

## TECHNICAL DATA SHEET

### M-Enterococcus Agar Base

#### Principle

M-Enterococcus Agar Base is modification of Slanetz and Bartley Medium were originally formulated by Slanetz and Bartley (1957) for the detection and enumeration of Enterococci by membrane filtration technique. The media is composed of tryptose, soya peptone, yeast extract, dextrose, disodium phosphate, sodium azide, triphenyl tetrazolium chloride and agar. Tryptose, soya peptone and yeast extract in the medium provide the necessary nitrogen, carbon, vitamins and minerals. Dextrose is carbon and energy source. Disodium phosphate is buffering agent. Sodium azide inhibits most of the associated bacteria especially gram-negative organisms. Triphenyl tetrazolium chloride is reduced to the insoluble formazan inside the bacterial cell forming dark red-colored colonies. When the medium is incubated at higher temperature (44-45°C), all red or maroon colonies can be considered as presumptive Enterococci. Agar is solidifying agent. For water testing, test sample is filtered through a membrane filter. The membrane is placed on the surface of the Slanetz and Bartley Medium plates and incubated at 35°C for 4 hours for the recovery of stressed organisms, after that the plate is incubated at 44-45°C for 44-48 hours. After incubation red or maroon colonies are counted as Enterococci. Some species of enterococci cannot able to reduce TTC, hence pale colonies are also considered.

**Use:** For the isolation & enumeration of Enterococci in sewage, water & foods by membrane filter technique.

Contents*	Gram/Litre
Ingredients	
Tryptose	15.000
Soya peptone	5.000
Yeast extract	5.000
Dextrose	2.000
Disodium phosphate	4.000
Sodium azide	0.400
Triphenyl tetrazolium chloride	0.100
Agar	10.000
pH at 25°C	7.2 ±0.2

\* Formula adjusted for optimum performance and parameters

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**Regd Office:** Unit no 12, 1st Floor,  
Neminath Industrial Estate No.6,  
Navghar, Vasai (East), Palghar - 410210.  
Maharashtra, INDIA.

**Tel:** +91 250 2390032 / 2390989 / 2390990  
**Email:** sales@oxfordlabchem.com /  
info@oxfordlabchem.com  
**Web:** www.oxfordlabchem.com

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**Directions: Dissolve 41.50 grams in 1000 ml distilled water. Boil to dissolve the medium Completely. DO NOT OVERHEAT OR AUTOCLAVE. Cool to 45-50°C and distribute aseptically in petri plates and allow to solidify. Ensure complete solidification and inoculate test sample aseptically.**

**If desired, add 0.5 ml polysorbate 80 and 2.00 ml of 10% aqueous solution of sodium carbonate, after boiling.**

## Specimens' types analyzed

Water, sewage and food samples etc.

## Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

## Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

## Quality Control

<b>Appearance</b>	<b>Pinkish beige colored free flowing, hygroscopic homogeneous powder</b>
<b>Reaction of 4.15% solution</b>	<b>7.2 ±0.2 at 25 °C</b>
<b>pH</b>	<b>7.00- 7.40</b>
<b>Gelling</b>	<b>Firm comparable with 1.0% agar gel</b>
<b>Color and clarity of ready medium</b>	<b>Light pink colored clear to slightly opalescent gel</b>
<b>Growth Promotion properties</b>	<b>Best at ≤ 100 CFU at 32-37 °C for 18-72 h</b>
<b>Indicative properties</b>	<b>Optimum at ≤ 100 CFU at 32-37 °C for 18-48 h</b>
<b>Negative control</b>	<b>Performed using sterile distilled water</b>

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**Different Microbial Response: Cultural characteristics observed after an incubation at 33-37°C for 18-24 hours.**

Organism	ATCC	Growth	Colony color	Recovery
<i>Enterococcus faecalis</i>	14506	Luxuriant	Red maroon	≥ 60%
<i>Escherichia coli</i>	8739	Inhibited	-	-

**Storage and Shelf Life:** The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label.

**Note:** Sterilize media immediately after reconstitution.

**Disposal:** To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

## Reference

1. Atlas, R. M. (2005). Handbook of media for environmental microbiology. CRC press.
2. Difco Manual (1998). 11<sup>th</sup> Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.
3. Rand, M. C., Arnold E. Greenberg, and Michael J. Taras, (1976), Standard methods for the examination of water and wastewater. Prepared and published jointly by American Public Health Association, American Water Works Association, and Water Pollution Control Federation.
4. MacFaddin, J. D. (1985). Media for isolation-cultivation identification-maintenance of medical bacteria, vol. 1, p.110-114. Williams & Wilkins, Baltimore, MD.
5. Salfinger Y., and Tortorello M.L., (2015), Compendium of Methods for the Microbiological Examination of Foods, 5<sup>th</sup> Ed., American Public Health Association, Washington, D.C

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