Instructions For Use

ENGLISH

Slanetz Bartley Agar (m-Enterococcus)
Slanetz Bartley Agar + TTC
Slanetz Bartley Agar Base

Selective medium for detection and enumeration of intestinal enterococci, according to ISO 7899-2.

INTENDED PURPOSE

Selective medium for the isolation and enumeration of enterococci in water and other samples. This medium is not intended for use in the diagnosis of disease or other conditions in humans.

DESCRIPTION

Slanetz Bartley Agar is recommended by ISO 7899-2 for detection and enumeration of intestinal enterococci in water by membrane filtration. This medium can be also used by direct plating for the examination of foodstuffs or other materials. The presence of sodium azide inhibits the development of all contaminating microorganisms, whilst triphenyltrazolium chloride (TTC) is reduced to formazan by enterococci, which grow as red to maroon colonies.

TYPICAL FORMULA* (Per Litre of Purified Water)

Tryptose	20.0 g
Glucose	2.0 g
Yeast Extract	10.0 g
Dipotassium Hydrogen Phosphate (K_2HPO_4)	4.0 g
Sodium Azide (NaN_3)	0.4 g
2,3,5-triphenyltetrazolium chloride (TTC)	0.1 g
Agar	13.0 g
Final pH 7.2 ± 0.1 at 25°C	

*Adjusted and/or supplemented as required to meet performance specifications.

Note: Slanetz Bartley Agar is available both as complete medium and agar base to be used with TTC 1% supplement (see the ORDER INFORMATON section).

METHOD PRINCIPLE

Tryptose provides amino acids, nitrogen, carbon, vitamins and minerals for organisms growth. Yeast extract is a source of vitamins, particularly of group B. Glucose is the fermentable carbohydrate providing carbon and energy. Dipotassium hydrogen phosphate is a buffer. Sodium azide inhibits Gram-negative bacteria and staphylococci. TTC is a redox indicator of bacterial growth, which is colorless in the oxidized form and is reduced to the insoluble red triphenyl formazan. Agar is the solidifying agent.

PREPARATION

Dehydrated medium with TTC

Suspend 44.5 g of the powder in 1 liter of distilled or deionized water. Mix well. Heat to boil until completely dissolved. DO NOT AUTOCLAVE. Dispense an appropriate volume into plates, e.g. pour 20 ml of medium into Petri dishes of 90 mm.

Dehydrated medium without TTC

Suspend 44.4 g of the powder in 1 liter of distilled or deionized water. Mix well. Heat to boil until completely dissolved. DO NOT AUTOCLAVE. Cool to 45-50°C. Add 10 ml of TTC 1% supplement before distributing into Petri dishes.

MATERIALS REQUIRED BUT NOT PROVIDED

Standard microbiological supplies and equipment such as: Test tubes, inoculating loops, incubator, quality control organisms.

TEST PROCEDURE

Ensure there is no visible moisture on the plates before use.

For the examination of water, filter 100 ml of the sample trough a filter membrane (0.45 µm pore diameter), and transfer this onto the surface of the medium.

For other samples, dilute as necessary and spread 0.5 ml over the agar surface.

Incubate aerobically at 36 ± 2°C for 40-48 hours.

For more details, consult appropriate guidance.

INTERPRETING RESULTS

Typical colonies show a red, maroon or pink color, either in the centre or throughout the colony.

Note: TTC reduction to formazan is not exclusive to enterococci, which may be confirmed by demonstrating aesculin hydrolysis reaction.

Following ISO 7899-2, confirm by transferring the membrane and the colonies onto a plate of Bile Aesculin Azide Agar pre-warmed to 44°C. Incubate at 44 ± 0.5°C for 2 hours. Count all typical colonies showing a brown to black color in the surrounding medium as intestinal enterococci.

STORAGE

The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment, in its original container tightly closed.

Store prepared plates at 10-25°C away from direct light in their original pack until just prior to use. Avoid quick temperature shifts of plated medium to prevent condensation.

Do not use the product beyond its expiry date on the label or if product shows any evidence of contamination or any sign of deterioration.

