Technical Data Sheet

A-1 Medium

Ordering number: 1.00415.0500

Selective culture medium for the detection of fecal coliforms in non-potable and wastewater.

The medium is accepted by the US-EPA (method 8368) for the examination of non-potable and wastewater.

Mode of Action

Peptone from casein, lactose and salicin are nutrients and guarantee good growth of microorganisms. Sodium chloride provides the osmotic balance. Triton® X 100 is contained as a detergent.

Typical Composition (g/L)

A-1 Medium	
Peptone from casein	20.0
Lactose	5.0
Sodium chloride	5.0
Salicin	0.5
Triton® X 100	1.0 ml

Preparation

Completely dissolve 31.5 g in 1 litre demineralised water and fill into tubes containing inverted fermentation vials (Durham tubes). Autoclave for 10 min. at 121 °C

pH : 6.9 ± 0.2 at 25 °C

The prepared medium is clear to slightly opalescent and yellowish in colour.

For the examination of 10 ml water samples a double-strength concentrated broth is used.

Experimental Procedure and Evaluation

1. Inoculate tubes according to the Standard Methods MPN-Method.

2. Incubate for 3 hours at 35 ± 0.5 °C and then continue incubation in a water bath at 44.5 ± 0.2 °C for 21 ± 2hours

The water level in the bath must be above the level of the liquid in the test tubes!!! Gas formation in the Durham tubes indicates the presence of fecal coliforms. The number of fecal coliforms is determined using the MPN-table.

Storage

The prepared medium can be stored for up to 1 week at room temperature (store in the dark).

Quality Control

Control strains	Growth	Gas formation
Escherichia coli ATCC 25922 (WDCM 00013)	good to very good	+
Escherichia coli ATCC 8739 (WDCM 00012)	good to very good	+
Enterococcus faecalis ATCC 19433 (WDCM 00009)	none to fair	-
Enterobacter aerogenes ATCC 13048	none to fair	none or poor
Bacillus subtilis ATCC 6633 (WDCM 00003)	none	-
Aeromonas hydrophila ATCC 7966 (WDCM 00063)	none	-

Please refer to the actual batch related Certificate of Analysis.

Escherichia coli

Uninoculated tube

Literature

US EPA. Manual for the Certification of Laboratories Analyzing Drinking Water Fifth edition. Chapter 5.5.3. January 2005.

Andews, W. H., Pressnell, M. W. 1972. Rapid Recovery of Escherichia coli from estuarine water. Appl. Microbiol. **23**:521-523.

Andrews, W. H., Diggs, C. D., and Wilson, C. R. 1975. Evaluation of a medium for the rapid recovery of Escherischia coli from shellfish. Appl. Mikrobiol. **29**: 130-131.

Standridge and Delfino. 1981. Appl. Environ. Microbiol. 42: 918

Eaton, A. D., Clesceri, L. S. and Greenberg, A. E. (ed.). 1995. Standard methods for the examination of water and wastewater, 19 th. Ed. APHA, Washington D.C.

Vanderzant, C., and Splittstoesser, D. F. (ed.). 1992. Compendium of methods for the microbiological examination of food, 3 rd ed. APHA Washington D.C.

Association of Official Analytical Chemists. 1995. Bacteriological analytical manual, 8 th ed. AOAC International, Gaithersburg, MD

Ordering Information

Product	Cat. No.	Pack size
A-1 Medium	1.00415.0500	500 g

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