



PRODUCT DATA SHEET

LAURYL TRYPTOSE MANNITOL BROTH W/TRYPHTOPHAN

TM 151

for detection of *Escherichia coli* in water

Composition

Ingredients	Gms/Ltr.
Tryptose	20.000
Mannitol	5.000
Sodium chloride	5.000
Dipotassium phosphate	2.750
Monopotassium phosphate	2.750
Sodium lauryl sulphate	0.100
L-Tryptophan	0.200

* Dehydrated powder, store in a dry place, in tightly-sealed containers at 24°C and protect from direct Sunlight.

Instructions for Use

Dissolve 35.80 gms in 1000ml of distilled water. Gently heat to dissolve the medium completely. Dispense in tubes with inverted Durham's tubes and sterilize by autoclaving at 115°C for 10 minutes.

Appearance: Yellow coloured clear solution

PH (at 25°C): 6.8 ± 0.2

Principle

LAURYL TRYPTOSE MANNITOL BROTH W/TRYPHTOPHAN is used for detection of *Escherichia coli* in water. This medium is also recommended by the ISO committee and is also a suitable medium as per the requirements of the EC Directive for the quality of drinking water.

Tryptose in the medium is the source of carbon, nitrogen, vitamins, amino acids and other essential growth requirements. Phosphates buffer the medium whereas sodium lauryl sulphate serves to inhibit accompanying non-coliform bacteria. L-tryptophan is a substrate of tryptophan deaminase enzyme. Mannitol is the fermentable carbohydrate. *E. coli* is confirmed by gas and indole production when incubated at 44°C for 24 hours. If the indole test is negative even if in a single tube medium, repeat the test in TRYPTONE WATER (TM 392). Each tube showing acid and gas in the multiple tube test is subcultured to a tube of Lauryl Tryptose Mannitol Broth with Tryptophan and incubated at 44°C.

Interpretation

Cultural characteristics observed after incubation at 44°C for 24 hours.



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Microorganisms	ATCC	Inoculum (CFU)	Growth	Gas	Indole production
<i>Escherichia coli</i>	25922	10^3	Luxuriant	Positive reaction	Positive reaction, red ring at the interface of the medium
<i>Enterobacter aerogenes</i>	13048	$\geq 10^3$	Inhibited	-	-
<i>Staphylococcus aureus</i>	25923	$\geq 10^3$	Inhibited	-	-

References

1. Departments of the Environment, Health and Social Security and Public Health Laboratory Service, 1982, The Bacteriological Examination of Drinking Water Supplies, Report on Public Health and Medical Subjects No. 71, HMSO, London.
2. International Organization for Standardization (ISO), 1990, Draft ISO/DIS 9308.
3. Joint Circular 20/82, Departments of the Environment, 1982, incorporating EC Directive relating to the Quality of Water intended for Human Consumption (80/778/EEC), HMSO, London.