Lauryl Sulfate Tryptose Broth

Catalog : HB0102-5-5K

Lauryl Sulfate Tryptose Broth (LST) is used for the determination and enumeration of coliforms in water, dairy products and foods, especially E. coli.

Approximate Formula:

Ingredients	gm/liter
Pancreatic digest of casein	20.0
Sodium chloride	5.0
Lactose	5.0
Dipotassium phosphate	2.75
Monopotassium phosphate	2.75
Sodium lauryl sulfate	0.1

Final pH 6.8±0.2 at 25℃

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

Directions:

Suspend 35.6g of the medium in one liter of deionized or distilled water. Mix well. Heat it slowly to dissolve completely the powder. Dispense into test tubes with gas collecting tubes (Durham). Sterilize in an autoclave at 121 ℃ (15 lbs.) for 15

Principle and Interpretation:

Lauryl Sulfate Tryptose Broth (LST) is used for the determination and enumeration of coliforms in water, dairy products and foods, especially E. coli.

Lauryl Sulfate Tryptose Broth is designed to obtain rich growth and substantial amount of gas from small inoculum of coliform organisms.Aerobic spore-bearers are completely inhibited in this medium. Tryptose provides essential growth substances, such as nitrogen and carbon compounds, sulphate and trace ingredients. The potassium phosphates provide buffering system, while sodium chloride maintains osmotic equilibrium. Sodium lauryl Sulfate inhibits organisms other than coliforms.For inoculum of 1 ml or less, use single strength medium. For inocullum of 10 ml or more, double strength or proportionate medium should be prepared.

Appearance:

Dehydrated medium is a free-flowing yellowish powder. The prepared medium is a kind of yellowish transparent liquid.

Precautions:

This medium is for laboratory use only. Dried medium which is past shelf life, caking or color variation cannot be used.

Storage conditions and Shelf life:

Lauryl Sulfate Tryptose Broth (LST) must be stored tightly capped in the original container at 5-30°C. The dehydrated medium has a shelf life of 5 years from date of manufacturing. Prepared medium may be stored, out of direct light at 2-8°C.

Quality control:

Prepare the culture medium as per label directions. Inoculate and incubate at 36±1℃ for 24-48 hours.

Microorganism	Strains Number	Inoculum (CFU)	Growth	Remarks
Salmonella typhimurium	ATCC14028	10-100	luxuriant	Turbidity 2; non-aerosis
Citrobacter freundii	ATCC43864	10-100	luxuriant	Turbidity 2; and gas is full with 1/3 of tube
Enterococcus faecalis	ATCC29212	1000-5000	inhibited	Turbidity 0(no growth)
Escherichia coli	ATCC8739	10-100	luxuriant	Turbidity 2; and gas is full with 1/3 of tube
Staphylococcus Aureus	ATCC25923	1000-5000	inhibited	Turbidity 0(no growth)

Reference:

1.GB4789.28-2013 People's Republic of China food safety national standard food microbiology test medium and reagent quality requirements.
2. Eaton A. D., Clesceri L. S., Rice E. W. and Greenberg A. W., (Eds.), 2005, Standard Methods for the Examination of Water and Wastewater, 21st Ed., APHA, Washington, D.C.
3. Marshall R. T., (Ed.), 1992, Standard Methods for the Examination of Dairy Products, APHA, Washington, D.C.

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