



Water Detect Coliforms

Chromogenic medium for detection of
E. coli and other coliforms in water.

DESCRIPTION

Water Detect Coliforms is a chromogenic medium used for the simultaneous detection of total coliforms and *Escherichia coli* in the microbiological monitoring of water quality.

TYPICAL FORMULA	(g/l)
Tryptose	5.0
Sodium Chloride	5.0
Sorbitol	1.0
Isopropyl β-D-1-thiogalactopyranoside (IPTG)	0.1
Tryptophan	1.0
Potassium Phosphate, Monobasic	2.0
Potassium Phosphate, Dibasic	2.7
Sodium Lauryl Sulfate	0.1
Chromogenic and Fluorogenic Mix	0.2
Final pH 7.0 ± 0.2 at 25°C	

METHOD PRINCIPLE

Tryptose provides nitrogen, carbon, vitamins and minerals. Sodium Chloride maintains the osmotic balance of the medium. Sorbitol and IPTG are the fermentable carbohydrates. Tryptophan is added to improve the indole reaction. Potassium phosphates act as buffer. Sodium lauryl sulfate inhibits organisms other than coliform bacteria. X-GAL is the chromogenic substrate cleaved by coliforms. MUG is the fluorogenic substrate highly specific for *E. coli*.

TEST PROCEDURE

Use directly the water sample to suspend the powder: 17.1 g of the powder in 1 liter of water.

If tubes or bottles containing pre-weighted powder are used, add 10 ml of water to the tube (ref. 630600) or 100 ml of water to the bottle (ref. 630601). Shake the tube/bottle to dissolve the powder completely.

Incubate at 37°C for 18-24 h or at room temperature (20-25°C) for up to 48 h.

INTERPRETING RESULTS

Coliforms

Any color change of the broth to blue-green indicates presence of coliforms.

Escherichia coli

Check blue-green broth for fluorescence under long wavelength (366 nm) UV light. A blue fluorescence indicates presence of *E. coli*.

Confirm *E. coli* by overlaying the broth with KOVAC's Reagent (ref. 80271). The almost immediate development of a red-purple colouring is considered a positive result (positive indole reaction).

See pictures in Appendix I.

APPEARANCE

Powder medium: free-flowing homogeneous, light to medium beige.

Prepared broth: clear, yellowish.

STORAGE

The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment, in its original container tightly closed. Do not use the product beyond its expiry date on the label or if product shows any evidence of contamination or any sign of deterioration.

SHELF LIFE

2 years.

QUALITY CONTROL

The medium is inoculated with the microbial strains indicated in the QC table.

Inoculum for productivity : ≤ 100 CFU.

Inoculum for selectivity : $>10^3$ CFU.

Inoculum for specificity : 10^3 - 10^4 CFU.

Incubation conditions: aerobically at $35 \pm 2^\circ\text{C}$ for 18-24 h.

QC Table.

Microorganism		Growth	Color	Fluorescence	Indole reaction
<i>Escherichia coli</i>	ATCC® 25922	Good	Blue-green	Positive	Positive
<i>Enterobacter aerogenes</i>	ATCC® 13048	Good	Blue-green	Negative	---
<i>Salmonella Typhimurium</i>	ATCC® 14028	Good	Yellow (no color change)	---	---
<i>Staphylococcus aureus</i>	ATCC® 25923	Inhibited	Yellow (no color change)	---	---

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 is intended for professional use and must be used by properly trained operators only.

DISPOSAL OF WASTE









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

BIBLIOGRAPHY

- Comparison of enumeration of *E. coli* on CHROMagar *E. coli* and MPN methods. Study by S. Weissman, Israel, 1994.
- Quantitative determination of *Escherichia coli* in water using CHROMagar *E. coli*. Jose L.Alonso et al. Journal of Microbiological Methods, 25, 1996, p.309-315.
- J. Merlino, S. Siarakas, G.J. Robertson, G.R. Funnel, T. Gottlieb, and R. Bradbury. Evaluation of Colorex Orientation for differentiation and presumptive identification of gram-negative bacilli and *Enterococcus* species. J.Clin.Microbiol.1996,34:1788-1793.
- Z. Samra, M. Heifetz, J. Talmor, e. Bain and J. Bahar. Evaluation of use of a new chromogenic Agar in detection of urinary tract pathogens. J.Clin.Microbiol.1998, 36:990-994.

PRESENTATION	Contents	Ref.
Water Detect Coliforms	20 tubes containing powder medium	630600
Water Detect Coliforms	12 bottles containing powder medium	630601
Water Detect Coliforms	500 g of powder in plastic container	610382
Water Detect Coliforms	100 g of powder in plastic container	620382

TABLE OF SYMBOLS

LOT Batch code	 Keep away from sunlight	 Manufacturer	 Use by	 Fragile, handle with care
REF Catalogue number	 Temperature limitation	 Contains sufficient for <n> tests	 Caution, consult Instruction For Use	 Do not reuse



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Water Detect Coliforms

Chromogenic medium for detection of
E. coli and other coliforms in water.

Blue-green color	Fluorescent under UV light	Indole reaction positive
		
<i>Escherichia coli</i> ATCC® 25922		

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