# Slanetz and Bartley Medium (Membrane Enterococcus Agar) (NCM0197)

## Intended Use
Slanetz and Bartley Medium is used for the enumeration of enterococci from water samples as described in ISO 7899-2, and is not intended for use in the diagnosis of disease or other conditions in humans.

## Description
This medium was originally described by Slanetz and Bartley for the enumeration of enterococci from water samples using a membrane filtration technique, but it may also be used as a spread plate for the examination of other sample types. Enterococci reduce tetrazolium chloride to the insoluble red dye formazan, producing colonies which are dark red or maroon on the surface of the membrane or agar. This reaction is not exclusive to enterococci, and the count at this stage should be considered presumptive. Colonies may be confirmed as enterococci by demonstrating aesculin hydrolysis using Kanamycin Aesculin Azide Agar (NCM0198).

## Typical Formulation

| | |
|---|---|
| Tryptose | 20.0 g/L |
| Yeast Extract | 5.0 g/L |
| Glucose | 2.0 g/L |
| Dipotassium Hydrogen Phosphate | 4.0 g/L |
| Sodium Azide | 0.4 g/L |
| 2,3,5 Tetrazolium Chloride | 0.1 g/L |
| Agar | 12.0 g/L |

Final pH: 7.2 ± 0.2 at 25°C
Formula may be adjusted and/or supplemented as required to meet performance specifications.

## Precaution
Refer to SDS

## Preparation
1. Suspend 43.5 grams of the medium in one liter of purified water.
2. Heat with frequent agitation and bring to the boil to completely dissolve the medium.
3. Cool to 45-50 °C.
4. DO NOT AUTOCLAVE, PREHEAT OR LEAVE FOR GREATER THAN 2 hours at 45-50 °C.

## Test Procedure
Water: Filter 100ml of the water through a suitable membrane, and place this on the surface of a properly dried Slanetz and Bartley plate.
Other samples: Dilute as necessary and spread 0.5ml over the surface of the plate using a spreader, and allow to soak into the agar.
Water: at 37°C for 48hr if testing potable waters or processed foods. At 37°C for 4hr then 44°C for 44hr if testing untreated waters or raw materials.

## Quality Control Specifications
**Dehydrated Appearance:** Powder is homogeneous, free flowing and beige.

**Prepared Appearance:** Prepared medium is a rose-colored gel.

Effective Date: 12/19/2019
Revision: 1

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**Minimum QC:**
*Enterococcus faecalis* WDCM 00009
*Enterococcus faecium* WDCM 00177
*Escherichia coli* WDCM 00013 (inhibition)
*Staphylococcus aureus* WDCM 00032 (inhibition)

**Results**
Count all red and maroon colonies as presumptive enterococci. Confirmation of isolates can be achieved by demonstration of a positive aesculin reaction on KAAA (NCM0198).

**Expiration**
Refer to expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing or appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

**Limitations of the Procedures**
Due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium.

**Storage**
Store dehydrated culture media at 2-30°C away from direct sunlight. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light by keeping container tightly closed.

**References**
1. Slanetz, L.W., and Bartley, C.H. (1957) J.Bact. 74 591-595.
2. Environment Agency: The Microbiology of Drinking Water (2012) - Part 5 –Methods for the Isolation and enumeration of enterococci.

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