

MRS Broth



Medium used for the isolation and cultivation of *Lactobacilli* spp.

• CONTENTS (Liter)

Proteose Peptone	10.0 g
Meat Extract	10.0 g
Yeast Extract	5.0 g
Glucose	20.0 g
Tween 80	1.0 g
Triammonium Citrate	2.0 g
Sodium Acetate	5.0 g
Magnesium Sulfate	0.1 g
Manganese Sulfate	0.05 g
Dipotassium Phosphate	2.0 g
Final pH = 6.5 ± 0.2 at 25°C	

• PROCEDURE

Suspend 55.15 G of powder in 1 L of distilled or deionized water. Heat to boiling until completely dissolved. Sterilize by autoclave at 121°C for 15 minutes. Cool to 45 - 50°C in water bath. Mix well. Pour into tubes.

• INTERPRETATION

MRS Broth is a general purpose medium used for the isolation and cultivation of *Lactobacilli* spp. Proteose peptone, meat extract and yeast extract provide nitrogen, carbon, amino acids, vitamins and minerals. Glucose provides the energy source. Tween 80 provides growth factors for growth of *Lactobacilli* spp. Triammonium citrate and sodium acetate are the selective agents. Magnesium sulfate and manganese sulfate provide cations. Dipotassium phosphate is the buffering agent.

• TECHNIC

Inoculate the specimen using a sterile needle to the medium. Incubate at 36 ± 1°C for 48 - 72 ± 3 hours under appropriate condition. Refer appropriate references for recommended test procedure.

• QUALITY CONTROL FOR USE

Dehydrated medium

Appearance: free-flowing, homogeneous

Color: beige

Prepared medium

Appearance: clear to slightly opalescent

Color: light amber to amber

Incubation conditions: 36 ± 1°C / 48 - 72 ± 3 hours / microaerobic condition

Microorganism	ATCC	Inoculum CFU	Growth
<i>Lactobacillus bulgaricus</i>	11842	50-100	good
<i>Lactobacillus fermentum</i>	9338	50-100	good
<i>Lactobacillus plantarum</i>	8014	50-100	good

• STORE

The powder is very hygroscopic. Store the powder at 2 - 8°C, in a dry environment, in its original container tightly closed and use it before the expiry date on the label. Store prepared medium at 2 - 8°C.

• REFERENCES

1. Briggs, M. (1953). J. Dairy Res. 20:36.
2. Cox, G.P., and M. Briggs (1954). J. App. Bact.17:18.
3. De Man, J.C., M. Rogosa, and M.E. Sharpe (1960). J. App. Bact. 23:130-135.
4. ISO/FDIS 15214 (1998) Microbiology of food and animal feeding stuffs-Horizontal method for the enumeration of mesophilic lactic acid bacteriacolonycount technique.
5. Marshall R.T. (Ed.), 1992, Standard Methods for the Examination of Dairy Products, 16th ed., APHA, Washington,D.C.
6. Downes F. P. and Ito K., (Eds.), 2001, Compendium of Methods For the Microbiological Examination of Foods, 4th Ed., APHA, Washington, D.C.
7. Sabine and Vaselekos, 1965, Nature, 206:960.
8. MacFaddin J.,1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol.1, Williams and Wilkins, Baltimore.

• PACKAGE

Cat. No : MB-M1025 MRS Broth	500 G
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• MICROBIAL CULTURE IMAGES



None

L. Plantarum
ATCC 8014*L. Fermentum*
ATCC 9338

Incubation conditions : 36 ± 1°C / 48 - 72 ± 3 hours under microaerobic condition