Lauryl Sulfate Broth
SKU: 700003049, 700003050, 700003051, 700003052
NCM0030

Intended Use
Lauryl Sulfate Broth is used for the detection of coliform bacteria in water and wastewater in a laboratory setting. Lauryl Sulfate Broth is not intended for use in the diagnosis of disease or other conditions in humans.

Description
The coliform group of bacteria includes aerobic and facultative anaerobic, Gram-negative, non-sporeforming bacilli that ferment lactose and form acid and gas at 35°C within 48 hours. Members of the *Enterobacteriacae* comprise the majority of this group, but organisms such as *Aeromonas* spp. may also be included. Procedures to detect and confirm coliforms are used in testing water, foods, dairy products, and other materials.

Lauryl Sulfate Broth, also referred to as Lauryl Tryptose Broth, is prepared according to the formula of Mallmann and Darby. During their investigation, Sodium Lauryl Sulfate produced the best results for inhibition of organisms other than coliforms. Lauryl Sulfate Broth, abbreviated as LSB, is used in the presumptive phase of the Standard Total Coliform Fermentation Technique in the examination of water, and coliform detection of foods.

Typical Formulation

Enzymatic Digest of Casein	20.0 g/L
Lactose	5.0 g/L
Sodium Chloride	5.0 g/L
Monopotassium Phosphate	2.75 g/L
Disodium Phosphate	2.75 g/L
Sodium Lauryl Sulfate	0.1 g/L

Final pH: 6.8 ± 0.2 at 25°C
Formula is adjusted and/or supplemented as required to meet performance specifications.

Precautions
Refer to SDS

Preparation
1. Dissolve 35.6 g of the medium in one liter of purified water.
2. Mix thoroughly.
3. Prepared double strength broth for evaluating 10 mL samples. Distribute into tests containing inverted Durham tubes.
4. Autoclave at 121˚C for 15 minutes.

Quality Control Specifications
Dehydrated Appearance: Powder is homogeneous, free flowing, and white to off-white.

Prepared Appearance (1X): Prepared medium is yellow to gold, clear with none to light precipitate.

Prepared Appearance (3X): Prepared medium is red to orange-amber, clear, with none to moderate precipitate.

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Expected Cultural Response: Cultural response in Lauryl Sulfate Broth incubated at 35 ± 2°C and examined for growth after 18 – 48 hours.

Microorganism	Approx. Inoculum (CFU)	Expected Results	
		Growth	Gas
Escherichia coli ATCC® 25922	10 - 300	Good to excellent	Positive
Salmonella typhimurium ATCC® 14028	10 - 300	Good to excellent	Negative
Staphylococcus aureus ATCC® 25923	10^3	Completely Inhibited	----

The organisms listed are the minimum that should be used for quality control testing.

Test Procedure
Follow the methods and procedures for the detection of coliform organisms as described in standard methods.

Results
After incubation of the tubes at 35°C for 24 hours, examine for turbidity and gas production. If no gas has formed in the inverted tube, reincubate and reexamine after 48 hours.

Expiration
Refer to expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitation of the Procedure
Due to varying nutritional requirements, some strains may be encountered that grow poorly or fail to grow on this medium.

Storage
Store sealed bottle containing the dehydrated medium at 2 - 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light by keeping container tightly closed.

References
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3. Vanderzant, C., and D. F. Splittstoesser (eds.). 2015. Compendium of methods for the microbiological examination of foods, 4th ed. American Public Health Association, Washington, D.C.
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