SHELF LIFE

Dehydrated medium: 4 years.
Ready-to-use plates: 6 months.
Supplement: 1 year.

QUALITY CONTROL

Appearance of TTC 1% supplement: clear, colourless.

Appearance of dehydrated medium: Free-flowing, homogeneous, light beige.

Appearance of prepared medium: Light amber, slightly opalescent.

Expected Cultural Response:

Control strain	Inoculum	Incubation	Criteria	Specification
Enterococcus faecalis WDCM 00087 (ATCC® 29212; NCTC 12697)	50-100 CFU	40-48 h / 36 ± 2°C	Good growth ($P_R \geq 0.5$)	Red-maroon-pink colonies
Enterococcus faecalis WDCM 00009 (ATCC® 19433; NCTC 775)				Red-maroon-pink colonies
Enterococcus faecium WDCM 00177 (ATCC® 6057)				Inhibition
Escherichia coli WDCM 00013 (ATCC® 25922; NCTC 12241)	10^4-10^6 CFU		Inhibition	---
Staphylococcus aureus WDCM 00034 (ATCC® 25923)			Inhibition	---

A productivity ratio (P_R) of 0.5 is equivalent to a recovery rate of 50%.

Please refer to the actual batch related Certificate of Analysis (CoA).

PERFORMANCE CHARACTERISTICS

Performance testing of Slanetz Bartley Agar was carried out using the QC strains listed above. The results obtained met the established criteria.

LIMITATIONS

Invalid results can be caused by poor specimen quality, improper sample collection, improper transportation, improper laboratory processing, or a limitation of the testing technology. The operator should understand the

principles of the procedures, including its performance limitations, in advance of operation to avoid potential mistakes.
Due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium.

WARNING AND PRECAUTIONS

For professional use only. Operators must be trained and have certain experience. Please read the instructions carefully before using this product. Reliability of assay results cannot be guaranteed if there are any deviations from the instructions in this document.

Consult the Safety Data Sheet (SDS) for information regarding hazards and safe handling practices.

DISPOSAL OF WASTE

Disposal of waste must be carried out according to national and local regulations in force.

BIBLIOGRAPHY

See the references at the end of this document.

TABLE OF SYMBOLS

See the table of symbols at the end of this document.

ORDER INFORMATION

Product	Format	Packaging	Ref.
Slanetz Bartley Agar (m-Enterococcus A.) [a]	Plate 60 mm	20 plates, in blister of 2 pieces (double wrapped)	163462
Slanetz Bartley Agar (m-Enterococcus) [a]	Plate 90 mm	20 (2 x 10) plates	11058
Slanetz Bartley Agar + TTC [a]	Dehydrated medium	100 g	620147
		500 g	610147
		5 kg	6101475
Slanetz Bartley Agar Base [b]	Dehydrated medium	100 g	620134
		500 g	610134
TTC 1% supplement	Bottle	5 x 10 ml	80300
	Bottle	10 x 10 ml	80430

Footnotes:

a) Complete medium (includes TTC)
b) Medium without TTC, requiring supplementation with TTC 1% supplement

Revision History

Revision	Release Date	Change Summary
0	2024-07-02	Updated layout and content, version reset to revision 0

This IFU document and the SDS are available from the online Support Center:

liofilchem.com/ifu-sds

References

1. EN ISO 11133:2014+Amd1:2018. Microbiology of food, animal feed and water -- Preparation, production, storage and performance testing of culture media.
2. ISO 7899-2:2000. Water quality – Detection and enumeration of intestinal enterococci – Part 2: Membrane filtration method.
3. Burkwal, M.K., and P.A. Hartman. 1964. App. Microbiol. 12,18.
4. Slanetz, L.W., and C.H. Bartley 1957. J. Bact., 74,591.

Table of Symbols

LOT	Batch code
REF	Catalogue number
	Manufacturer
	Use by
	Fragile, handle with care
	Temperature limitation
	Contains sufficient for <n> tests
	Consult instructions for use
	Do not reuse
	Keep away from sunlight

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