Technical Data

HiCrome™ E.coli Agar Plate

MP1295

Intended Use:

Recommended for the detection and enumeration of *Escherichia coli* in foods without further confirmation on membrane filter or by indole reagent. It can also be used for detection of *E. coli* from clinical samples.

Composition**

Ingredients	g / L
Tryptone	14.000
Peptone, special	5.000
Bile salts mixture	1.500
Disodium hydrogen phosphate	1.000
Sodium dihydrogen phosphate	0.600
Sodium chloride	2.400
X-Glucuronide	0.075
Agar	12.000
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Either streak, inoculate or surface spread the test inoculum (50-100 CFU) aseptically on the plate.

Principle And Interpretation

HiCrome™ E.coli Agar Plate is based on Tryptone Bile Agar to detect *Escherichia coli* in foods (1), where recovery of *E.coli* is faster, more reliable and accurate. Most of the *E.coli* strains can be differentiated from other coliforms by the presence of enzyme glucuronidase, which is highly specific for *E.coli* (2). The chromogenic agent X-glucuronide used in this medium helps to detect glucuronidase activity of *E.coli*. *E.coli* cells absorb X-glucuronide and the intracellular glucuronidase enzyme splits the bond between the chromophore and the glucuronide. The released chromophore gives bluish green colouration to the *E.coli* colonies. This medium is recommended for isolation of *E.coli* from water, food and clinical samples.

Tryptone and peptone special provides carbon, nitrogen compounds, long chain amino acids, vitamins and other essential growth nutrients to the organisms. Bile salts mixture inhibits gram-positive organisms. Sodium chloride and phosphates maintain osmotic balance and buffering action respectively.

The surface of the plated medium is dried before use. Dilute food samples 1:5 or 1:10 with 0.1% (w/v) sterile Peptone Water (M028) and homogenize in a blender or a stomacher. Pipette 0.5 ml or 1.0 ml of the homogenized food sample on to the plate and spread with sterile glass spreader. Incubate the plates at 30°C for 4 hours and then at 44°C for 18 hours.

Type of specimen

Clinical samples - faeces, Water samples, Food samples

Specimen Collection and Handling

For food samples, follow appropriate techniques for sample collection and processing as per guidelines (3).

For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (4). For clinical samples follow appropriate techniques for handling specimens as per established guidelines (5,6).

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic Use only. For professional use only. Read the label before opening the pack. Wear protective gloves/ protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. ß-glucuronidase is present in 97% of *E.coli* strains, however few *E.coli* may be negative.
2. Certain species of *Salmonella* are ß-glucuronidase positive.
3. Some species may show poor growth due to nutritional variations.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Sterile HiCrome™ E.coli Agar in 90 mm disposable plates with smooth surface and absence of black particles/cracks/ bubbles

Colour of medium

Light yellow coloured medium

Quantity of medium

25 ml of medium in 90 mm disposable plates.

pH

7.00-7.40

Sterility Check

Passes release criteria

Cultural Response

Cultural characteristics observed after an incubation at 44°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of Colony
Staphylococcus aureus subsp. *aureus* ATCC 25923 (00034*)	>=10^3	inhibited	0%	
Escherichia coli ATCC 25922 (00013*)	50-100	luxuriant	>=50%	bluish green
Salmonella Enteritidis ATCC 13076 (00030*)	50-100	luxuriant	>=50%	colourless

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life

On receipt store between 2 - 8°C. Use before expiry date on the label. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (5,6).

Reference

1.Anderson J.M. and Baird-Parker A.C., 1975, J.Appl. Bacteriol., 39:111.
2.Hansen W. and Yourassawsky E., 1984, J. Clin. Microbiol., 20:1177.
3.Salfinger Y., and Tortorello M.L. Fifth (Ed.),2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
4.Lipps WC, Braun-Howland EB, Baxter TE,eds. Standard methods for the Examination of Water and Wastewater, 24th ed. Washington DC:APHA Press; 2023.
5.Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
6.Jorgensen,J.H., Pfaller , M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

Revision : 03/2024

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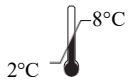
IVD ***In vitro*** **diagnostic medical device**



Storage temperature

EC REP CEpartner4U, Esdoornlaan 13,
3951DB Maarn, NL
www.cepartner4u.eu

CE **CE Marking**

Do not use if package is damaged

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