

PRODUCT CODE: 413812

Slanetz Bartley Medium (ISO 7899-2:2000) (Dehydrated Culture Media) for microbiology

Preparation

Suspend 41.5 grams of the medium in one litre 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 45-50°C, mix well and dispense into plates. The prepared medium should be stored at 8-15°C.

The colour is amber, slightly opalescent with a pink tint. The dehydrated medium should be homogeneous, free-flowing and beige in colour. If there are any physical changes, discard the medium.

Caution: This medium is toxic if swallowed, inhaled or comes into contact with skin. Wear gloves and eye/face protection.

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 litre 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.

The ISO standard 7899-2 recommends this medium for the enumeration of *enterococci* in water systems. Water is filtered through a membrane, which is then placed on the surface of a plate of Slanetz-Bartley Medium. The plate is incubated at 36 ± 2°C for 44 ± 4 hours.

The membrane is examined with a magnifying lens under good light and all red or brown colonies are counted as presumptive enterococci. With a positive presumptive result, the membrane with the typical colonies is transferred to a dish with Bile Esculin Azide Agar, pre-warmed to 44°C. The plates are incubated at 44 ± 0.5°C for 2 hours.

After incubation typical colonies (brown-black surrounding medium) are counted as intestinal enterococci. 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.

Composition

See in Data Sheet (TDS).

Microbiological Test

The following results were obtained in the performance of the medium from type cultures after incubation at a temperature of $36 \pm 2^\circ\text{C}$ and observed after 44 ± 4 hours.

Microorganism	Growth	Red Colonies	Inoculum (CFU)	Recovery (%)
<i>Enterococcus faecalis</i> ATCC 11700	Good	+	$10^2 - 10^3$	$\geq 70\%$
<i>Enterococcus faecalis</i> ATCC 19433	Good	+	$10^2 - 10^3$	$\geq 70\%$
<i>Staphylococcus aureus</i> ATCC 25923	Null	-	$> 10^5$	≤ 0.01
<i>Escherichia coli</i> ATCC 25922	Null	-	$> 10^5$	≤ 0.01

According to ISO 11333 $44 \pm 4\text{h}/36 \pm 2^\circ\text{C}$ (Productivity, Selectivity)

Microorganism	Inoculum (cfu)	Productivity Quantitative	Selectivity Qualitative	Characteristic Reaction
<i>Enterococcus faecalis</i> ATCC 19433	10^2	50%	-	Red-Brown pink colonies
<i>Enterococcus faecalis</i> ATCC 29212	10^2	50%	-	Red-Brown pink colonies
<i>Enterococcus faecium</i> ATCC 6057	10^2	50%	-	Red-Brown pink colonies
<i>Escherichia coli</i> ATCC 25922	$10^4 - 10^6$	-	Total Inhibition	-
<i>Staphylococcus aureus</i> ATCC 25923	$10^4 - 10^6$	-	Total Inhibition	-

Reference Media Productivity: TSA

Storage

Once opened keep powdered medium closed to avoid hydration.

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