

MRS AGAR

INTENDED USE

Remel MRS Agar (Man, Rogosa, and Sharpe) is a solid medium recommended for use in qualitative procedures for isolation of *Lactobacillus* species and gram-positive cocci.

SUMMARY AND EXPLANATION

In 1953, Rogosa et al. formulated a medium for recovery of lactobacilli from oral and fecal specimens.¹ In further testing this medium was found to be inadequate for recovery of certain *Lactobacillus* spp. from dairy products. In 1960, De Man, Rogosa, and Sharpe modified the Rogosa formulation by eliminating tomato juice and created a medium which supported the growth of slower-growing lactobacilli.² Recently MRS Agar has been used in the clinical laboratory to differentiate certain strains of gram-positive cocci and lactobacilli.³⁻⁶

PRINCIPLE

Gelatin peptone and beef extract provide essential nutrients and amino acids necessary for bacterial growth. Yeast extract is a growth enhancer and dextrose provides an energy source. Dipotassium phosphate supplies essential electrolytes and maintains osmotic equilibrium. Polysorbate 80 supplies fatty acids required for the metabolism of lactobacilli. Ammonium citrate and sodium acetate inhibit the growth of commensal microbial flora, gram-negative bacilli, and fungi, and improve the growth of lactobacilli.

REAGENTS (CLASSICAL FORMULA)*

Dextrose.....	20.0 g	Dipotassium Phosphate.....	2.0 g
Gelatin Peptone.....	10.0 g	Polysorbate 80.....	1.0 g
Beef Extract.....	8.0 g	Magnesium Sulfate.....	0.2 g
Sodium Acetate.....	5.0 g	Manganese Sulfate.....	0.05 g
Yeast Extract.....	4.0 g	Agar.....	10.0 g
Ammonium Citrate.....	2.0 g	Demineralized Water.....	1000.0 ml

pH 6.2 ± 0.2 @ 25°C

*Adjusted as required to meet performance standards.

PRECAUTIONS

This product is For Laboratory Use only. It is not intended for use in the diagnosis of disease or other conditions.

PREPARATION OF DEHYDRATED CULTURE MEDIUM

1. Suspend 62 g of medium in 1000 ml of demineralized water.
2. Heat to boiling with agitation to completely dissolve.
3. Sterilize by autoclaving at 121°C for 15 minutes or following established laboratory procedures.
4. Dispense into appropriate containers.

PROCEDURE

1. Consult current editions of appropriate references for the recommended procedure for sample preparation, inoculation, testing, and interpretation.^{7,8}

QUALITY CONTROL

Each lot number of MRS Agar has been manufactured, packaged, and processed in accordance with current Good Manufacturing Practice regulations. All lot numbers have been tested using the following quality control organisms and have been found to be acceptable. Testing of control organisms should be performed in accordance with established laboratory quality control procedures. If aberrant quality control results are noted, sample results should not be reported.

CONTROL

Lactobacillus johnsonii ATCC® 33200

INCUBATION

Anaerobic, up to 72 h @ 33-37°C

RESULTS

Growth

BIBLIOGRAPHY

1. Rogosa, M., R.F. Wiseman, J.A. Mitchell, M.N. Disraely, and A.J. Beaman. 1953. J. Bacteriol. 65:681-699.
2. De Man, J.C., M. Rogosa, and M.E. Sharpe. 1960. J. Appl. Bacteriol. 23:130-135.
3. Facklam, R., D. Hollis, and M.D. Collins. 1989. J. Clin. Microbiol. 27:724-730.
4. Spitzer, E.D. 1990. Lab. Med. 21:411-413.
5. Golledge, C.L. 1989. Clin. Microbiol. News. 11:29-30.
6. Adams, S. 1991. Clin. Lab. Science. 4:93-94.
7. Downes, F.P. and K. Ito. 2001. Compendium of Methods for the Microbiological Examination of Foods. 4th ed. APHA, Washington, D.C.
8. Wehr, H.M. and J.F. Frank. 2004. Standard Methods for the Examination of Dairy Products. 17th ed. APHA, Washington, D.C.

Refer to the front of Remel *Technical Manual of Microbiological Media* for **General Information** regarding precautions, product storage and deterioration, specimen collection, storage and transportation, materials required, quality control, and limitations.

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