A1 MEDIUM

Basal medium in Durham tubes for faecal coliforms detection in water

TYPICAL FORMULA	(g/l)
Tryptone	20.0
Lactose	5.0
Sodium Chloride	5.0
Salicin	0.5
Triton X 100	1.0 ml
Final pH 6.9 ± 0.2	

DESCRIPTION

A1 MEDIUM, prepared according to the formulation of Andrews & Presnell, is used for the detection of faecal coliforms in food, treated wastewater and seawater.

PRINCIPLE

Peptone is a source of nitrogen, vitamins, minerals and amino acids. Lactose is the carbon source and in combination with salicin provides energy for organism growth. Sodium chloride maintains the osmotic balance of the medium. Triton X-100 is a surfactant.

PREPARATION

Check the content of the tube is homogeneous and clear and fermentation vials are inverted.

TECHNIQUE

1. Inoculate tubes of A1 MEDIUM as directed in standard methods.
2. Incubate at 35+/-0.5°C for 3 hours.
3. Transfer tubes to a water bath at 44.5 +/-0.2°C and incubate for an additional 21+/-2 hours.
4. Maintain water level in bath above level of liquid in inoculated tubes.

INTERPRETATION OF RESULTS

Tubes with gas accumulation in the Durham tubes are scored positive for faecal coliforms and those with no gas as negative. A MPN table is consulted to determine the most probable number of faecal coliforms. From the positive tubes, subculture 0.1 ml to 10 ml of Peptone Water (ref. 24098). After incubation at 44°C for 18-24hours, add 0.5 mL of Kovacs' Reagent (ref. 80271). The tubes, which develop a red ring, are considered positive for *E. coli.*

STORAGE

10-25°C away from light, until the expiry date on the label or until signs of deterioration or contamination are evident.

WARNING AND PRECAUTIONS

The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. It is nevertheless recommended to consult the safety data sheet for its correct use. The product must be used only by properly trained operators.

DISPOSAL OF WASTE

Disposal of waste must be carried out according to the national and local regulations in force.

REFERENCES

- Andrews, Diggs and Wilson.1975.Appl.Microbiol. 29:130.
- Andrews and Presnell.1972.Appl.Microbiol.23:521.
- Standridge and Delfino.1981.Appl.Environ.Microbiol.42:918.
- Clesceri, Greenberg and Eaton (ed.). 1998. Standard methods for the examination of water and wastewater, 20th ed. American Public Health Association, Washington, D.C.
- Downes and Ito (ed.)2001. Compendium of methods fr the microbiological examination of foods, 4th ed. American Public Health Association, Washington, D.C.

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PRODUCT SPECIFICATIONS

NAME
A1 MEDIUM

PRESENTATION
Durham tubes containing 10 ml of broth

STORAGE
10-25°C

PACKAGING

Ref.	Content	Packaging
24113	20 tubes x 10 ml	20 tubes in cardboard box

pH OF THE MEDIUM
6.9 ± 0.2

USE
A1 MEDIUM, prepared according to the formulation of Andrews & Presnell, is used for the detection of faecal coliforms in food, treated wastewater and seawater as a most probable number (MPN) method

TECHNIQUE
Refer to technical sheet of the product

APPEARANCE OF THE MEDIUM
Light amber, clear, may have a flocculent precipitate

SHELFLIFE
2 years

QUALITY CONTROL
1. Control of general characteristics, label and print
2. Sterility control
   7 days at 22 ± 1°C, in aerobiosis
   7 days at 36 ± 1°C, in aerobiosis
3. Microbiological control
   Inoculum for productivity: 10-100 UFC/ml
   Inoculum for selectivity: 10^4-10^5 UFC/ml
   Inoculum for specificity: ≤10^4 UFC/ml
   Incubation Conditions: 3 hours at 36 ± 1°C, in aerobiosis
   After incubation, transfer tubes to a 44.5°C water bath for 21+/- 2 hours

Microorganism		Growth	Gas
Escherichia coli	ATCC 25922	Good	+
Enterococcus faecalis	ATCC 19433	None to poor	-
Enterobacter aerogenes	ATCC 13048	Poor to good	-

TABLE OF SYMBOLS

LOT Batch code	Do not reuse	Manufacturer	Use by	Fragile, handle with care
REF Catalogue number	Temperature limitation	Contains sufficient for <n> tests	Caution, consult instructions for use	

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