TM 2243 - MICRO VITAMIN TEST CULTURE AGAR

INTENDED USE

For cultivation and maintenance of stock cultures of used in microbiological assays of vitamins.

PRODUCT SUMMARY AND EXPLANATION

Lactobacillus is a genus of gram-positive facultative anaerobic lactic acid bacteria. The lactic acid bacid bacteria are so named because most of its member's convert lactose and other sugars to lactic acid. They are common and usually benign. Many species are prominent in decaying plant material. The production of lactic acid makes its environment acidic which inhibits the growth of some harmful bacteria. Three types of media are generally used in microbiological assays namely maintenance media, inoculum /cultivation media and the test assay media.

Micro Vitamin Test Agar is used for carrying stock cultures of Lactobacilli and other test organisms used in microbiological assays. This media can also be used for routine cultivation of Lactobacilli in microbiological assays of vitamins and in inoculum preparation for assays. Stock cultures are prepared by stab inoculation in triplicates. One is used for preparation of stock cultures while others are used for inoculum preparation for assays. Transfer of cultures should be made at weekly or biweekly intervals.

Suspend a 16-24 hours' culture of Lactobacilli from Micro Vitamin Test Culture Agar into Micro Vitamin Test Inoculum Broth. After an incubation at 35-37°C for 18-24 hours, centrifuge the culture and decant the supernatant. Re-suspend the centrifuged cells in 10 ml of sterile saline suspension. Repeat the washing two more times. Dilute the washed cell suspension with basal assay medium or as desired to obtain the required density of cells. For procedure of Vitamin Assay, refer standard references.

COMPOSITION

Ingredients	Gms / Ltr
Yeast extract	20.000
Peptone	5.000
Dextrose (Glucose)	10.000
Potassium dihydrogen phosphate	2.000
Polysorbate 80 (Tween 80)	0.100
Agar	15.000

PRINCIPLE

Peptone and yeast extract in the medium provide nitrogen, sulphur, vitamins and other essential nutrients for growth. Dextrose is the energy source. Polysorbate 80 is the fatty acid source. Potassium dihydrogen phosphate buffers the medium.

INSTRUCTION FOR USE

- Dissolve 52.1 grams in 1000 ml purified/distilled water.
- Heat to boiling to dissolve the medium completely.
- Dispense and sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 45-50°C. Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Light yellow coloured clear to slightly opalescent gel forms in tubes as butts.
pH (at 25°C) : 6.7±0.2

INTERPRETATION

Cultural characteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
Lactobacillus casei	9595	50-100	Good-luxuriant	35-37°C	24 - 48 Hours
Lactobacillus viridescens	12706	50-100	Good-luxuriant	35-37°C	24 - 48 Hours
Lactobacillus leichmanni	4797	50-100	Good-luxuriant	35-37°C	24 - 48 Hours
Lactobacillus plantarum	8014	50-100	Good-luxuriant	35-37°C	24 - 48 Hours

PACKAGING:

In pack size of 100 gm bottles.

STORAGE

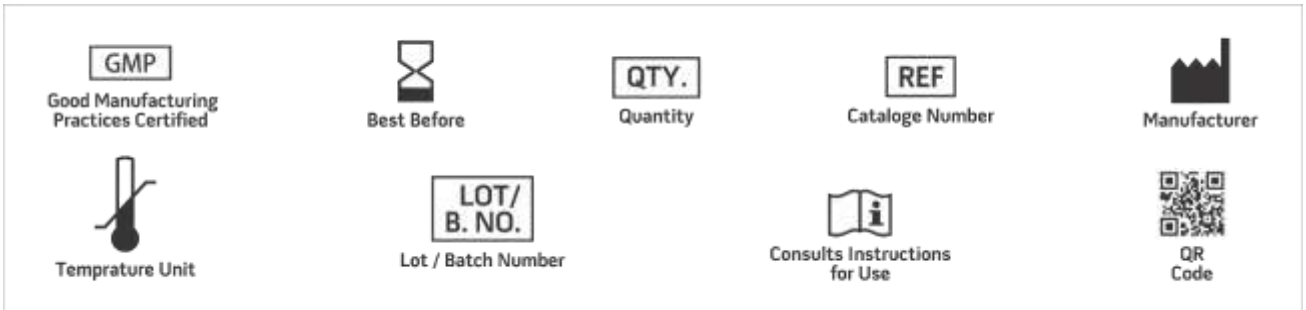
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Atlas R. M., 1993, Handbook of Microbiological Media, Parks L.C., (Ed.), CRC Press, Inc.
2. Horwitz, (Ed.), 2000, Official Methods of Analysis of AOAC International, 17th Ed., Vol. I, AOAC International, Gaithersburg, Md.
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
4. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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