

MRS Broth w/low pH

M1926

Recommended for cultivation of all *Lactobacillus* species from all types of material

Composition**

Ingredients	Gms / Litre
Meat extract	10.000
Meat peptone	10.000
Yeast extract	5.000
Diammonium citrate	2.000
Dipotassium hydrogen phosphate	2.000
Glucose	20.000
Magnesium sulphate,heptahydrate	0.200
Manganous sulphate,tetrahydrate	0.050
Sodium acetate trihydrate	5.000
Final pH (at 25°C)	5.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 52.15 grams(the equivalent weight of dehydrated medium per litre) in 1000 ml distilled water. Heat if necessary to boiling to dissolve the medium completely. Distribute in tubes, bottles or flasks as desired. Sterilize by autoclaving at 15lbs pressure (121°C) for 15 minutes.

Principle And Interpretation

The media formulation is based on the formulation of deMan, Rogosa and Sharpe (1) with slight modification. It supports luxuriant growth of all Lactobacilli from oral cavity (1), dairy products (2), foods (3), faeces (4) and other sources.

Meat peptone and meat extract supply nitrogenous and carbonaceous compounds. Yeast extract provides vitamin B complex and dextrose is the fermentable carbohydrate and energy source. Sodium acetate and ammonium citrate inhibit Streptococci, moulds and many other microorganisms. Glucose serves as carbohydrate source. Phosphates buffers the medium. Magnesium sulphate and manganous sulfate provide ions used in metabolism.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Medium amber coloured, clear to slightly opalescent solution in tubes

Reaction

Reaction of 5.22% w/v aqueous solution at 25°C. pH : 5.4±0.2

pH

5.20-5.60

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours or longer. (with 5% CO₂)

Cultural Response

Organism	Inoculum (CFU)	Growth
Cultural Response		
<i>Lactobacillus fermentum</i> ATCC 9338	50-100	luxuriant
<i>Lactobacillus leichmannii</i> ATCC 7830	50-100	luxuriant
<i>Lactobacillus plantarum</i> ATCC 8014	50-100	luxuriant

*Lactobacillus casei ATCC 50-100 luxuriant
9595*

Storage and Shelf Life

Store dehydrated and the prepared medium at 2-8°C in tightly closed container. Use before expiry date on the label.

Reference

- 1.deMan J., Rogosa M. and Sharpe M., 1960, J. Appl. Bacteriol., 23:130.
- 2.Marshall R.T. (Ed.), 1992, Standard Methods for the Examination of Dairy Products, 16th ed., APHA, Washington,D.C.
- 3.Downes F.P.and Ito K.,(Eds.),2001,Compendium of Methods for the Microbiological Examination of Foods, 4th Ed., APHA, Washington, D.C.
- 4.Sabine and Vaselekos, 1965, Nature, 206:960.

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