

## MRS Broth w/o Glucose

Liquid medium for cultivating lactobacilli from nonclinical samples.

TYPICAL FORMULA*	(g/l)
Peptone	10.0
Beef Extract	8.0
Yeast Extract	4.0
Ammonium Citrate	2.0
Sodium Acetate	3.0
Magnesium Sulphate	0.1
Manganese Sulphate	0.05
Dipotassium Phosphate	2.0
Final pH 6.2 ± 0.2 at 25°C	

\*Formula may be adjusted and/or supplemented as required to meet performance specifications;  
Grams per litre of purified water.

### DESCRIPTION

MRS Broth w/o Glucose is a medium used with supplements for supporting the luxuriant growth of all lactobacilli from different sources, including fermented foods such as meat, dairy and vegetables, among others. A desired carbohydrate can be incorporated into the medium to rise selectivity.

### PRINCIPLE

Peptone and beef extract provide amino acids, nitrogen, carbon, minerals, vitamins and other nutrients necessary for organisms growth. Yeast extract is a source of vitamins, particularly of B-group. Ammonium citrate and sodium acetate may act as selective agents inhibiting some organisms other than lactobacilli. Magnesium sulphate and manganese sulphate provide cations used in metabolism. Dipotassium phosphate acts as buffering.

Polysorbate 80 is a surfactant which is added to the medium for facilitating uptake of nutrients by lactobacilli.

### PREPARATION

Suspend 29.2 g of powder in 1 litre of deionized or distilled water. Add 1 ml of Tween® 80 (ref. 80031). Add the carbohydrate of choice. Bring to boil and shake until completely dissolved. Distribute in final containers. Sterilize in autoclave at 121°C for 15 minutes.

### TECHNIQUE

Inoculate the sample directly into the medium. Incubate at 35 ± 2°C for up to 72 h.

### INTERPRETATION OF RESULTS

Turbidity indicates microbial growth.

Organisms other than lactobacilli may grow in this medium. Subculture to appropriate solid media and confirm isolates by appropriate biochemical testing.

### STORAGE

The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident. Store the prepared medium at 2-8°C away from light.

### WARNING AND PRECAUTIONS

**For professional use only.** Operators must be trained and have certain experience in the laboratory methods. Please read the instructions carefully before using this product. Reliability of assay results cannot be guaranteed if there are any deviations from the instructions in this document.

Consult the Safety Data Sheet (SDS) for information regarding hazards and safe handling practices.

### DISPOSAL OF WASTE

Disposal of waste must be carried out according to the national and local regulations in force.

### REFERENCES

1. Murray P.R., E.J. Baron, M.A. Pfaller, F.C. Tenover, R.H. Tenover (1995) Manual of Clinical Microbiology 6<sup>th</sup> ed. American Society for Microbiology, Washington D.C.
2. de Man J.C., M. Rogosa and M.E. Sharpe (1960) A medium for the cultivation of lactobacilli. J. Bacteriol 23:130.



**LIOFILCHEM® S.r.l.**

Via Scozia 64026, Roseto degli Abruzzi (TE) - ITALY  
Tel +39 0858930745 Fax +39 0858930330 www.liofilchem.com liofilchem@liofilchem.com

## PRODUCT SPECIFICATIONS

### NAME

MRS Broth w/o Glucose

### STORAGE

10-30°C

### pH OF THE MEDIUM

6.2 ± 0.2

### USE

MRS Broth w/o Glucose is a liquid medium used for supporting the luxuriant growth of all lactobacilli from food and natural substrates. A desired carbohydrate can be incorporated into the medium to rise selectivity

### SHELF LIFE

4 years

### QUALITY CONTROL

**Appearance of Dehydrated Medium:** Free-flowing, homogeneous, yellow-tan

**Appearance of Prepared Medium:** Clear to very slightly opalescent, amber

#### Expected Cultural Response

Inoculum: ≤100 CFU (productivity)

Incubation: 18-48 h / 35 ± 2°C










Microorganism		Growth
<i>Lactobacillus fermentum</i>	ATCC® 9338	Good
<i>Lactobacillus delbrueckii</i>	ATCC® 10118	Good
<i>Lactobacillus lactis</i>	ATCC® 19435	Good

Please refer to the actual batch related Certificate of Analysis (CoA).

### PACKAGING

Ref. 610144	Dehydrated medium	500 g of powder in plastic bottle
Ref. 620144	Dehydrated medium	100 g of powder in plastic bottle

### TABLE OF SYMBOLS

 Batch code	 Do not reuse	 Manufacturer	 Use by	 Fragile, handle with care
 Catalogue number	 Temperature limitation	 Contains sufficient for <n> tests	 Caution, consult instructions for use	



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