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Product Information

MRS Biosart® 100 Nutrient Media

Introduction

MRS Biosart® 100 Nutrient Media is used for the detection of different *Lactobacillus* species and other lactic acid bacteria according to De Man, Rogosa and Sharpe (MRS). The culture medium is intended for the isolation and cultivation of *Lactobacillus* from dairy and food products.

The medium contains Tween 80, which provides fatty acids essential for the growth of Lactobacilli. Additionally, magnesium sulfate and manganese sulfate supply essential ions that support the proliferation of these strains. Sodium acetate inhibits the growth of other microorganisms, such as molds.

Technical Specifications

Order No.	16400-02----MR-K (50 units)
Media	MRS
Color	Transparent
Storage	Refrigerate (2 - 8 °C) after arrival*, dark and dry, use before expiry date on the label
Shelf Life	12 months
For Use With	Biosart® 100 Monitor (16402) with green membrane filter and dark green grid, 0.45 µm

* Data have shown constant performance in microbiological tests after storage at 22 °C for 14 days.

Media Formulation**

Ingredients	g/L
Peptone from casein	10
Dextrose	20
Yeast extract	4
Meat extract	8
Dipotassium phosphate	2
Di-Ammonium hydrogen citrate	2
Sodium acetate	5
Magnesium sulfate	0.2
Manganese sulfate	0.04
Tween 80	1
Water (AP-Quality)	Ad 1,000 mL

pH 6.1 ± 0.25 (at room temperature)
** Formula adjusted, standardized to suit performance parameters.

Instructions

The Biosart® 100 Monitor is a sterile, ready-to-use disposable unit featuring an integrated membrane filter and cellulose pad. After filtration, add the Biosart® 100 Nutrient Media from the ampoule and apply vacuum for 1 second. Remove the disposable unit from the manifold and seal the outlet. Finally, detach the funnel to transform the monitor into a petri dish.

Incubation Conditions

5 - 7 days at 30 ± 1 °C, anaerobic.

Evaluation and Typical Results

The MRS medium is used for the detection of a variety of Lactobacilli. The Lactobacilli species grow as slightly rounded whitish colonies with approximately 1 – 2 mm in diameter. Other microorganisms, which do not have this typical growth, can be defined by confirmation tests. Lactobacilli species are Gram-positive, catalase negative and negative in the production of indole and hydrogen sulfide.

Microbiological Quality Control

Sterility: Qualitative
Incubation conditions: 14 days at 30 - 35 °C
Specification: No growth or turbidity

Productivity: Quantitative
Inoculum: 50 - 150 CFU
Incubation conditions:
5 - 7 days at 30 ± 1 °C, anaerobic
Specification: ≥ 85% membrane filtration on control agar as reference

Microorganism	Test strain	Specification	Morphology
Lactobacillus brevis	WDCM 00099	$P_R \geq 0.85$	Creamy-white colonies
Lactobacillus plantarum	WDCM 00104	$P_R \geq 0.85$	Creamy-white colonies
Pediococcus damnosus	WDCM 00022	$P_R \geq 0.85$	Creamy-white colonies
Lactobacillus acidophilus	WDCM 00098	$P_R \geq 0.85$	Creamy-white colonies

P_R Productivity Ratio

Selectivity: Qualitative
Inoculum: 10^4 CFU
Specification: No growth | total inhibition

Microorganism	Test strain	Specification
Pseudomonas aeruginosa	WDCM 00026	No growth | total inhibition

The incubation conditions recommended by Sartorius can be adjusted based on the type of samples, in accordance with the reference standards or customer requirements. Descriptions of typical results illustrate the usual appearance of the specified microorganisms. However, in certain cases, the color and shape of the colonies may differ from the expected appearance. Additional tests may be required to confirm the results. Sartorius shall not be liable for any consequential or incidental damages incurred by customers from the use of its products.

Germany
Sartorius Lab Instruments GmbH & Co. KG
Otto-Brenner-Strasse 20
37079 Goettingen
Phone +49 551 308 0

USA
Sartorius Corporation
3874 Research Park Drive
Ann Arbor, MI 48108
Phone +1 734 769 1600

For further contacts, visit
www.sartorius.com

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