

Lactose TTC Agar with Tergitol-7 (i23281)

Recommended as a selective and differential medium for the recovery of injured *coliform* organisms from chlorinated water by membrane filter technique.

Industry: Water

Principles & Uses

Lactose TTC Agar, a selective and differential medium, is employed for presumptive *E. coli* and *coliform* control in water via membrane filtration. Key components include peptone, beef extract, and yeast extract for essential nutrients, while lactose serves as a fermentable carbohydrate. Sodium heptadecyl sulfate (Tergitol 7) and TTC act as selective agents against Gram-positive bacteria. Bromothymol blue serves as a pH indicator. The medium distinguishes lactose-positive *E. coli* and *coliforms* from lactose-negative bacteria. Lactose fermentation is indicated by bromothymol blue color change, with colonies of lactose fermenters appearing yellow-orange, while lactose non-fermenters display red colonies surrounded by blue zones.

Composition (gr/L)

Peptone 10 g, Yeast extract 6 g, Meat extract 5 g, Lactose 20 g, Bromothymol blue 0.05 g, Tergitol®7 0.1 g, Agar 12.7 g.

Final pH at 25°C 7.2 ± 0.2

Preparation from dehydrated Powder

Suspend 53.9 g in 1 litre of purified water, dissolve and autoclave (121 °C, 15 min). Cool the medium in a water bath to 45-50 °C, add 5 ml of a sterile filtrated 0.05 % aqueous solution of TTC to 100 ml basal medium. Mix homogeneously and pour the medium into Petri dishes. The agar layer should have a height of at least 5 mm.

Quality Control

Dehydrated Appearance: Light beige, free flowing, homogeneous.

Prepared Appearance: Green, clear.

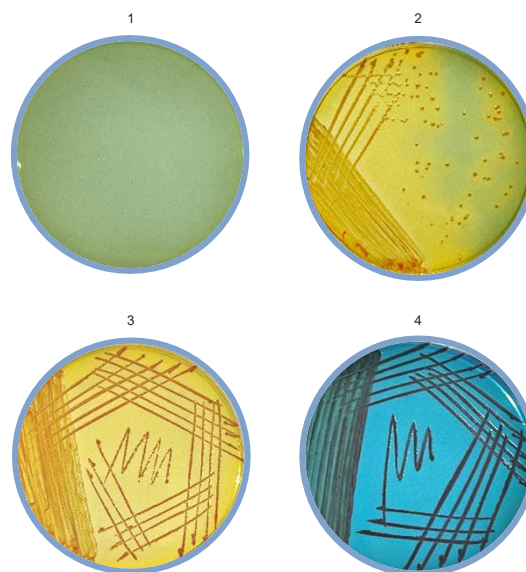
Reaction of 5.39% Solution at 25°C: pH 7.2 ± 0.2

Cultural Response

The medium was inoculated with the organisms listed below. Cultural characteristics were observed after adding TTC solution and incubation at 35 ± 2°C for 21-24 hours.

Organism (ATCC*)	Recovery	Color of Medium	Colony Color
<i>Escherichia coli</i> (25922)	Good	Yellow	Yellow-Orange
<i>Pseudomonas aeruginosa</i> (27853)	Good	Blue	Red
<i>Citrobacter freundii</i> (8090)	Good	Yellow	Yellow-Orange
<i>Bacillus cereus</i> (11778)	None	-	-

*ATCC is a registered trade mark of the American Type Culture Collection.



1: Prepared Culture Media. 2: *Citrobacter freundii*.
3: *Escherichia coli*. 4: *Pseudomonas aeruginosa*

Storage

Keep the container at 15-30 °C. Store prepared medium at 2-8 °C.