

PRODUCT CODE: 416109

Chromogenic E. coli Agar (Dehydrated Culture Media) for microbiology

Preparation

Suspend 26.4 grams of the medium in one liter ml of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. AVOID OVERHEATING. DO NOT AUTOCLAVE. Allow to cool at 45-50°C and dispense in Petri dishes. The prepared medium should be stored at 8-15°C. The color of the prepared medium is amber.

The dehydrated medium should be homogeneous, free-flowing and beige in color. If there are any physical changes, discard the medium.

Uses

E.COLI-COLIFORMS CHROMOGENIC MEDIUM is a selective medium for the detection of E.coli and other coliforms in waters and foods.

The interaction of ingredients in the medium, such as peptone, sorbitol, etc, grants a quick colony growth, including infectious coliforms. Tergitol-7 inhibits Gram-positive bacteria. Sodium chloride maintains the osmotic balance and the Phosphate is the buffer. Bacteriological agar is the solidifying agent. The chromogenic mixture contains chromogenic substrates as Salmon-GAL and X-glucuronide. Coliform enzymes produced, such as galactosidase and glucuronidase, cleave these substrates, resulting in the different coloration of certain bacteria colonies. The β -D-galactosidase cleaves Salmon-GAL substrate, and gives a salmon to red color to the coliform colonies. E.coli cleaves both substrates Salmon-Gal and X-glucuronide, giving a dark blue to violet color to the colonies, easily distinguishable from other coliform colonies that have a salmon to red color.

The addition of tryptophan to the medium allows the performance of the Indole test for further E. coli confirmation. Inoculate and incubate at $35 \pm 2^\circ\text{C}$ for 18 - 24 hours.

Note: Some Shigella strains contains the enzyme β -D-glucuronidase and can grow aslight blue colonies. The negative E. coli b- β -glucuronidase colonies are Salmon, e.g. E. coli O157:H7.

Composition

See in Data Sheet (TDS).

Microbiological Test

The following results were obtained in the performance of the medium from type cultures after incubation at a temperature of $35 \pm 2^\circ\text{C}$ and observed after 18 - 24 hours.

Microorganism	Growth	Colony color
<i>Escherichia coli</i> ATCC 25922	Good	Blue-dark violet
<i>Escherichia coli</i> ATCC 11775	Good	Blue-dark violet
<i>Citrobacter freundii</i> ATCC 8090	Good	Salmon
<i>Salmonella enteritidis</i> ATCC 13076	Good	Colorless
<i>Enterococcus faecalis</i> ATCC 19433	Null	

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Storage

Once opened keep powdered medium closed to avoid hydration.