

## TM 147 – MRS BROTH (LACTOBACILLUS MRS BROTH)

### INTENDED USE

For isolation and cultivation of *Lactobacillus* species.

### PRODUCT SUMMARY AND EXPLANATION

Lactobacilli MRS media are 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.

### COMPOSITION

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

### PRINCIPLE

Proteose peptone and Beef extract 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.

### INSTRUCTION FOR USE

- Dissolve 55.15 grams in 1000 ml purified / distilled water.
- Heat if necessary to dissolve the medium completely.
- Distribute in tubes, bottles or flasks as desired.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.

### QUALITY CONTROL SPECIFICATIONS

**Appearance of Powder** : Cream to yellow homogeneous free flowing powder  
**Appearance of prepared medium** : Medium amber coloured, clear to slightly opalescent solution in tubes  
**pH (at 25°C)** : 6.5±0.2

### INTERPRETATION

Cultural characteristics observed after incubation.



Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
<i>Lactobacillus fermentum</i>	9338	50-100	Luxuriant	35-37°C	18-24 Hours or longer (with 5% CO <sub>2</sub> )
<i>Lactobacillus leichmannii</i>	7830	50-100	Luxuriant	35-37°C	18-24 Hours or longer (with 5% CO <sub>2</sub> )
<i>Lactobacillus plantarum</i>	8014	50-100	Luxuriant	35-37°C	18-24 Hours or longer (with 5% CO <sub>2</sub> )
<i>Lactobacillus casei</i>	9595	50-100	Luxuriant	35-37°C	18-24 Hours or longer (with 5% CO <sub>2</sub> )
<i>Lactobacillus saki</i>	15521	50-100	Luxuriant	35-37°C	18-24 Hours or longer (with 5% CO <sub>2</sub> )
<i>Lactobacillus lactis</i>	19435	50-100	Luxuriant	35-37°C	18-24 Hours or longer (with 5% CO <sub>2</sub> )
<i>Pediococcus pentosaceus</i>	33316	50-100	Luxuriant	35-37°C	18-24 Hours or longer (with 5% CO <sub>2</sub> )
<i>Escherichia coli</i>	25922	≥10 <sup>4</sup>	Inhibition	35-37°C	18-24 Hours or longer (with 5% CO <sub>2</sub> )
<i>Bacillus cereus</i>	11778	≥10 <sup>4</sup>	Inhibition	35-37°C	18-24 Hours or longer (with 5% CO <sub>2</sub> )

**PACKAGING:**

In pack size of 100 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.



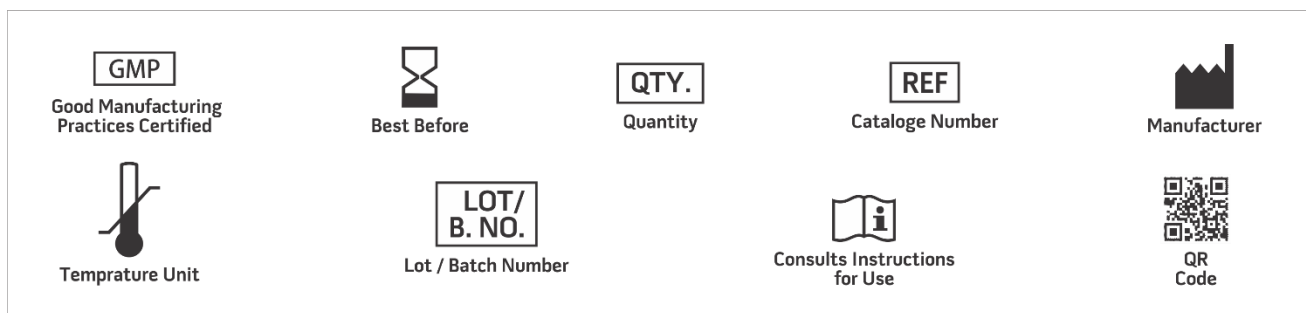
**Product Deterioration:** Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

### DISPOSAL

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

### REFERENCES

1. MacFaddin J., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol.1, Williams and Wilkins, Baltimore.
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
3. 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.
4. American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978, 14th Ed., Washington D.C.
5. deMan J., Rogosa M. and Sharpe M., 1960, J. Appl. Bacteriol., 23:130.



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

**\*For Lab Use Only**  
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