CURE LIFE SCIENCES
LAB TO LIFE

Technical Data Sheet

A-1 Broth CLS-DCM-A1B-01

Principle
A-1 broth is composed of the tryptone, lactose, sodium chloride, salicin and Triton X 100. Tryptone serve as source of carbon and nitrogen, vitamins and other essential nutrients required for bacterial metabolism. Lactose and salicin act as energy sources and sodium chloride maintains osmotic equilibrium. Triton 100 acts as a surfactant. The fecal coliforms are indicated by the lactose fermentation and gas production in inverted Durham's tube. The density of fecal coliform can be calculated by the standard methods using the MPN table. A-1 Medium can be used in a single-step procedure for the detection of fecal coliforms in source water, seawater, treated wastewater and foods.

Use: Recommended for detecting fecal coliforms in water samples, waste water, seawater and foods by MPN Method.

Contents*

Ingredients	**Gram/Litre**
Tryptone	20.00
Lactose	5.00
Sodium Chloride	5.00
Salicin	0.50
Triton-X100	1.00
pH at 25°C	6.9 ±0.2

* Formula adjusted for optimum performance and parameters

Directions: Dissolve 31.50 grams in 1000 ml distilled water. Boil to dissolve the medium completely and dispense into tubes containing inverted Durham tube without bubble. Sterilize by autoclaving at 15 lbs. pressure (121°C) for 15 min, cool it to 42-45°C and inoculate test sample aseptically.

Specimens types analyzed
Water samples, waste water, seawater and foods samples etc.

Precautions to be taken
These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation
The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	Light beige colored free flowing, homogeneous powder
Reaction of 3.15% solution	6.9 ±0.2 at 25 ˚C
pH	6.70- 7.10
Color and clarity of ready medium	Light amber colored opalescent solution
Growth Promotion properties	Best at ≤ 100 CFU at 32-37 ºC for 18-72 h
Indicative properties	Optimum at ≤ 100 CFU at 32-37 ºC for 18-48 h
Negative control	Performed using sterile distilled water

Different Microbial Response

Organism	Inoculum	Growth	Gas production	Incubation Temperature	Incubation period
Escherichia coli (ATCC 8739)	50-100	Luxurious	Positive reaction	33-37 ℃	18-48 h
Bacillus spizizenii (ATCC 6633)	50-100	Inhibited	--	33-37 ℃	18-48 h

Storage and Shelf Life

Hygroscopic; keep container tightly closed. Store in cool dry place.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. Andrews and Presnell, (1972), *Applied Microbiol*., 23:521.
2. Atlas, R. M. (2005). *Handbook of media for environmental microbiology*. CRC press.
3. *Difco Manual* (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.
4. Rand, M. C., Arnold E. Greenberg, and Michael J. Taras, (1976), *Standard methods for the examination of water and wastewater*. Prepared and published jointly by American Public Health Association, American Water Works Association, and Water Pollution Control Federation.