

## MRS-Broth with Indicator

Version: 01/2020  
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

### 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 1:2018 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
Dipotassiumhydrogenphosphate	2.0 g/l
Diammoniumcitrate	2.0 g/l
Magnesiumsulfate	0.2 g/l
Manganesesulfate	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

#### Productivity qualitative analysis

Incubation: microaerophilic at 30 ± 1 °C for 72 ± 2 h, approx. inoculum: 80 – 120 CFU

Microorganism	Test strain	Specification	Appearance
<i>Lactobacillus sakei</i>	WDCM 00015	Turbidity (1-2), color change	Turbidity, color change from green to yellow
<i>Lactobacillus lactis</i>	WDCM 00016	Turbidity (1-2), color change	Turbidity, color change from green to yellow
<i>Pediococcus damnosus</i>	DSM 20331	Turbidity (1-2), color change	Turbidity, color change from green to yellow