

Product Information

87959 HiCrome (TM) Coliform Agar

HiCrome Coliform Agar is recommended for the simultaneous detection of *Escherichia coli* and total coliforms in water and food samples.

Composition:

Ingredients	Grams/Litre
Peptone, special	3.0
Sodium chloride	5.0
Dipotassium hydrogen phosphate	3.0
Potassium dihydrogen phosphate	1.7
Sodium pyruvate	1.0
Tryptophan	1.0
Sodium lauryl sulphate	0.1
Chromogenic mixture	0.2
Agar	12.0
Final pH (at 25 °C) 6.8 ± 0.2	

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C.

Directions :

Suspend 27g in 1 litre distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 121°C for 15 minutes. When a high number of gram-positive accompanying bacteria are expected, add 5mg/l Novobiocin (Cat. No. 74675) before autoclaving of the medium.

Principle and Interpretation:

HiCrome Coliform Agar is a selective medium recommended for the simultaneous detection of *Escherichia coli* and total coliforms in water and food samples.

Peptone special, sodium pyruvate provide essential growth nutrients to the organisms. The phosphates buffer the medium well. The medium composition helps even the sublethally injured coliforms to grow rapidly. Sodium lauryl sulphate inhibits gram-positive organisms.

The chromogenic mixture contains two chromogenic substrates as Salmon-GAL and X-glucuronide. The enzyme β-D-galactosidase produced by coliforms cleaves Salmon-GAL, resulting in the salmon to red colouration of coliform colonies. The enzyme β-D-glucuronidase produced by *E. coli*, cleaves X-glucuronide. *Escherichia coli* forms dark blue to violet coloured colonies due to cleavage of both Salmon-GAL and X-glucuronide. The addition of tryptophan improves the indole reaction, thereby increasing detection reliability. In combination with the two Chromogens. To confirm *Escherichia coli*, add a drop of Kovac's reagent (Cat. No. 60983) on the dark-blue to violet colony. Formation of cherry-red colour indicates the positive reaction.

Cultural characteristics after 24 hours (48 hours if necessary) at 35 to 37°C.

Organisms (ATCC)	Colour of Colony	Salmon-GAL	X-Glucuronide	Indole
<i>Escherichia coli</i> (25922)	dark blue/violet	+	+	+
<i>Enterobacter cloacae</i> (13047)	salmon to red	+	-	-
<i>Citrobacter freundii</i> (8090)	salmon to red	+	-	-
<i>Klebsiella pneumoniae</i> (13883)	light pink	+	-	-
<i>Salmonella enteritidis</i> (13076)	colourless	-	-	-
<i>Shigella flexneri</i> (12022)	colourless	-	-	-
<i>Enterococcus faecalis</i> (29212)	inhibited	-	-	-

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References:

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2. Kilian M. and Bülow P., 1976, Acta. Pathol. Microbiol. Scand., Sect. B, 84:245
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4. Manafi M. and Kneifel W., 1989, Zentralbl. Hyg., 189:225.