Technical Information

Lee's Multidifferential MiVeg Agar

Product Code : VM2333

Application:- Lee's Multidifferential MiVeg Agar is used in the brewing industry for the cultivation and identification of brewing bacteria including the fastidious type.

Composition

Ingredients	Gms / Litre
Tomato juice broth	41.00
MiVeg hydrolysate No. 3	20.00
Calcium pantothenate	2.00
Citric acid	1.10
Calcium carbonate	5.00
Polysorbate 80	0.50
Bromo cresol green	0.022
Cycloheximide	0.007
Agar	15.00
Final pH (at 25°C)	5.5 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Lee's Multidifferential MiVeg Agar is prepared by using vegetable peptones in place of animal based peptones thereby making the medium BSE/TSE risks free . Lee's Multidifferential MiVeg Agar is used for the cultivation and identification of brewing bacteria.

The medium contains Tomato juice broth which provides nutrients and acid environment for the growth of acidophilic bacteria. MiVeg hydrolysate No.3 supplies all the essential growth nutrients. The low pH of the medium inhibits bacteria other than acidophilic bacteria. Polysorbate 80 serves as a fatty acid source. Bromo cresol green is the pH indicator. Acid producing bacteria produce a clear yellow halo around the colonies whereas other bacteria produce colonies in colours ranging from colourless to yellow green and blue depending on species and strain. Further tests should be carried out for their identification.

Methodology

Suspend 85 grams of powder media in 1000 ml distilled water. Mix thoroughly and heat just to boiling . Sterilize by autoclaving at 15 lbs pressure (121°C) for 10 minutes. Do not overheat. Stir the medium while dispensing to prevent settling of calcium carbonate.

NOTE : Due to the presence of calcium carbonate the prepared medium forms opalescent solution with white precipitate.

Quality Control

Physical Appearance

Greenish yellow coloured, homogeneous, free flowing powder.

Gelling

Firm, comparable with 1.5% Agar gel.

Colour and Clarity of prepared medium

Light blue coloured, gel forms in petri plates.

Reaction

Reaction of 8.5% w/v aqueous solution is pH 5.5 $\pm$ 0.2 at 25°C.

pH Range

5.3 - 5.7

Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 30°C for 48-72 hours.

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery
A. calcoaceticus (19606)	10^2-10^3	none-poor	<20%
Lactobacillus acidophilus (4356)	10^2-10^3	luxuriant with clear yellow halo	>70%
Lactobacillus fermentum (9338)	10^2-10^3	luxuriant with clear yellow halo	>70%
Lactobacillus leichmannii (4797)	10^2-10^3	luxuriant with clear yellow halo	>70%
Lactobacillus plantarum (8014)	10^2-10^3	luxuriant with clear yellow halo	>70%
Proteus vulgaris (13315)	10^2-10^3	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: 2-8^0 in sealable plastic bags for 2-5 day.

Further Reading

1. Mar 1976 DT Journal Article AU Lee, S. Y.; Jangaard, N. O.; Coors, J. H.; Hsu, W. P.; Fuchs, C. M.; Brenner.
2. M. W. PY 1975 AD Adolph Coors Co., Golden, Colorado 80401, USA SO Proceedings. American Society of Brewing Chemists 33 (1).

Disclaimer :

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