Slanetz-Bartley Medium ISO

Cat. 1109

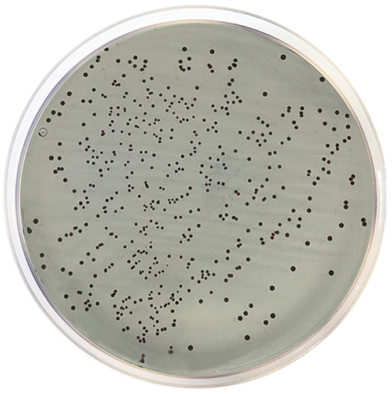
For the detection and enumeration of enterococci in water by the membrane filtration technique

Practical information

Aplications	Categories
Selective enumeration	Enterococci
Detection	Enterococci

Industry: Water

Regulations: ISO 11133 / ISO 7899-2



Principles and uses

Slanetz-Bartley Medium is very selective for enterococci. Burkwall and Hartman demonstrated that the addition of 0,5 ml of Tween 80 and 20 ml of a 10% Sodium carbonate or bicarbonate solution to each liter of the medium was valuable when investigating enterococci in frozen foods.

Tryptose provides nitrogen, vitamins, minerals and amino acids essential for growth. Yeast extract is a source of vitamins, particularly of the B-group. Glucose is the fermentable carbohydrate providing carbon and energy. Dipotassium phosphate is a buffer. Sodium azide inhibits Gram-negative bacteria. Triphenyltetrazolium chloride is reduced to formazan by the enterococci. Bacteriological agar is the solidifying agent.

It is prepared according to ISO 7899-2.

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.

Formula in g/L

Glucose	2	Bacteriological agar	10
Sodium azide	0,4	Tryptose	20
Yeast extract	5	Potassium hydrogen phosphate	4
Triphenyltetrazolium Chloride (TTC)	0,1		

Preparation

Suspend 41,5 grams of the medium in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. AVOID OVERHEATING. DO NOT AUTOCLAVE. Cool to 50-60 ºC, mix well and dispense into plates.

Instructions for use

For the detection and enumeration of enterococci according to ISO 7899-2:
- Filter a measured volume of water through a membrane filter.
- Place the membrane on a Slanetz-Bartley Medium plate.
- Incubate at 36±2 ºC for 44±4 h.
- Transfer the membrane with characteristic colonies previously incubated in the Slanetz-Bartley medium, without inverting the membrane, to a plate with Bile Esculin Azide Agar (Cat. 1005), pre-heated to 44 ºC.
- Incubate at 44±0,5 ºC for 2 hours.
- Read the plate immediately.
- It is considered that the typical colonies that show a brown-black color in the surrounding medium give positive reactions and are recounted as intestinal Enterococcus.

Quality control

Solubility	Appareance	Color of the dehydrated medium	Color of the prepared medium	Final pH (25ºC)
w/o rests	Fine powder	Beige	Amber, slightly opalescent with a pink tint	7,2±0,1

Microbiological test

According to ISO 11133:
Incubation conditions: (36±2 ºC / 44±4 h)
Inoculation conditions: Productivity quantitative (100±20. Min. 50 CFU) / Slectivity (10^4-10^6 CFU).
Reference media: TSA

Microrganisms	Specification	Characteristic reaction
Enterococcus faecalis ATCC 19433	Good growth >50%	Red-brown-pink colonies
Escherichia coli ATCC 25922	Total inhibition (0)	
Staphylococcus aureus ATCC 25923	Total inhibition (0)	
Enterococcus faecalis ATCC 29212	Good growth >50%	Red-brown-pink colonies
Enterococcus faecium ATCC 6057	Good growth >50%	Red-maroon-pink colonies

Storage

Temp. Min.:2 ºC
Temp. Max.:25 ºC

Bibliography

Slanetz L.W. and Bartley C.H. 1957. J. Bact. 74; 591 -595.
ISO 7899-2. Water quality-Detection and enumeration of intestinal enterococci-Part2: Membrane filtration method. Nordic Committee of Food analysis 1968 Leaflet 68.
Department of Health and Social Security report 711982.
The Bacteriological examination of drinking water supplies, HMBO, London