

Technical Information

PL MiVeg Agar

Product Code : VM2173

Application:- PL MiVeg Agar is recommended for the isolation and cultivation of *Plesiomonas shigelloides* from food.

Composition

Ingredients	Gms / Litre
MiVeg peptone	5.0
Yeast extract	2.0
Sodium chloride	5.0
Mannitol	7.5
L-Arabinose	5.0
Inositol	1.0
Lysine	2.0
Synthetic detergent	1.0
Phenol red	0.08
Agar	15.0
Final pH (at 25°C)	7.4 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

PL MiVeg Agar is prepared by using MiVeg peptone and Synthetic detergent in place of Peptic digest of animal tissue and Bile extract thereby making the medium BSE/TSE risks free. PL MiVeg Agar is the modification of PL Agar which is formulated as per APHA (1) for isolation and cultivation of *Plesiomonas shigelloides* from foods. *Plesiomonas shigelloides* is an opportunistic pathogen while controversy exists as its role as an enteropathogen (2, 3) and is mainly associated with the consumption of uncooked molluscs or with foreign travel (4). *Plesiomonas shigelloides* grows well on PL MiVeg Agar.

MiVeg peptone and yeast extract provides the nitrogenous compounds, vitamin B complex and trace ingredients. L-lysine is the amino acid source while arabinose, inositol and mannitol are the fermentable carbohydrate sources. Synthetic detergent inhibits gram-positive bacteria. Phenol red act as a pH indicator which turns yellow at acidic pH. If the sample is fluid, streak directly. If the sample is solid, prepare dilution in 0.1% MiVeg Peptone Water, (VM1028) or transfer 10 gram sample to 90 ml Tetrathionate MiVeg Broth (VM1032) without iodine and incubate at 40°C for 24 hours. After incubation streak on PL MiVeg Agar.

Methodology

Suspend 43.58 grams of powder media in 1000 ml distilled water. Mix thoroughly and heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 10 lbs pressure (115°C) for 15 minutes. Cool to 45-50°C and pour aseptically in sterile petri plates.

Quality Control

Physical Appearance

Pink coloured, homogeneous, free flowing powder.

Gelling

Firm, comparable with 1.5% Agar gel.

Colour and Clarity of prepared medium

Red coloured, clear to slightly opalescent gel forms in petri plates.

Reaction

Reaction of 4.36% w/v aqueous solution is pH 7.4 \pm 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 24 hours.

Organisms (ATCC)	Inoculum (CFU)	Growth
<i>Plesiomonas shigelloides</i> (14029)	10^2 - 10^3	luxuriant

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. Frances Pouch Downes and Keith Ito (Eds.), 2001, Compendium of Methods For The Microbiological Examination of Foods, 3rd ed., APHA, Washington, D.C.
2. Ingram C.W., Morrison A.J. and Levitz R.E., 1987, J. Clin. Microbiol., 25 : 1791.
3. Holmberg S.D. and Farmer J.J., 1984, Rev. Infect. Dis., 6 : 633.
4. Holmberg S.D., et al, 1986, Ann. Intern. Med., 105 : 690.

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