



HiCrome E. coli Agar

M1295

HiCrome E.coli Agar is recommended for the detection and enumeration of *Escherichia coli* in foods without further confirmation on membrane filter or by indole reagent.

Composition**

Ingredients	Gms / Litre
Casein enzymic hydrolysate	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

Suspend 36.57 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 50°C and pour into sterile Petri plates.

Principle And Interpretation

HiCrome E.coli Agar 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.

Casein enzymic hydrolysate and peptone special provide the 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.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.2% Agar gel.

Colour and Clarity of prepared medium

Light yellow coloured, clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 3.66% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH

7.00-7.40

Cultural Response

M1295: Cultural characteristics observed after an incubation at 44°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of Colony
<i>Escherichia coli</i> ATCC 25922	50-100	luxuriant	>=50%	bluish green
<i>Salmonella Enteritidis</i> ATCC 50-13076	50-100	luxuriant	>=50%	colourless
<i>Staphylococcus aureus</i> ATCC 25923	>=10 ³	inhibited	0%	

Storage and Shelf Life

Store dehydrated powder and prepared medium at 2-8°C. Use before expiry period on the label.

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.

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