Technical Information

Lactobacilli MiVeg Broth

Product Code : VM1368

Application:- Lactobacilli MiVeg Broth, also known as Elliker Broth MiVeg, is used for cultivating Streptococci and Lactobacilli of importance in the dairy industry.

Composition**

Ingredients	Gms / Litre
MiVeg hydrolysate	22.5
Yeast extract	5.0
Dextrose	5.0
Lactose	5.0
Saccharose	5.0
Sodium chloride	4.0
Sodium acetate	1.5
Ascorbic acid	0.5
Final pH (at 25°C)	6.8±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Lactic acid bacteria found in dairy products consisting primarily of Streptococcus, *Lactococcus, Leuconostoc* and homofermentative and heterofermentative *Lactobacillus species*. Lactobacilli MiVeg Broth is a modification of Lactobacilli Broth. It is prepared by using vegetable peptone in place of animal based peptones thus making it free from BSE/TSE risk.

Lactic acid bacteria testing in dairy products may be useful for determining the cause of acid defects in products and evaluating lactic starter cultures and thus controlling the quality of curds, cheese, cultured milks etc. Lactobacilli Broth is recommended by APHA which is used for culturing Streptococci and lactobacilli in the dairy industry (1). Elliker, Anderson and Hannesson developed Elliker Broth (2), which was further modified by McLaughlin (3).

MiVeg hydrolysate in this medium supplies nitrogen to the organisms. Yeast extract serves as the source of vitamin. Dextrose, lactose and saccharose are the fermentable carbohydrates and hence the sources of energy. Sodium chloride maintains the osmotic equilibrium of the medium. With the addition of ascorbic acid, the medium becomes slightly acidic which supports the growth of lactobacilli. Sodium acetate has an inhibitory effect on gram-negative bacteria and moulds, without affecting the growth of lactobacilli.

Methodology

Suspend 48.5 grams of powder media in 1000 ml distilled water. Mix thoroughly. Heat if necessary to dissolve the medium completely. Dispense as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Quality Control

Physical Appearance
Cream to yellow coloured homogeneous free flowing powder.
Colour and Clarity of prepared medium
Light amber coloured clear solution without any precipitate.
Reaction
Reaction of 4.85% w/v aqueous solution at 25°C. pH : 6.8±0.2
pH range
6.60-7.00

Cultural Response/Characteristics

VM1368: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum(CFU)	Growth
Lactobacillus casei ATCC 7469	50-100	luxuriant
Lactobacillus plantarum 19435	50-100	luxuriant
Streptocoocus cremoris ATCC 19527	50-100	luxuriant
Streptococcus thermophilus ATCC 14486	50-100	luxuriant(incubated at 30-32°C for 24-48 hours)
Streptococcus thermophilus ATCC 14486	50-100	good-luxuriant

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 days.

Further Reading

1.Marshall R., (Ed.), 1993, Standard Methods for the Examination of Dairy Products, 16th Ed., American Public Health Association, Washington, D.C.
2.Elliker P. R., Anderson A. W. and Hannesson G., 1956, J. Dairy Sci., 39:1611.
3.McLaughlin, 1946, J. Bacteriol., 51:560.

Disclaimer :

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