

Slanetz and Bartley Medium

Recommended for detection and enumeration of faecal Streptococci by membrane filtration technique.

REF: BS.1/SL01.100.0100
REF: BS.1/SL01.500.0500

100 Gram
500 Gram

REF: BS.1/SL01.250.0250

250 Gram

CLINICAL SIGNIFICANCE

Slanetz and Bartley Medium was originally devised by Slanetz and Bartley (1) for the detection and enumeration of Enterococci by membrane filtration technique. It can be also used as a direct plating medium (2, 3). The medium is highly selective for Enterococci.

METHOD PRINCIPLE

Tryptose and yeast extract in the medium provide the necessary nitrogen, carbon, vitamins and minerals required for the growth of organisms. Sodium azide has inhibitory effect on gram-negative organisms. Triphenyl Tetrazolium Chloride is reduced to the insoluble formazan inside the bacterial cell forming dark red-coloured colonies. When the medium is incubated at higher temperature (44-45°C), all red or maroon colonies can be considered as presumptive Enterococci (4, 5). The Department of Health (6) has recommended this medium to be used for enumeration of Enterococci in water supplies. Water is filtered through a membrane filter which is then placed on the surface of the Slanetz and Bartley Medium plates and incubated at 35°C for 4 hours and then at 44-45°C for 44-48 hours. Red or maroon colonies are counted as Enterococci. The preliminary incubation at 35°C helps for the recovery of stressed organisms. Not all the species reduce TTC, hence pale colonies also should be considered. Food samples are homogenized and so diluted with physiological saline to give 15-150 colonies on each Petri plate. Homogenates or dilutions are spread on agar surface and incubated at 35°C for 48 hours. Pink or dark red colonies with a narrow whitish border are counted (3).

MEDIA COMPOSITION

Item	Formula per liter of medium
- Tryptose	500.00 gm.
- Yeast extract	20.00 gm.
- Dextrose	2.000 gm.
- Disodium hydrogen phosphate	2.000 gm.
- Sodium azide	0.400 gm.
- 2,3,5-Triphenyl tetrazolium chloride	2.500 gm.
- Agar	

PRECAUTIONS AND WARNINGS

Media to be handled by entitled and professionally educated person. Do not ingest or inhale.

Good Laboratories practices using appropriate precautions should be followed in:

- Wearing personnel protective equipment (overall, gloves, glasses.).
- Do not pipette by mouth.
- In case of contact with eyes or skin; rinse immediately with plenty of soap and water. In case of severe injuries; seek medical advice immediately.
- Respect country requirement for waste disposal.

S56: dispose of this material and its container at hazardous or special waste collection point.

S57: use appropriate container to avoid environmental Contamination.

S61: avoid release in environment.

For further information, refer to the Slanetz and Bartley Medium material safety data sheet.

STORAGE AND STABILITY

BioScien Slanetz and Bartley Medium dehydrated media are stable until expiration date stated on label when properly stored 10-30°C. The prepared medium should be stored at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to avoid lump development due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in a dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Final pH 7.2 ± 0.2 at 25°C

MEDIA PREPARATION

- Suspend 46.5 grams in 1000 ml distilled water.
- Adjust pH to 7.2 ± 0.2 at 25°C
- Heat to boiling to dissolve the medium completely.
- DO NOT AUTOCLAVE OR OVERHEAT. Excessive heating is detrimental. Cool to 45-50°C.
- Mix well and pour into sterile Petri plates.

Deterioration

The color of **BioScien** Slanetz and Bartley Medium is Cream to yellow homogeneous free flowing powder. If there are any physical changes, discard the medium.

The hydrated medium is Light yellow coloured clear to slightly opalescent gel forms in Petri plates, media should not be used if there are any signs of deterioration (shrinking, cracking, or discoloration), and contaminations.

SPECIMEN COLLECTION AND PRESERVATION

Clinical samples

EQUIPMENT REQUIRED NOT PROVIDED

- Sterile cups
- Petri plates
- Sterile loops
- Incubator

PERFORMANCE CHARACTERISTICS

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature

Fits your perfection

Cultural characteristics observed after an incubation at 44-45°C for 44-48 hours.

Test Organisms	Growth
<i>Enterococcus faecalis</i> ATCC 29212 (00087*)	Good-luxuriant
<i>Escherichia coli</i> ATCC 25922 (00013*)	Inhibited

QUALITY CONTROL

To ensure adequate quality control, it is recommended that positive and negative control included in each run. If control values are found outside the defined range, check the system performance. If control still out of range please contact **BioScien** technical support.

REFERENCES

1. Slanetz L. W. and Bartley C.H., 1957, J. Bact., 74:591.
2. Burkwall M.K. and Hartman P.A., 1964, Appl. Microbiol., 12:18.
3. Nordic Committee on Food Analysis, 1968, Leaflet 68.
4. Taylor E.W. and Burman N.P., 1964, J. Appl. Bact., 27:294.
5. Mead G.C., 1966, Proc. Soc. Wat. Treat. Exam., 15:207.
6. Department of Health and Social Security, 1982, Report 71, HMSO, London.
7. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
8. Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and Wastewater, 23rd ed., APHA, Washington, D.C.
9. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition. 10. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock, D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

SYMBOLS IN PRODUCT LABELLING			
IVD	For in-vitro diagnostic use		Number of <n> test in the pack
LOT	Batch Code/Lot number		Caution
REF	Catalogue Number		Do not use if package is damaged
	Temperature Limitation		Consult Instruction for use
	Expiration Date		
	Manufactured by		