TM 2336 – SLANETZ AND BARTLEY MEDIUM (ISO/DIS 7899-2: 2000)

INTENDED USE
For detection and enumeration of faecal Streptococci from water samples by membrane filtration technique.

PRODUCT SUMMARY AND EXPLANATION
Slanetz and Bartley Medium was originally devised by Slanetz and Bartley for the detection and enumeration of Enterococci by membrane filtration technique. It can be also used as a direct plating medium. 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.
The Department of Health 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.

COMPOSITION

Ingredients	Gms / Ltr
Tryptose	20.000
Yeast extract	5.000
Dextrose	2.000
Dipotassium hydrogen phosphate	4.000
Sodium azide	0.400
2,3,5-Triphenyl tetrazolium chloride	0.100
Agar	15.000

PRINCIPLE
Tryptose and yeast extract serves as a source of essential nutrients along with B-complex vitamins and nitrogenous nutrients. The medium is highly selective for Enterococci. Sodium azide has inhibitory effect on gram-negative organisms.

INSTRUCTION FOR USE
- Dissolve 46.5 grams in 1000 ml purified / distilled water.
- 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.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium	: Light yellow coloured clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C)	: 7.2±0.1

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Incubation Temperature	Incubation Period
Enterococcus faecalis	29212	50-100	Good-luxuriant	>=50%	Red or maroon	44-45°C	44-48 Hours
Enterococcus faecalis	19433	50-100	Good-luxuriant	>=50%	Red or maroon	44-45°C	44-48 Hours
Enterococcus faecium	6057	50-100	Good-luxuriant	>=50%	Red or maroon	44-45°C	44-48 Hours
Escherichia coli	25922	>=10^4	Inhibited	0%	-	44-45°C	44-48 Hours
Escherichia coli	8739	>=10^4	Inhibited	0%	-	44-45°C	44-48 Hours
Staphylococcus aureus subsp. aureus	6538	>=10^4	Inhibited	0%	-	44-45°C	44-48 Hours
Staphylococcus aureus subsp. aureus	25923	>=10^4	Inhibited	0%	-	44-45°C	44-48 Hours

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

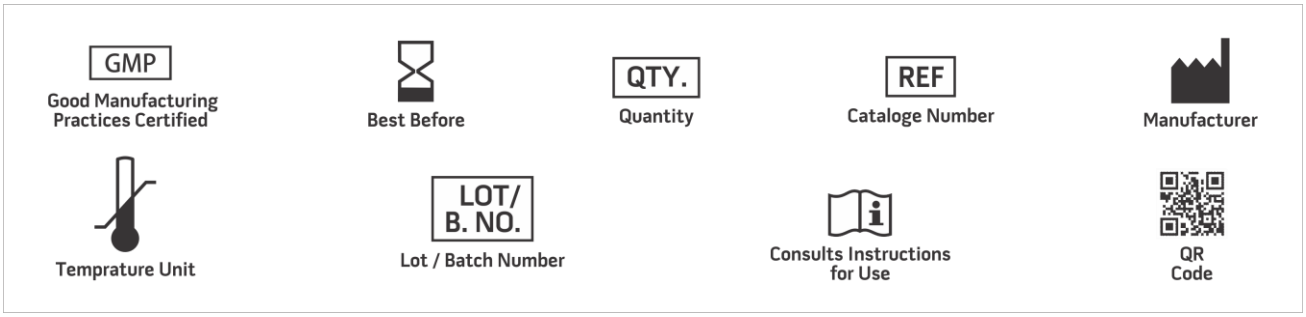
DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. 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.
2. Burkwall M.K. and Hartman P.A., 1964, Appl. Microbiol., 12:18.
3. Department of Health and Social Security, 1982, Report 71, HMSO, London.
4. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
5. ISO 7899-2: 2000 Standard for Water Quality - Detection and enumeration of intestinal enterococci - Part 2: Membrane filtration method.
6. Mead G.C., 1966, Proc. Soc. Wat. Treat. Exam., 15:207.

7. Nordic Committee on Food Analysis, 1968, Leaflet 68.
8. Slanetz L. W. and Bartley C.H., 1957, J. Bact., 74:591.
9. Taylor E.W. and Burman N.P., 1964, J. Appl. Bact., 27:294.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

Revision: 08 Nov., 2019