Dr. Möller & Schmelz GmbH
Corporation for Applied Microbiology

MRS-Broth with Indicator

Version:	07/2022
M&S item number:	5063 (4 x 250 ml)
Profile:	Polycarbonate bottles
Color:	Green
Storage:	Dark and dry at 4 – 12 °C
Shelf life:	8 months after production

Description and application range

MRS-Broth with indicator is used for enrichment, cultivation, and detection of lactobacilli from food and beverages. The formulation of the medium (acc. to De Man, Rogosa & Sharpe) specifically enhances the growth of lactobacilli. Especially magnesium and manganese are specific growth factors for those microorganisms. Leuconostoc- and Pediococcus-species grow as well. Due to the low selectivity of this medium also non-lactobacilli are able to develop. The redox – indicator methylene blue facilitates the detection of growth by a color change of the broth from green to yellow. The medium is manufactured and quality tested in compliance with ISO 11133:2014 + Amd. 2:2020 standard.

Typical composition

Enzymatic digest of casein	10.0 g/l
Meat extract	8.0 g/l
Yeast extract	4.0 g/l
Dextrose	20.0 g/l
Sodium acetate	5.0 g/l
Di-potassium hydrogen phosphate	2.0 g/l
Di-ammonium citrate	2.0 g/l
Magnesium sulfate	0.2 g/l
Manganese sulfate	0.02 g/l
Tween 80	1.0 ml/l
Methylene blue	0,004 g/l

Final pH: 5.7 ± 0.2 at 25 °C

Microbiological quality control

Bacterial contamination
Incubation: aerobically at room temperature for 3 days, specification: no growth

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Productivity qualitative analysis
Incubation: microaerophilic at 30 ± 1 °C for 72 ±2 h

Microorganism	Test strain	Specification	Appearance
Lactobacillus sakei	WDCM 00015	Turbidity and color change	Turbidity, color change from green to yellow
Lactobacillus lactis	WDCM 00016	Turbidity and color change	Turbidity, color change from green to yellow
Lactobacillus plantarum	DSM 20205	Turbidity and color change	Turbidity, color change from green to yellow
Pediococcus pentosaceus	WDCM 00158	Turbidity and color change	Turbidity, color change from green to yellow
Leuconostoc pseudomesent.	DSM 20193	Turbidity and color change	Turbidity, color change from green to yellow
Pediococcus damnosus	DSM 20331	Turbidity and color change	Turbidity, color change from green to yellow