and 500 gm bottles.

STORAGE

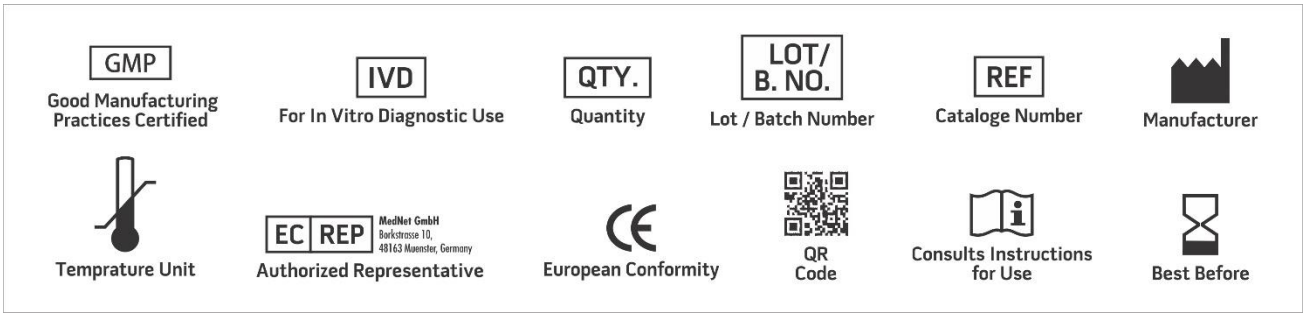
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Easmon C. S. F., Adlam C., 1983, Staphylococci and staphylococcal infections. Vol. 1 and 2, Academic Press, London,
2. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore.
3. Lewis B., 1961, J. Med. Lab. Technol., 18 : 112.
4. Barber M. and Kuper S. W. A., 1951, J. Pathol. Bacteriol., 63:65.



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

***For Lab Use Only**

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