

MRS (deMan, Rogosa, Sharpe) Broth

Lactobacillus MRS Broth is recommended for cultivation of all Lactobacillus species

REF: BS.1/RS01.100.0100	100 Gram	REF: BS.1/RS01.250.0250	250 Gram
REF: BS.1/RS01.500.0500	500 Grams		

CLINICAL SIGNIFICANCE

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.

METHOD 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.

MEDIA COMPOSITION

Item	Formula per liter of medium
Proteose peptone	10
Meat extract	10
Yeast extract	5
D(+)-Glucose	20
Dipotassium hydrogen phosphate	2
Diammonium hydrogen citrate	2
Sodium acetate	5
Magnesium sulfate	0.1
Manganous sulfate	0.05

PRECAUTIONS AND WARNINGS

Media to be handled by entitled and professionally educated person. Do not ingest or inhale.

Good Laboratories practices using appropriate precautions should be followed in:

- Wearing personnel protective equipment (overall, gloves, glasses,).
- Do not pipette by mouth.
- In case of contact with eyes or skin; rinse immediately with plenty of soap and water. In case of severe injuries; seek medical advice immediately.
- Respect country requirement for waste disposal.

S56: dispose of this material and its container at hazardous or special waste collection point.

S57: use appropriate container to avoid environmental contamination.

S61: avoid release in environment.

For further information, refer to the MRS Broth material safety data sheet.

STORAGE AND STABILITY

BioScien MRS Broth Store between 10-30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to avoid lump development due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in a dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Final pH 6.5 +/- 0.2 at 25°C

PREPARATION

- Suspend 55.15 grams in 1000 ml distilled water
- Adjust pH to 6.5 +/- 0.2 at 25°C
- Heat if necessary 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.

Deterioration

The color of **BioScien** MRS Broth is Cream to light yellow homogeneous free flowing powder. Prepared Media is Medium to dark amber coloured, clear to slightly opalescent gel forms in Petri plates. If there are any physical changes for powder or signs of deterioration (shrinking, cracking, or discoloration), and contaminations for hydrated media, discard the medium.

SPECIMEN

Clinical samples; faeces - oral cavity

Non clinical samples

EQUIPMENT REQUIRED NOT PROVIDED

- Sterile test tubes
- Incubator
- Autoclave
- Tween 80

PERFORMANCE CHARACTERISTICS

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

Microorganism	Result
<i>Lactobacillus fermentum</i> ATCC 9338	Luxuriant growth
<i>Lactobacillus leichmannii</i> ATCC 7830	Luxuriant growth

<i>Lactobacillus plantarum</i> ATCC 8014	Fair-good growth
<i>Lactobacillus casei</i> ATCC 9595	Luxuriant growth

QUALITY CONTROL

To ensure adequate quality control, it is recommended that positive and negative control included in each run. If control still out of range please contact **BioScien** technical support.

REFERENCES

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.

SYMBOLS IN PRODUCT LABELLING			
	For in-vitro diagnostic use		Number of <n> test in the pack
	Batch Code/Lot number		Caution
	Catalogue Number		Do not use if package is damaged
	Temperature Limitation		Consult Instruction for use
	Expiration Date		
	Manufactured by		