

TM 146 – LACTOBACILLUS MRS AGAR (MRS AGAR)

INTENDED USE

For isolation and cultivation of *Lactobacillus* species.

PRODUCT SUMMARY AND EXPLANATION

Lactobacilli MRS medium is based on the formulation of deMan, Rogosa and Sharpe with slight modification. It supports luxuriant growth of all Lactobacilli from oral cavity, dairy products, foods, faeces and other sources. Lactobacilli are microaerophilic and generally require layer plates for aerobic cultivation on solid media. When the medium is set, another layer of un-inoculated MRS Agar is poured over the surface to produce a layer plate. Lactobacilli isolated on MRS Agar should be further confirmed biochemically.

COMPOSITION

Ingredients	Gms / Ltr
Proteose peptone	10.000
Beef extract	10.000
Yeast extract	5.000
Dextrose	20.000
Polysorbate 80	1.000
Ammonium citrate	2.000
Sodium acetate	5.000
Magnesium sulphate	0.100
Manganese sulphate	0.050
Dipotassium phosphate	2.000
Agar	12.000

PRINCIPLE

This medium consists of Proteose peptone and beef extract which supply nitrogenous and carbonaceous compounds. Yeast extract provides vitamin B complex and dextrose is the fermentable carbohydrate and energy source. Polysorbate 80 supplies fatty acids required for the metabolism of Lactobacilli. Sodium acetate and ammonium citrate inhibit Streptococci, moulds and many other microorganisms. Magnesium sulphate and manganese sulphate provide essential ions for multiplication of lactobacilli. Phosphates provide good buffering action in the media.

INSTRUCTION FOR USE

- Dissolve 67.15 grams in 1000 ml purified/distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS



Appearance of Powder : Cream to light yellow homogeneous free flowing powder.
Appearance of prepared medium : Medium to dark amber coloured, clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C) : 6.5 ± 0.2

INTERPRETATION

Cultural characteristics observed in presence of 5% Carbon dioxide (CO₂) after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
<i>Lactobacillus casei</i>	9595	50-100	Luxuriant	≥70%	35-37°C	18-24 Hours
<i>Lactobacillus leichmannii</i>	7830	50-100	Luxuriant	≥70%	35-37°C	18-24 Hours
<i>Lactobacillus fermentum</i>	9338	50-100	Luxuriant	≥70%	35-37°C	18-24 Hours
<i>Lactobacillus plantarum</i>	8014	50-100	Luxuriant	≥70%	35-37°C	18-24 Hours

PACKAGING:

In pack size of 100 gm and 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 2-8°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

- deMan J., Rogosa M. and Sharpe M., 1960, J. Appl. Bacteriol., 23:130.
- Marshall R.T. (Ed.), 1992, Standard Methods for the Examination of Dairy Products, 16th ed., APHA, Washington, D.C.
- Downes F. P. and Ito K., (Eds.), 2001, Compendium of Methods For the Microbiological Examination of Foods, 4th Ed., APHA, Washington, D.C.
- Sabine and Vaselekos, 1965, Nature, 206:960.
- MacFaddin J., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol.1, Williams and Wilkins, Baltimore.



GMP Good Manufacturing Practices Certified	IVD For In Vitro Diagnostic Use	QTY. Quantity	LOT/B. NO. Lot / Batch Number	REF Catalogue Number	 Manufacturer
 Temperature Unit	EC REP MedNet GmbH Buckstrasse 10 48163 Muenster, Germany Authorized Representative	 European Conformity	 QR Code	 Consults Instructions for Use	 Best Before

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

***For Lab Use Only**
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