OXFORD LAB FINE CHEM LLP
ISO 9001-2008 Certified Company

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Oxford
Range of
Laboratory Chemicals

TECHNICAL DATA SHEET

Slanetz and Bartley Medium

Principle

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, yeast extract, dextrose, disodium phosphate, sodium azide, triphenyl tetrazolium chloride and agar. Tryptose 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 detection and enumeration of enterococci by membrane filtration method.

Contents*

Ingredients	Gram/Litre
Tryptose	20.000
Yeast extract	5.000
Dextrose	2.000
Disodium phosphate	4.000
Sodium azide	0.400
Triphenyl tetrazolium chloride	0.100
Agar	15.000
pH at 25˚C	7.2 ±0.2

*** Formula adjusted for optimum performance and parameters**

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Directions: Dissolve 46.5 grams in 1000 ml purified / distilled water. Boil to dissolve the medium completely. DO NOT OVERHEAT OR AUTOCLAVE. Cool to 45-50°C. Dispense into Petri plate and allow to solidify.

Specimens types analyzed

Water 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

Appearance	**Light beige colored free flowing, homogeneous powder**
Reaction of 4.65% solution	**7.2 ±0.2 at 25 ˚C**
pH	**7.00- 7.40**
Gelling	**Firm comparable with 1.5% agar gel**
Color and clarity of ready medium	**Light amber to pink colored opalescent gel**
Growth Promotion properties	**Best at ≤ 100 CFU at 44±2ºC for 18-72 h**
Indicative properties	**Optimum at ≤ 100 CFU at 44±2ºC for 18-48 h**
Negative control	**Performed using sterile distilled water**

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Different Microbial Response

Organism	Inoculum	Growth	Colony color	Recovery	Incubation
Enterococcus faecalis (ATCC 14506)	50-100	Luxuriant	Red maroon	≥ 60%	44±2°C, 24-48 h
Escherichia coli (ATCC 8739)	50-100	Inhibited	---	--	44±2 °C, 24-48 h

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). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.**
3. **Slametz L. W., & Bartley C. H. (1957).** ***Numbers of enterococci in water, sewage, and feces determined by the membrane filter technique with an improved medium.*** **Journal of bacteriology, 74(5), 591–595. 4. ISO 7899-2:2000. Water quality − Detection and enumeration of intestinal enterococci − Part 2: Membrane filtration method**

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