Technical Information

SA MiVeg Agar Base

Product Code :VM2177

Application:- SA MiVeg Agar Base with Ampicillin Supplement is used for isolation and cultivation of *Aeromonas hydrophila* from foods.

Composition

Ingredients	Gms / Litre
MiVeg hydrolysate	10.0
Sodium chloride	5.0
Starch, soluble	10.0
Phenol red	0.025
Agar	15.0
Final pH (at 25°C)	7.4 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Starch Ampicillin MiVeg Agar Base is prepared by using vegetables peptones in place of animal based peptones thus making the medium BSE/TSE risks free. This medium is the modification of SA Agar Base which was formulated as described by Palumbo et al (1) and also recommended by APHA (2) for isolation and cultivation of *Aeromonas hydrophila* from foods. Very few bacteria in food are capable of hydrolyzing starch. Starch hydrolysis is a differentiating characteristic of *Aeromonas hydrophila.* Typical colonies of *Aeromonas hydrophila* are yellow to honey coloured surrounded by a clear zone of hydrolyzed starch against black background.

MiVeg hydrolysate supplies all the essential nutrients needed for the growth of organisms. Sodium chloride maintains osmotic equilibrium. Ampicillin suppresses the contaminating microflora. SA MiVeg Agar Base is used for quantitative detection of *Aeromonas hydrophila*, *Aeromonas sobria* and *Aeromonas caviae* in fresh foods of animal origin and fresh vegetable (3) *Aeromonas sobria* and *Aeromonas caviae* are further identified by biochemical tests. Starch hydrolysis is determined by flooding the plate with 5 ml Lugol's Iodine solution.

Methodology

Suspend 40 grams of powder media in 1000 ml distilled water. Mix thoroughly and heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45°-50°C. Aseptically add rehydrated contents of 1 vial of Ampicillin Supplement (MS2082). Mix well before pouring into sterile petri plates.

Quality Control

Physical Appearance

Light 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 4.0% 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 30°C for 24-48 hours.

Organisms (ATCC)	Inoculum (CFU)	Growth	Starch hydrolysis
Aeromonas hydrophila (7966)	10^2-10^3	luxuriant	+
Escherichia coli (25922)	10^2-10^3	Poor-fair	-
Staphylococcus aureus (25923)	10^2-10^3	inhibited	-

Key : + = positive reaction, clearing around the colony
- = negative reaction, no clearing around the colony

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. Palumbo S., et al, 1985, Appl. Environ. Microbiol., 50:1027.
2. Frances Pouch Downes and Keith Ito (Eds.), 2001, Compendium of Methods For The Microbiological Examination of Foods, 4th ed., APHA, Washington, D.C.
3. Stern NJ, Drazek ES and Joseph SW 1987, J. Food Protect, 50:66.

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