

Technical Information

CAL MiVeg Agar (Cellobiose Arginine Lysine MiVeg Agar)

Product Code : VM1893

Application:- CAL (Cellobiose Arginine Lysine) MiVeg Agar is a selective media used for isolation and biochemical differentiation of *Yersinia enterocolitica*.

Composition

Ingredients	Gms / Litre
Yeast extract	3.00
Sodium chloride	5.00
Cellobiose	3.50
L-Arginine	6.50
L-Lysine hydrochloride	6.50
Synthetic detergent No. III	1.50
Neutral red	0.03
Agar	20.00
Final pH (at 25°C)	7.1±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

CAL MiVeg Agar is prepared by using Syntheticdetergent No. III instead of sodium deoxycholate which makes the media free from BSE/TSE risks.

This media is the modifications of CAL Agar which is prepared according to the formula described by Dudley and Shotts (1) for selective isolation and biochemical differentiation of *Yersinia enterocolitica*.

It contains cellobiose which serve as fermentable carbohydrate. Amino acids L-Arginine and L-Lysine are also incorporated in the medium. CAL Agar is a differential medium as it differentiates *Yersinia* on the basis of cellobiose fermentation and arginine or lysine decarboxylation (2). This media serves the same above mentioned purpose. Neutral red is the pH indicator which turns red under acidic condition. Yeast extract supplies the necessary nutrients to the organisms while sodium chloride maintains the osmotic equilibrium. Gram-positive bacteria are inhibited by Synthetic detergent No. III & which avoid contamination during cultivation.

Methodology

Suspend 46 grams of powder media in 1000 ml distilled water. Mix thoroughly. Heat to boiling to dissolve the medium completely. DO NOT OVERHEAT OR AUTOCLAVE. Dispense as desired.

Quality Control

Physical Appearance

Pinkish beige coloured, homogeneous, free flowing powder.

Gelling

Firm, comparable with 2.0% Agar gel

Colour and Clarity of prepared medium

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

Reaction

Reaction of 4.6 % w/v aqueous solution pH: 7.1 ±0.2 at 25°C

pH range

6.9-7.3

Cultural Response/Characteristics

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

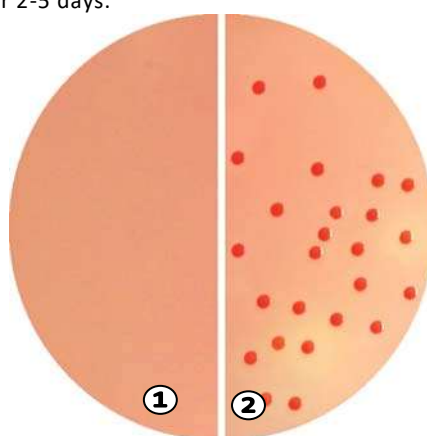
Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery	Cellobiose	Arginine	Lysine
<i>Yersinia enterocolitica</i> (27729)	10^2 - 10^3	good-luxuriant	>50%	+	-	-
<i>Escherichia coli</i> (25922)	10^2 - 10^3	good	>30%	-	v	v
<i>Pseudomonas aeruginosa</i> (27853)	10^2 - 10^3	good	>30%	-	-	+
<i>Proteus mirabilis</i> (25933)	10^2 - 10^3	good	>30%	-	-	-

Key : + = positive reaction
— = negative reaction
v = variable

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 days.



VM1893 CAL MiVeg Agar

1. Control

2. *Yersinia enterocolitica*

Further Reading

1. Dudley M.V. and Shotts E.B., 1979, J. Clin. Microbiol., 10(2):180.

2. MacFaddin J.F., 2000(ed), Biochemical Tests for Identification of Medical Bacteria, 3rd edition, Lippincott Williams and Wilkins, New York.

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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