

Lauryl Sulfate Tryptose (LST) Broth (MFDS)



Medium used for the identification and determination of coliforms in food.

*Equally use with QIA (MB-L1085Q).

• CONTENTS (Liter)

Tryptose	20.0 g
Lactose	5.0 g
Sodium Chloride	5.0 g
Sodium Lauryl Sulfate	0.1 g
Dipotassium Phosphate	2.75 g
Final pH = 6.8 ± 0.2 at 25°C	

• PROCEDURE

Suspend 32.85 G of powder in 1 L of distilled or deionized water. If necessary, add 1 vial of MUG supplement (MB-M1820) (LST-MUG). Heat to boiling until completely dissolved. Sterilize by autoclave at 121°C for 15 minutes. Cool to 45 - 50°C in water bath. Mix well. Pour into tubes with durham tubes.

MUG supplement

1vial contents (each vial is sufficient for 1 L of medium)

MUG 0.05 g

• INTERPRETATION

Lauryl Sulfate Tryptose (LST) Broth (MFDS) is a medium used for the identification and determination of coliforms in food. Tryptose provides nitrogen, carbon, vitamins and minerals. Lactose is the fermentable carbohydrate. Sodium chloride maintains the osmotic balance. Sodium lauryl sulfate inhibits organisms other than coliforms. Dipotassium phosphate is a buffering agent. MUG (4-methylumbelliferyl-β-d-glucuronide) is a chromogenic substrate for β-D-glucuronidase encoded by *Escherichia coli*. The enzyme hydrolyzes MUG to glucuronide and highly fluorescent compound called 4-methylumbelliferone which is observed by UV.

• TECHNIC

Inoculate the specimen with stab using a sterile needle to the medium. Incubate at 35 ± 1°C for 24 ± 2 hours. If gas production is not observed, incubate the medium at 35 ± 1°C for 48 ± 3 hours. Refer appropriate references for recommended test procedure.

• QUALITY CONTROL FOR USE

Dehydrated medium

Appearance: free-flowing, homogeneous

Color: light beige

Prepared medium

Appearance: clear to slightly opalescent

Color: amber

Incubation conditions: 35 ± 1°C / 24 ± 2 hours up to 48 ± 3 hours

44.5°C / 24 hours for MPN method

Microorganism	ATCC	Inoculum CFU	Growth	Gas	Fluorescence
<i>Escherichia coli</i>	25922	50-100	good	+	+
<i>Klebsiella pneumoniae</i>	13883	50-100	good	+	-
<i>Salmonella typhimurium</i>	14028	50-100	good	-	-
<i>Staphylococcus aureus</i>	25923	≥10 ³	inhibited	-	-

• STORE

The powder is very hygroscopic. Store the powder at room temperature, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration are evident. Store prepared medium at 2 - 8°C.

• REFERENCES

1. Christen, G.L., P.M. Davidson, J.S. McAllister, and L.A. Roth (1992). Coliforms and other indicator bacteria, p. 247-267.
2. Association of Official Analytical Chemists. (1995). Bacteriological analytical manual, 8th ed.
3. American Public Health Association (1980). Standard methods for the examination of water and wastewater. 15th ed. APHA Inc. Washington DC.
4. ISO Standard 11866-2 Milk and milk products- Enumeration of presumptive *Escherichia coli*.
5. Refer to the MFDS, QIA.

• PACKAGE

Cat. No : MB-L1085K Lauryl Sulfate Tryptose (LST) Broth (MFDS)	500 G
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