Technical Information

Halophilic MiVeg Agar

Product Code : VM1590

Application:- Halophilic MiVeg Agar is recommended for the isolation and cultivation of extreme halophiles.

Composition

Ingredients	Gms / Litre
MiVeg acid hydrolysate	10.00
Yeast extract	10.00
MiVeg peptone No.3	5.00
Trisodium citrate	3.00
Potassium chloride	2.00
Magnesium sulphate	25.00
Sodium chloride	250.00
Agar	20.00
Final pH (at 25°C)	7.2 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Halophilic MiVeg Agar is prepared by replacing animal based peptone with vegetable peptones thus making the medium free from BSE/TSE risks. This medium is the modification of Halophilic Agar, formulated for isolation and cultivation of extreme halophilic species of *Halobacterium* and *Halococcus* from foods (1, 2). High salt concentration of about 20-30% is needed for optimum growth of these halophiles. These bacteria can cause pink discoloration on the outer surface accompanied by putrefaction and decomposition of fish, bacon and hides preserved in sea salts.

MiVeg acid hydrolysate, MiVeg peptone No.3 and yeast extract provides all the necessary nutrients, mainly nitrogenous and vitamins for the optimum growth of the halophilic bacteria. Trisodium citrate serves as selective agent and prevents loss of halophiles in mixed population; as it supresses gram- positive organisms and coliforms (2). Magnesium, an essential ion for the growth of extreme halophiles and is incorporated in the medium as magnesium sulphate. 10 gm sample is added to 90 ml Halophilic MiVeg Broth and incubated at 35°C for upto 12 days. The organisms are then isolated onto Halophilic MiVeg Agar from this enriched culture.

Methodology

Suspend 32.5 grams of powder media in 100 ml distilled water. Mix thoroughly and heat to boiling to dissolve the medium completely. Dispense as desired and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Quality Control

Physical Appearance

Off white coloured, homogeneous, free flowing powder.

Gelling

Firm, comparable with 2.0% Agar gel.

Colour and Clarity of prepared medium

Amber coloured, slightly opalscent gel forms in petri plates.

Reaction

Reaction of 32.5% w/v aqueous solution is pH 7.2 ± 0.2 at 25°C.

pH Range

7.0-7.4

Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 35-37°C for 12 days.

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery
Halococcus morrhuae (17082)	10^2-10^3	luxuriant	>70%
Halobacterium salinarium (33171)	10^2-10^3	luxuriant	>70%

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: 2-8^0 in sealable plastic bags for 2-5 day.

Further Reading

1. Dundas I.E., 1977, Advances In Microbiology and Physiology, Rose H. and Tempest D.W. (Eds.), A.P. London.
2. Gibbons N.E., 1969, Methods In Microbiology, Vol. 3B, Norris J.R., and Ribbons D.W. (Eds.), A.P., New York, pp.169-183.

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