

Technical Information

Phenolphthalein Phosphate MiVeg Agar

Product Code : VM1652

Application:- Phenolphthalein Phosphate MiVeg Agar is recommended for the detection of phosphatase positive colonies of *Staphylococcus aureus*.

Composition

Ingredients	Gms / Litre
MiVeg peptone	5.0
MiVeg extract	3.0
Sodium chloride	5.0
Sodium phenolphthalein phosphate	0.012
Agar	15.0
Final pH (at 25°C)	7.4 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Phenolphthalein Phosphate MiVeg Agar is prepared by adding MiVeg peptone and MiVeg extract in place of Peptic digest of animal tissue and Beef extract thereby making the medium BSE/TSE risks free. Phenolphthalein Phosphate MiVeg Agar is the modification of Phenolphthalein Phosphate Agar which is used for the identification of phosphatase positive colonies of *Staphylococcus aureus* which is a coagulase positive pathogenic strain (1). Phosphatase has been implicated as a virulence factor of *Staphylococcus aureus*. Phosphatase production is determined by the liberation of phenolphthalein which is indicated by the change in colour of the medium (2). On adding alkali to this medium, the liberated phenolphthalein gives bright pink - red colouration.

MiVeg peptone and MiVeg 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.

Methodology

Suspend 28 grams of powder media in 1000 ml distilled water. Mix thoroughly and heat to boiling to dissolve the medium completely. Distribute in tubes. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Quality Control

Physical Appearance

Light yellow coloured, may have slightly greenish tinge, homogeneous, free flowing powder.

Gelling

Firm, comparable with 1.5% Agar gel.

Colour and Clarity of prepared medium

Yellow coloured, clear gel forms in tubes as slants.

Reaction

Reaction of 2.8% w/v aqueous solution is pH 7.4 ± 0.2 at 25°C.

pH Range

7.2 - 7.6

Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organisms (ATCC)	Inoculum (CFU)	Growth	Phosphatase*
<i>Escherichia coli</i> (25922)	10 ² -10 ³	luxuriant	—
<i>Staphylococcus aureus</i> (25923)	10 ² -10 ³	luxuriant	+
<i>Staphylococcus epidermidis</i> (12228)	10 ² -10 ³	luxuriant	+

Key : * = after incubation add 1 drop of 40% NaOH

+ = Bright pink-red colouration after addition of 40% NaOH

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

Prepared Media: 2-8° in sealable plastic bags for 2-5 day.

Further Reading

1. MacFaddin J.F., 2000, Biochemical Tests for Identification of Medical Bacteria, 2nd ed., Williams and Wilkins, Baltimore.
2. Lewis B., 1961, J. Med. Lab. Technol., 18 : 112.
3. Barber M. and Kuper S.W.A., 1951, J. Pathol. Bacteriol., 63:65.

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