

# TECHNICAL DATA SHEET

Article No. 8848

Lauryl Sulphate Broth

## SYNONYMS

LST, Tryptose Lauryl Sulfate Broth

## SPECIFICATION

Liquid medium used for the detection and enumeration of coliform bacteria, according to IDF-FIL 73B and ISO standards.

## FORMULA\* IN G/L

Tryptose	20.00
Sodium lauryl sulphate	0.10
Lactose	5.00
Dipotassium phosphate	2.75
Potassium dihydrogenphosphate	2.75
Sodium chloride	5.00

Final pH 6.8 ±0.2 at 25 °C

\*Adjusted and/or supplemented as required to meet performance criteria.

## DIRECTIONS

Dissolve 35.6 g of powder in 1 l of distilled water. Distribute into tubes fitted with inverted Durham tubes (for gas). Sterilize at 121 °C for 15 minutes. As for the double concentration medium, dissolve 71.2 g/l and proceed as indicated above.

## DESCRIPTION

Lauryl Sulphate Broth is used for the MPN Presumptive Test of coliforms in water and sewage, confirmatory test of lactose fermentation with gas production for milk and detection of coliforms in food. The high nutrient quality and the presence of phosphate buffer in this medium ensure rapid growth and increased gas production, even by slow lactose-fermenting coliforms. Indol production is observed by adding a few drops of Kovacs' Reagent to the broth (with or without previous extraction) and shaking gently. Formation of a red ring indicates indol production.

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St.-Nr. 70093/40018 / USt-IdNr. DE147510304  
Amtsgericht Stuttgart / HRA-Nr. 254140  
Persönlich haftende Gesellschafterin:  
Geyer Beteiligungsgesellschaft mbH  
Amtsgericht Stuttgart / HRB-Nr. 252035  
Geschäftsführer: Lutz-Alexander Geyer / Thomas Roth

This medium can be used as a presumptive broth for *E. coli* (by fluorescent reaction) if, before sterilization, MUG (Art. no. 8751) is added.

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## TECHNIQUE

If the volume of sample is substantial, reconstitute the medium such that the final concentration remains normal. Incubate at 37 °C for 24-48 hours. Lactose fermentation is shown by the appearance of gas in the Durham tubes, indicating the presence of coliform bacteria.

Verification can be done by the isolation and identification of the coliforms on an appropriate medium.

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## CAUTIONS AND LIMITATIONS

None

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## QUALITY CONTROL

- Incubation temperature: 37 ±1.0 °C
- Incubation time: 24-48 ±2 h
- Inoculum: ≤100 CFU. Min. 50 CFU (productivity)/10<sup>4</sup> -10<sup>6</sup> CFU (selectivity), according to ISO 11133:2014.

Microorganism	Growth	Remarks
<i>Enterococcus faecalis</i> ATCC® 29212	Inhibited to poor	None
<i>Enterococcus faecalis</i> ATCC® 19433	Inhibited to poor	None
<i>Escherichia coli</i> ATCC® 25922	Good	Gas (+)
<i>Escherichia coli</i> ATCC® 8739	Good	Gas (+)
<i>Citrobacter freundii</i> ATCC® 43864	Good	Gas (+)

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## REFERENCES

- APHA AWWA WPCF (1995) Standard Methods for the examination of water and wastewater. APHA. Washington.
- DOWNES, F.P. & K. ITO (2001) Compendium of Methods for the Microbiological Examination of Food. 4th ed. APHA. Washington.
- FDA (Food and Drug Administrations) (1998) Bacteriological Analytical Manual. 8th ed. Revision A. AOAC International Gaithersburg. MD.
- FIL IDF Standard 73B (1998) Milk and milk products. Enumeration of coliforms. IDF. Brussels.
- HORWITZ, W. (2000) Official methods of Analysis. 17th ed. AOAC International. Gaithersburg. MD.
- ISO 11133:2014. Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.

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- ISO 4831 Standard (1991) General guidance for the enumeration of coliforms - MPN technique.
- ISO 7251 Standard (1993) General guidance for enumeration of E.coli by MPN technique.
- MARSHALL R.T. (1992) Standard Methods for the examination of dairy products. 16th ed. APHA. Washington.

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## STORAGE

Keep tightly closed, away from light, in a dry place (4-30 °C).

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## SHELF LIFE

5 years from date of production.

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