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LAURYL SULPHATE BROTH (LAURYL TRYPTOSE BROTH) (ISO 4831: 1991) TM 150

INTENDED USE

For detection and enumeration of coliform bacteria in water, waste water, dairy products and other food sample

COMPOSITION

Ingredients	Gms/Ltr.
Tryptose	20.000
Lactose	5.000
Sodium chloride	5.000
Dipotassium phosphate	2.750
Mono potassium phosphate	2.750
Sodium lauryl sulphate	0.100

PRODUCT SUMMARY AND EXPLANATION

Lauryl Sulphate Broth is used for the detection of coliforms in water, dairy products and other foods, as recommended by APHA. Lauryl Sulphate Broth is also recommended by the ISO Committee for the detection of coliforms. It can be used for the presumptive detection of coliforms in water, effluent or sewage by the MPN test. Lauryl Sulphate Broth was developed by Mallmann and Darby. Cowls demonstrated that inclusion of sodium lauryl sulphate makes the medium selective for coliform bacteria. It was later investigated that Lauryl Sulphate Broth gave a higher colon index than the confirmatory standard methods media and also that gas production in Lauryl Sulphate Broth not only acts as a presumptive test but also as a confirmatory test for the presence of coliforms, in the routine testing of water.

PRINCIPLE

Tryptone provides the nitrogen, carbon compounds, vitamins and amino acids. Lactose is the fermentable sugar. Sodium chloride maintains the osmotic balance of the medium. Dipotassium phosphate and Mono potassium phosphate controls the pH during fermentation of Lactose. Lactose-positive bacteria metabolize lactose with gas formation is indicated by using inverted Durham tubes. Sodium lauryl sulfate is the selective agent used to inhibit organisms other than coliforms

INSTRUCTION FOR USE

1. Dissolve 35.6gms in 1000ml distilled water.
2. Gently heat to boiling with gentle swirling and dissolve the medium completely.

3. Distribute 10 ml into each test tubes containing inverted Durham tubes.
4. Sterilize by autoclaving at 15 psi (121°C) for 15 minutes.
5. Cool to 45-50°C prior to inoculation.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder: Cream to yellow colour, homogeneous free flowing powder.
Appearance of prepared medium: Light yellow colour, clear solution.
pH (at 25°C):6.8 ± 0.2

INTERPRETATION:

Cultural characteristics observed after incubation at 35 ± 2°C for 18 - 24 hours.

Microorganisms	ATCC	Inoculum (CFU/ml)	Growth	Gas production
Enterobacter aerogenes	13048	50 - 100	Good – Luxuriant	Positive
Escherichia coli	25922	50 – 100	Good – Luxuriant	Positive
Salmonella typhimurium	14028	50 – 100	Good – Luxuriant	Negative
Staphylococcus aureus	25923	50 – 100	Inhibited	---

STORAGE & STABILITY

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 25°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.

REFERENCES

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3. Vanderzant, C., and D. F. Splittstoesser (eds.). Compendium of methods for the microbiological examination of foods, 3rd ed. American Public Health Association, Washington, D.C. (1992).

4. Eaton, A. D., L. S. Clesceri, and A. E. Greenberg (eds.). Standard methods for the examination of water and wastewater, 19th ed. American Public Health Association, Washington, D.C. (1995).
5. Downes F. P. and Ito K., (Eds.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th Ed., APHA, Washington, D.C.
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NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.