Dehydrated Culture Media
Bases / Media Supplements

Technical Information

Plate Count MiVeg Agar

Product Code : VM1091

Application:- Plate Count MiVeg Agar is recommended for the plate count of microorganisms found in food, water and waste water.

Composition

Ingredients	Gms / Litre
MiVeg hydrolysate	5.00
Yeast extract	2.50
Dextrose	1.00
Agar	15.00
Final pH (at 25°C)	7.0 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Plate Count MiVeg Agar is prepared by adding MiVeg hydrolysate in place of Casein enzymic hydrolysate thus making the medium free from BSE/TSE risks. This medium is the modification of Plate Count Agar which was formulated as described by Buchbinder et al (1) and also recommended by APHA (2,3,4).
MiVeg hydrolysate supplies amino acids and other complex nitrogenous substances needed for the microbial growth. Yeast extract supplies Vitamin B complex. The samples under examination are diluted and then appropriate dilutions placed into sterile petri plates. Sterile molten agar is added to these plates with gently rotating the plates to ensure uniform mixing of the sample with agar. Like conventional medium, Plate Count MiVeg Agar is also suitable to determine bacterial count of sterile rooms.
To obtain countable plates for foods having low colony counts, low dilutions must be used. Certain food items results in the presence of food particles which makes it difficult for accurate counting and this can be overcome by adding 1 ml of 0.5% 2,3,5-triphenyltetrazolium chloride (TTC) per 100 ml of melted agar medium just prior to pouring the plates. Most bacteria form red colonies onto TTC containing medium.

Methodology

Suspend 23.5 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.

Quality Control

Physical Appearance

Light yellow coloured, may have slightly greenish tinge, homogeneous, free flowing powder.

Gelling

Firm, comparable with 1.5% Agar gel.

Colour and Clarity of prepared medium

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

Reaction

Reaction of 2.35% w/v aqueous solution is pH 7.0 ± 0.2 at 25°C.

pH Range

6.8-7.2

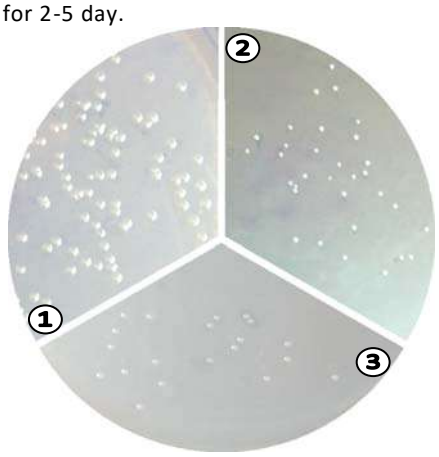
Cultural Response/Characteristics

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

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery
Bacillus subtilis (6633)	10^2-10^3	luxuriant	>70%
Escherichia coli (25922)	10^2-10^3	luxuriant	>70%
Lactobacillus casei (9595)	10^2-10^3	luxuriant	>70%
Staphylococcus aureus (25923)	10^2-10^3	luxuriant	>70%
Enterococcus faecalis (29212)	10^2-10^3	luxuriant	>70%
Streptococcus pyogenes (19615)	10^2-10^3	luxuriant	>70%

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.



VM1091 Plate Count MiVeg Agar
(Against dark background)
1. *Escherichia coli*
2. *Staphylococcus aureus*
3. *Enterococcus faecalis*

Further Reading

1. Buchbinder, Baris and Goldstein, 1951, Publ. Hlth. Rep., 66:327.
2. Standard Methods for the Examination of Dairy Products. 17th Edition, 2004 Edited by H. Michael Wehr and Joseph H.Frank.
3. Downes FP and Ito K (Eds.), 2001, Compendium of Methods For The Microbio logical Examination of Foods, 4th ed., APHA, Washington, D.C.
4. Eaton A.D., Clesceri L.S. and Greenberg A.E., (Eds.), 2005, Standard Methods for the Examination of Water and Wastewater, 21st ed, APHA, Washington DC.

Disclaimer :

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