

Technical Information

Deoxycholate Lactose MiVeg Agar

Product Code :VM1066

Application:- Deoxycholate Lactose MiVeg Agar is a differential and slightly selective medium recommended for the isolation and enumeration of coliforms in water, waste water, milk and dairy products.

Composition

Ingredients	Gms / Litre
MiVeg special peptone	10.0
Lactose	10.0
Sodium chloride	5.0
Sodium citrate	2.0
Synthetic detergent No. III	0.5
Neutral red	0.03
Agar	15.0
Final pH (at 25°C)	7.1±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Deoxycholate Lactose MiVeg Agar is prepared by using vegetable peptones instead of animal based peptones which makes the medium BSE/TSE risks free. This is the modification of Leifson (1) and prepared according to the formula in Standard Methods for Examination of Dairy Products (2) and Water and Wastewater (3) and food (4) for the detection of coliform bacilli.

The optimum concentration of synthetic detergent No. III and sodium citrate in the medium inhibits gram positive organisms. This medium helps in differentiating between lactose fermenting and non lactose fermenting enteric bacilli. The lactose fermenters utilize lactose and produce acid which is indicated by pH indicator, neutral red. Lactose fermenting organisms show pink coloured colony, whereas the non lactose fermenting form colourless colonies.

Methodology

Suspend 42.5 grams of powder media in 1000 ml distilled water. Mix thoroughly. Heat to boiling to dissolve the medium completely. The medium requires no autoclaving if it is to be used at once. If the medium is to be stored, it should be sterilized at 15 lbs pressure (121°C) for 15 minutes. AVOID OVERHEATING.

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

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

Reaction

Reaction of 4.25 % 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 18-24 hours

Organisms (ATCC)	Inoculum (CFU)	Growth	Colour of colony
<i>Bacillus subtilis</i> (6633)	10 ² -10 ³	inhibited	-
<i>Ent. aerogenes</i> (13048)	10 ² -10 ³	good - luxuriant	pink
<i>Enterococcus faecalis</i> (29212)	10 ² -10 ³	inhibited	-
<i>Escherichia coli</i> (25922)	10 ² -10 ³	good - luxuriant	pink
<i>S. serotype Typhimurium</i> (14028)	10 ² -10 ³	good - luxuriant	colourless

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.

Further Reading

1. Leifson, 1935, J. Path. Bact., 40:581.
2. Richardson (Ed.), 1985, Standard Methods for the Examination of Dairy Products, 15th ed., APHA, Wasington, D.C.
3. Greenberg A. E., Trussell R. R. and CClesceri L. S. (Eds.) 1985, Standard Methods for the Examination of Water and Wastewater, 16th ed., APHA, Wasington, D.C.
4. Speck M. (Ed.), 1984, Compendium of Methods for the Microbiological Examination of Foods, 2nd ed., APHA, Washington, D.C.

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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