

Technical Information

Deoxycholate Agar, MiVeg

Product Code : VM1030

Application:- Deoxycholate Agar, MiVeg is a differential medium used for the direct count of coliforms in dairy products. Also used for the isolation of enteric pathogens from rectal swabs, faeces and other pathological specimens.

Composition

Ingredients	Gms / Litre
MiVeg peptone	10.0
Lactose	10.0
Synthetic detergent No. III	1.0
Sodium chloride	5.0
Dipotassium phosphate	2.0
Ferric citrate	1.0
Sodium citrate	1.0
Neutral red	0.03
Agar	15.0
Final pH (at 25°C)	7.3±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Deoxycholate Agar, MiVeg is prepared by using vegetable peptones instead of animal based peptones thereby making the medium free from BSE/TSE risks. This medium is the modification of modified formula of Leifson's medium (1). It is used for the isolation and maximum recovery of intestinal pathogens belonging to *Salmonella* and *Shigella* groups. The selectivity of medium permits the use of fairly heavy inocula without danger of overgrowth of *Shigella* and *Salmonella* by other micro-flora.

For the routine examination of stool and urine specimens, it is recommended that other media such as MacConkey MiVeg Agar (VM1082), Bismuth Sulphite MiVeg Agar (VM1027) etc. be used in conjunction with this medium. This medium can be used to streak specimen from Selenite Broth cultures. It is particularly recommended for the detection of *Shigella* and *Salmonella* in the examination of rectal swabs and faeces. In this medium, these organisms produce colourless colonies which are non-lactose fermenters.

Coliform bacteria and gram-positive bacteria are inhibited or greatly suppressed on this medium due to the presence of synthetic detergent, sodium citrate and ferric ammonium citrate. Coliform bacteria, if present, form pink colonies on this medium. It can be used in the enumeration of coliforms in milk and cream as follows (1): Pipette 1-4 ml of the sample (or decimal dilution of the sample) into a sterile plate and add 10-20 ml of prepared medium to each plate. Allow the plates to solidify and then overlay with 3-5 ml of uninoculated medium, allow to set and incubate at 30°C for 24 hours. Coliforms form dark red colonies (0.5 mm in diameter).

Methodology

Suspend 4.5 grams of powder media in 1000 ml distilled water. Mix thoroughly. Heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE. Avoid excessive or prolonged heating during reconstitution.

Quality Control

Physical Appearance

Beige to 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 very slightly opalescent gel forms in petri plates.

Reaction

Reaction of 4.5 % w/v aqueous solution pH: 7.3 ±0.2 at 25°C

pH range

7.1-7.5

Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery	Colour of colony
<i>Enterococcus faecalis</i> (29212)	10 ³ -2x10 ³	good-luxuriant	0%	-
<i>Escherichia coli</i> (25922)	30-300	good-luxuriant	>50%	pink
<i>Salmonella</i> serotype Enteritidis (13076)	30-300	good-luxuriant	>50%	colourless
<i>Salmonella</i> serotype Typhi (6539)	30-300	good-luxuriant	>50%	colourless
<i>Salmonella</i> serotype Typhimurium (14028)	30-300	good-luxuriant	>50%	colourless
<i>Staphylococcus aureus</i> (25923)	10 ³ -2x10 ³	inhibited	0%	-

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. Standard Methods for the Examination of Dairy Products. 17th Edition, 2004 Edited by H. Michael Wehr and Joseph H. Frank.
2. Leifson, 1935, J. Patho. Bacteriol., 40:581.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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