MRS Agar (ISO) De Man, Rogosa and Sharpe Agar

Intended Use
A medium used for the cultivation of lactic acid bacteria from food in compliance with ISO specification ISO 15214:1998.

Summary
De Man, Rogosa and Sharpe agar, often abbreviated to MRS, is a selective culture medium for isolation, enumeration and cultivation of *Lactobacillus* species and other mesophilic lactic acid bacteria from all types of materials. It contains sodium acetate, which suppresses the growth of many competing bacteria. The composition and performance criteria of this medium are as per the specifications laid down in ISO 15214:1998.

Principle
Enzymic digest of casein and cara meat extract provide nitrogen, carbon, amino acids, vitamins and minerals for organism's growth. Yeast extract provides vitamin B complex. Glucose is the fermentable carbohydrate and energy source. Sodium acetate and tri-ammonium citrate inhibit Streptococci, moulds and many other microorganisms. Dipotassium phosphate functions as a buffer. Magnesium sulphate heptahydrate and manganese sulphate tetrahydrate are sources of ions and sulphates.

Formula*

Ingredients	**g/L**
Enzymic Digest of Casein	10.0
Cara Meat Extract#	10.0
Yeast Extract	4.0
Tri-Ammonium Citrate	2.0
Sodium Acetate	5.0
Magnesium Sulphate Heptahydrate	0.2
Manganese Sulphate Tetrahydrate	0.05
Di-potassium Hydrogen Phosphate	2.0
Sorbitan Mono-oleate	1.08
Glucose	20.0
Agar	12.4
Final pH (at 25°C)	5.7 ± 0.1

*Adjusted to suit performance parameters.
Equivalent to Meat Extract

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Type of specimen
Soil samples, Clinical samples, Food and dairy samples.

Specimen Collection and Handling
Ensure that all samples are properly labelled.
Follow appropriate techniques for handling samples as per established guidelines.
Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure. The samples must be stored and tested within the permissible time duration.
After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions

1. Suspend 66.73 g of the powder in 1000 mL purified / distilled water.
2. Boil to dissolve the powder completely.
3. Dispense into tubes, bottles or flasks and sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.

Quality Control

Dehydrated Appearance: Yellow coloured, homogeneous powder with soft lumps.
Prepared Appearance: Medium to dark amber coloured, clear to slightly opalescent gel.
Cultural Response: Cultural characteristics observed after an incubation of 3 days in microaerophilic atmosphere (5% CO_2) at 30 ± 1°C.

Organisms (ATCC)	**Growth**
Lactobacillus gasseri (19992)	Good
Lactobacillus sake (15521)	Good
Streptococcus lactis (19435)	Good
Pediococcus pentosaceus (33316)	Good
Bacillus cereus (11778)	No Growth
Escherichia coli (8739)	No Growth
Escherichia coli (25922)	No Growth

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Warranty

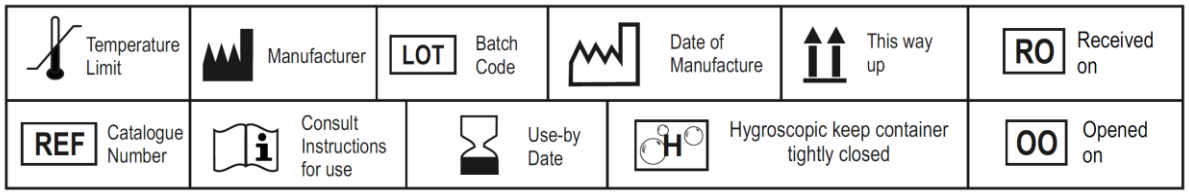
This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. https://www.humeau.com/media/blfa_files/__TC_MRoe-Broth-IoeO-15214_EN_280618_55015070054.pdf
2. deMan J., Rogosa M. and Sharpe M., 1960, J. Appl. Bacteriol., 23:130.
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition
4. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	**Product description**	**Pack Size**
201131540500	Dehydrated Culture Media	500 g



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Disclaimer

Information provided is based on our inhouse technical data on file, it is recommended that user should validate at his end for suitable use of the product.