

Technical Information

Lactobacillus MRS Broth

Product Code: DM 1369

Application: - Lactobacillus MRS Broth is recommended for cultivation of all *Lactobacillus* species.

Composition**

| Ingredients | Gms / Litre |
|-----------------------|-------------|
| 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 |
| Final pH (at 25°C) | 6.5±0.2 |

**Formula adjusted, standardized to suit performance

Principle & Interpretation

Lactobacilli MRS media are 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.

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.

Methodology

Suspend 55.15 grams of media powder in 1000 ml distilled water. Shake well & heat to dissolve the medium completely. Distribute in tubes, bottles or flasks as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Quality Control

Physical 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 5.51% w/v aqueous solution at 25°C. pH : 6.5±0.2

pH Range: 6.3-6.7

Cultural Response/ characteristics

DM 1369: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours or longer.(with 5% CO₂)

| Organism | Inoculum (CFU) | Growth |
|-------------------------------------|----------------|-----------|
| Lactobacillus fermentum ATCC 9338 | 50-100 | luxuriant |
| Lactobacillus leichmannii ATCC 7830 | 50-100 | luxuriant |
| Lactobacillus plantarum ATCC 8014 | 50-100 | luxuriant |
| Lactobacillus casei ATCC 9595 | 50-100 | luxuriant |



Dehydrated Culture Media
Bases / Media Supplements

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

Prepared Media: 2-8° in sealable plastic bags for 2-5 days.

Further Reading

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.
5. MacFaddin J., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol.1, Williams and Wilkins, Baltimore.

Storage and Shelf Life

Store below 8°C and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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