Slanetz and Bartley agar (ISO) Code 84900.0500

Also known as
Membrane-filter Enterococcus Selective Agar acc. to SLANETZ and BARTLEY
m-Enterococcus (ME) agar
m-Azide agar

Intended use
For detection and enumeration of intestinal enterococci by membrane filtration method (ISO 7899-2).

Formula* - Composition in g/L

Tryptose	20.00
Yeast Extract	5.00
Glucose	2.00
Dipotassium hydrogen phosphate	4.00
Sodium azide	0.40
2,3,5-triphenyltetrazolium chloride (TTC)	0.10
Agar	10.00

* Adjusted and/or supplemented as required to meet performance criteria

Final pH 7.2 ± 0.1 at 25 °C.

Instructions for preparation
Dissolve 41.5 g in 1 litre of purified water by bringing to the boil with frequent shaking. Do not sterilise in the autoclave, do not overheat.

Principle of the method and general information
Slanetz and Bartley Agar, originally described by Slanetz and Bartley, relies upon the selective inhibitory properties of sodium azide and the incorporation of TTC which, most of organisms growing on the medium, will reduce to some extent with the formation of red colonies. It is recommended by ISO 7899-2 for use with membrane filters but the medium can also be used for direct plating.
This medium also complies with the recommendations of the British Ministry of Health – Report 71, and the German DIN Regulations 10181 and 10160 for the examination of milk, meat and meat products.

Instruction for use
For the enumeration of enterococci in water samples proceed as following.
1. Filter through a 0.45µm membrane an appropriate volume of water (100-10-1-0.1-0.01ml) according to the degree of pollution expected.
2. Transfer 10ml of medium to 60mm plates, pass a flame over the surface of the agar to eliminate any air bubbles.
3. Leave to solidify and lay the filter membrane on the surface.
4. After 48 hours of incubation at 37°C, count all the pink-dark red colonies, which can be considered to be enterococci.

Confirm the colonies by transferring the membrane on a plate of Bile Aesculin Azide Agar pre-warmed at 44°C. The plates are incubated at 44 ± 0.5°C for 2 hours. If the colonies develop a brown or black halo they are confirmed as enterococci.

Quality Control
Physical characteristics:

Appearance of powder	Yellow, fine, homogeneous, hygroscopic powder
Appearance of prepared medium	Limpid or slightly opalescent, yellow to pink tint.
pH (25°C)	7.2 ± 0.1

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Microbiological characteristics:

Test strains			Inoculation	Incubation T° / t / At.	Growth characteristics	Productivity Ratio
E. faecalis	ATCC	29212	QT	37°C / 44h -A	GOOD GROWTH RED COLONIES	A/C ≥ 0,5
E. faecalis	ATCC	19433	QT	37°C / 44h -A	GOOD GROWTH RED COLONIES	A/C ≥ 0,5
E. faecalis	CIP	106877	QT	37°C / 44h -A	GOOD GROWTH RED COLONIES	A/C ≥ 0,5
E. faecium	ATCC	6057	QT	37°C / 44h -A	GOOD GROWTH RED COLONIES	A/C ≥ 0,5
E. coli	ATCC	25922	MM	37°C / 44h -A	GROWTH INHIBITED	
S. aureus	ATCC	25923	MM	37°C / 44h -A	GROWTH INHIBITED	

Notes
PR (Productivity Ratio): CFU obtained on the culture medium under test / CFU obtained on Tryptoc Soy Agar
Incubation atmosphere AE: aerobic incubation
Inoculation method QT : quantitative surface (MF) method; MM: modified Miles-Misra surface drop method
ATCC is a registered trade mark of American Type Culture Collection; CIP:Collection de l'Institut Pasteur

References

- ISO 7899-2. Water quality-Detection and enumeration of intestinal enterococci-Part2: Membrane filtration method.
- Slanetz L.W. and Bartley C.H. 1957. J. Bact. 74; 591 -595.

Storage conditions

For laboratory use only. Keep tightly closed, away from bright light, in a cool dry place (+10ºC to 30 ºC and <60% RH).

Ordering information

84900.0500	Slanetz and Bartley agar (ISO)	Bottle of 500 g

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