

# MRS Agar (non-animal)

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

## • CONTENTS (Liter)

Peptone Non-Animal Origin	10.0 g
Yeast Extract	15.0 g
Glucose	20.0 g
Triammonium Citrate	2.0 g
Sodium Acetate	5.0 g
Magnesium Sulfate	0.2 g
Manganese Sulfate	0.05 g
Dipotassium Phosphate	2.0 g
Tween 80	1.0 g
Agar	13.0 g
Final pH = 6.2 ± 0.2 at 25°C	

## • PROCEDURE

Suspend 68.25 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 petri dishes.

## • INTERPRETATION

MRS Broth (non-animal) is a medium used for the isolation and cultivation of *Lactobacillus* spp. Peptone non-animal origin is a source of carbon, nitrogen and essential nutrients. Yeast extract provides vitamins. Glucose provides carbohydrates. Triammonium citrate and sodium acetate is the selective agents. Magnesium sulfate and manganese sulfate provide cations. Dipotassium phosphate is the buffering agent. Tween 80 provides fatty acids. Agar is the solidifying agent.

## • TECHNIC

Inoculate the specimen using a sterile needle to the medium. Incubate at 35 ± 2°C for 48 - 72 ± 3 hours under microaerobic condition. Refer appropriate references for recommended test procedure.

## • QUALITY CONTROL FOR USE

### Dehydrated medium

Appearance: free-flowing, homogeneous

Color: beige

### Prepared medium

Appearance: clear

Color: amber

Incubation conditions: 35 ± 2°C / 48 - 72 ± 3 hours under microaerobic condition

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

## • STORE

The powder is very hygroscopic. Store the powder at room temperature, 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.

## • PACKAGE

Cat. No : MB-M0622 MRS Agar (non-animal)	500 G
---	-------