

Technical Information

Rippey-Cabelli MiVeg Agar Base

Product Code : VM1859

Application:- Rippey-Cabelli MiVeg Agar Base is recommended for differential and selective cultivation of *Aeromonas hydrophila* from water samples using membrane filter technique.

Composition

Ingredients	Gms / Litre
MiVeg hydrolysate No. 1	5.0
Trehalose	5.0
Yeast extract	2.0
Sodium chloride	3.0
Potassium chloride	2.0
Magnesium sulphate	0.2
Iron (III) Chloride	0.1
Bromo thymol blue	0.04
Agar	15.0
Final pH (at 25°C)	8.0 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Rippey-Cabelli MiVeg Agar Base is prepared by adding MiVeg hydrolysate No. 1 instead of Tryptose thereby making the medium free from BSE/TSE risks. Rippey-Cabelli MiVeg Agar Base is the modification of Rippey-Cabelli (RC) Agar which was formulated by Rippey and Cabelli (1). This medium is a differential medium as it differentiates microbes on the basis of their trehalose fermentation.

MiVeg hydrolysate and yeast extract support the growth of *Aeromonas* species. Ampicillin and ethanol selectively inhibits gram-positive bacteria, coliforms, *Shigella* species, *Proteus mirabilis* and *Actinomyces*. Ethanol inhibits overgrowth of *Klebsiella* species on the filter. Ampicillin is unsuitable as a selective agent with *Plesiomonas*(2). The main drawback of this medium is that it fails to recognize lysine-positive *Aeromonas* strains. As most enteric organisms can ferment trehalose thereby specificity of this medium is insufficient due to clear characteristics to distinguish *Aeromonas* colonies from the *Enterobacteriaceae* (3). Sensitivity and specificity are higher with pure cultures (4).

Methodology

Suspend 16.17 grams of powder media in 500 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 50°C and aseptically add 10 ml ethanol and 1 vial of rehydrated contents of Rippey-Cabelli Supplement (MS2107). Mix well and pour into sterile petriplates.

Quality Control

Physical Appearance

Light green coloured, homogeneous, free flowing powder.

Gelling

Firm, comparable with 1.5% Agar gel.

Colour and Clarity of prepared medium

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

Reaction

Reaction of 3.23% w/v aqueous solution is pH 8.0 $\pm$ 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 24 hours on addition of Rippey-Cabelli Supplement (MS2107).

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery	Trehalose fermentation
<i>Aeromonas hydrophila</i> (7966)	10 ² -10 ³	luxuriant	>50%	+
<i>Escherichia coli</i> (25922)	10 ² -10 ³	none-poor	<20%	-
<i>Shigella flexneri</i> (12022)	10 ² -10 ³	inhibited	0%	-
<i>Staphylococcus aureus</i> (25923)	10 ² -10 ³	inhibited	0%	-

Key : + = acid production, yellow colour

- = no colour change (blue-green colour)

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. Rippey S.R. and Cabelli V.J., 1979, Appl. Environ. Microbiol. 38 (1):108.
2. Von Graevenitz A. and Bucher C., 1983, J. Clin. Microbiol, 17 (1):16.
3. Roland, F.P., 1977, Med. Microbiol. Immunol., 163:241.
4. MacFaddin J.F., 1985, Media for Isolation - Identification Cultivation and Maintenance of Medical bacteria, Vol. I Williams and Wilkins, Baltimore.

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