Technical Data Sheet

GranuCult™
SLANETZ and BARTLEY Agar (Base) acc. ISO 7899

Ordering number: 1.05289.0500

For the enumeration of enterococci in water and other liquids by the membrane filtration technique.

This culture medium complies with the specifications given by EN ISO 7899-2 and APHA (mEnterococcus agar).

SLANETZ and BARTLEY agar is also called mEnteroccous agar.

Mode of Action

The growth of the entire accompanying Gram-negative microbial flora is inhibited by sodium azide. Enterococci reduce 2,3,5-Triphenyl tetrazoliumchloride (TTC) to give a red formazan inside the bacterial cell, their colonies are thus red in color. Nitrogen, minerals and amino acids are provided by the tryptose whilst yeast extract supplies vitamins. Glucose acts as the carbon source, dipotassium phosphates buffers the medium and agar-agar is the solidifying agent.

GranuCult™ SLANETZ and BARTLEY agar incl. TTC acc. ISO 7899 (article number 1.05262.0500) includes TTC in its formulation.

Typical Composition

Specified by ISO 7899-2 and APHA		**ReadyPlate™SLANETZ and BARTLEY Medium ISO 7899**	
Tryptose	20 g/l	Tryptose	20 g/l
Yeast Extract	5 g/l	Yeast Extract	5 g/l
Glucose	2 g/l	D(+)-Glucose	2 g/l
K_2HPO_4	4 g/l	K_2HPO_4	4 g/l
NaN_3	0.4 g/l	NaN_3	0.4 g/l
Agar	8-18 g/l	Agar-Agar*	10 g/l
Water	1000 ml/l	Water	n/a
pH at 25 °C	7.2 ± 0.1	pH at 25 °C	7.2 ± 0.1
Supplement added after heating			
2,3,5-Triphenyl Tetrazoliumchloride Solution	10 ml/l	2,3,5-Triphenyl Tetrazoliumchloride Solution	10 ml/l

* Agar-Agar is equivalent to other different terms of agar.

2,3,5-Triphenyl tetrazoliumchloride (TTC) solution

2,3,5-Triphenyl tetrazoliumchloride	1 g	2,3,5-Triphenyl Tetrazoliumchloride	1 g
Water	100 ml	Water	100 ml

Preparation

Dissolve 41.5 g in 1 l of purified water. Heat in boiling water and agitate frequently until completely dissolved. Sterilize by further heat for 20 min in the boiling water bath.

Do not autoclave.

At about 50 °C mix in 10 ml/l of filter-sterilized 1 % solution of 2,3 ,5-Triphenyltetrazolium chloride (article number 1.08380.0010). Pour to plates.

The plates are clear and yellowish-brown.

Experimental Procedure and Evaluation

Depend on the purpose for which the medium is used.

Membrane filtration of water samples: Place the inoculated membrane filters on the surface of the plates. Incubate the inoculated plates under aerobic conditions. e.g. acc. to EN ISO 7899-2 at 34-38 °C for 40-48 h.

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

Confirm the colonies according to the appropriate method.

Storage

Store at +15 °C to +25°C, dry and tightly closed. Do not use clumped or discolored medium. Protect from UV light (including sun light). For *in vitro* use only.

According to EN ISO 7899-2, self-prepared plates can be stored at +2 °C to +8 °C in the dark and protected against evaporation for up to two weeks..

Quality Control

Function	Control strains	Incubation	Reference medium	Method of control	Expected results
Productivity	*Enterococcus faecalis* ATCC® 19433	40-48 h at 34-38 °C	Tryptic Soy Agar (TSA)	Quantitative with membrane filtration	Recovery ≥ 50 %, red-maroon-pink colonies
	Enterococcus faecalis ATCC® 29212				
	Enterococcus faecalis DSM 24916				
	Enterococcus faecium ATCC® 6057				
	Enterococcus faecium NCTC 13169				

Function	Control strains	Incubation	Reference medium	Method of control	Expected results
Selectivity	*Escherichia coli* ATCC® 8739	40-48 h at 34-38 °C	Tryptic Soy Agar (TSA)	Qualitative	Total inhibition
	Escherichia coli ATCC® 25922				
	Staphylococcus aureus ATCC® 6538				
	Staphylococcus aureus ATCC® 25923				

Please refer to the actual batch related Certificate of Analysis.

The performance test is in accordance with the current version of EN ISO 11133 A recovery rate of 50 % is equivalent to a productivity value of 0.5.

Enterococcus faecalis ATCC® 11700

Literature

APHA (2012): Standard Methods for the Examination of Water. 22nd ed. American Public Health Association, American Water Works Association, Water Environment Federation, Washington, D.C.

ISO International Standardisation Organisation. Water quality - Detection and enumeration of intestinal enterococci - Part 2: Membrane filtration method. EN ISO 7899-1:2000.

ISO International Standardisation Organisation. Microbiology of food, animal feed and water – Preparation, production, storage and performance testing of culture media. EN ISO 11133:2014.

Lachica R.V. and Hartman, P.A. (1968): Two improved media for isolating and enumerating enterococci in certain frozen foods. J. Appl. Bact. **31**: 151-156.

Slanetz, L.W. and Bartley, C.H. (1957): Numbers of enterococci in water, sewage, and feces determined by the membrane filter technique with an improved medium. J. Bact. **74**: 591-595.

Ordering Information

Product	Cat. No.	Pack size	Other pack sizes available
GranuCult™ SLANETZ and BARTLEY Agar (Base) acc. ISO 7899	1.05289.0500	500 g	
2,3,5-Triphenyltetrazolium Chloride	1.08380.0010	10 ml	100 ml
ReadyPlate™ Slanetz and Bartley ISO 7899	1.46709.0020	20 x 90 mm	100 x 90 mm
GranuCult™ SLANETZ and BARTLEY including TTC acc. ISO 7899	1.05262.0500	500 g	
EZ-Pak Filters MCE 0.45µm 47mm white gridded	EZHAWG474	4 x 150 pcs	
Bile Esculin Azide Agar, acc. to ISO 7899-2 for microbiology	1.00072.0500	500 g	
Bile Esculin Azide Agar	1.46321.0020	20 x 90 mm	
Chromocult® Enterococci-Agar for microbiology	1.00950.0500	500 g	

MilliporeSigma 290
Concord Road
Billerica, MA 01821

Find contact information for your country at:
www.EMDmillipore.com/offices

For Technical Service, please visit:
www.EMDmillipore.com/techservice

For more information, visit

www.EMDmillipore.com/biomonitoring

GranuCult, MilliporeSigma, Millipore, and Sigma-Aldrich are trademarks of Merck KGaA, Darmstadt, Germany or its affiliates. Detailed information on trademarks is available via publicly accessible resources.
© 2019 Merck KGaA, Darmstadt, Germany and/or its affiliates. All Rights Reserved.

The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the US and Canada.