Technical Information

MOF MiVeg Medium

Product Code : VM1379

Application:- MOF MiVeg Medium is recommended for differentiation between oxidative and fermentative carbohydrate metabolism of marine bacteria.

Composition

Ingredients	Gms / Litre
MiVeg hydrolysate	1.0
Yeast extract	0.1
Tris hydroxymethyl aminomethane	0.5
Boric acid	0.011
Ammonium sulphate	0.5
Disodium phosphate	0.004
Ammonium nitrate	0.0008
Sodium chloride	9.7
Magnesium chloride	4.4
Sodium sulphate	1.6
Calcium chloride	0.9
Potassium chloride	0.275
Sodium bicarbonate	0.08
Potassium bromide	0.04
Strontium chloride	0.017
Sodium silicate	0.002
Sodium fluoride	0.0012
Phenol red	0.01
Agar	3.0
Final pH (at 25°C)	8.0±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

MOF MiVeg Medium is prepared by using MiVeg hydrolysate in place of Casein enzymic hydrolysate , thus the medium becomes BSE/ TSE risks free. This medium is the modification of MOF Medium which is a modified version of the formula originally developed by Leifson (1); used for differentiating oxidative and fermentative carbohydrate metabolising marine bacteria.

It contains MiVeg hydrolysate and yeast extract which provides the necessary nitrogenous nutrients including amino acids, vitamins etc. The mineral content of this medium is equivalent to one- half that of sea water (1). This medium contains a variety of salts found in seawater which makes the medium suitable for marine bacteria and also buffers the medium. Phenol red serve as the pH indicator in the medium.

To differentiate the fermentation and oxidation of carbohydrates, inoculate two tubes of medium containing carbohydrate with each culture to be tested. Overlay one tube of each culture with sterile melted petrolatum to form a layer about one inch in height. The marine bacteria which change the colour of the medium in both the tubes from red to yellow are carbohydrate fermenters and those which change the medium from red to yellow in the open(uncovered) tube only, are carbohydrate oxidizers. No change in the covered medium and an alkaline reaction in the uncovered medium by the marine bacteria are neither oxidative nor fermentative.

Methodology

Suspend 22.14 grams of powder media in 1000 ml distilled water. Mix thoroughly. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 55-60°C and aseptically add sterile dextrose solution (or other carbohydrate of choice) to a final concentration of 1%.

Quality Control

Physical Appearance

Pink coloured, homogeneous, free flowing powder.

Gelling

Semisolid, comparable with 0.3% Agar gel.

Colour and Clarity of prepared medium

Red coloured, clear gel forms in tubes as butt.

Reaction

Reaction of 2.2% w/v aqueous solution pH: 8.0 ±0.2 at 25°C

pH range

7.8-8.2

Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours

Organisms (ATCC)	Inoculum (CFU)	Acid	Gas	Motility
Vibrio cholerae (15748)	luxuriant	+	+	+
Vibrio parahaemolyticus (11344)	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: 2-8^0 in sealable plastic bags for 2-5 days.

Further Reading

1. Leifson, 1963, J. Bact., 85:1183.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at **CDH** is true and accurate
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