

PRODUCT CODE: 414955

Chapman TTC (Tergitol 7) Agar (ISO 9308-1:2000) (Dehydrated Culture Media) for microbiology

Preparation

Suspend 56.15 grams of the medium in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Sterilize in autoclave at 121°C for 15 minutes. Cool to 45-50°C and aseptically add 5 ml of TTC 1%. Homogenize gently and dispense into Petri dishes. DO NOT OVERHEAT THE MEDIUM. The prepared medium should be stored at 2-8°C.

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

TTC SUPPLEMENT

Triphenyltetrazolium Red A6246

Uses

TTC CHAPMAN AGAR (Lactose Agar TTC with Tergitol 7) is a selective and differential medium prepared according to ISO 9308-1, is used for the presumptive control of *E.coli* and coliforms in waters for human consumption by the membrane - filtration technique.

Peptone and Beef extract provide nitrogen, vitamins, minerals and amino acids essential for growth. Yeast extract is source of vitamins, particularly the B-group. Lactose is a fermentable carbohydrate providing carbon and energy. Sodium heptadecylsulfate (Tergitol 7) and TTC inhibit most gram-positive bacteria. Bromothymol blue is a pH indicator. Bacteriological agar is the solidifying agent. The norm ISO 9308-1 recommends: Two samples of water must be taken on two membranes and incubated in TTC Chapman Agar at 36±2°C and 44 ±4 °C respectively.

After 21 ± 3 hours of incubation:

- *E. coli* and *Citrobacter spp* present yellow colonies with orange-coloured centre.
- *Enterobacter spp* form red coloured colonies and dark yellow with orange-coloured centre. The medium is yellow.
- *Klebsiella spp* form red coloured or yellow, but without centre. The medium is yellow.
- Lactose non-fermentative bacteria grow with purple colonies and change the medium to blue.
- *Klebsiella* and *Enterobacter* species can also produce yellow-green colonies.

The results will always refer to counts per 100 ml of sample (considering if it has been necessary to make dilutions). The colonies that grow at 36±2°C will be considered as faecal coliforms and the colonies that grow at 44 ±4°C are considered as *E. coli*.

Confirmation of the colonies in EMB Agar, Kligler Iron Agar, etc. is necessary for the verification of the biochemical characteristics. The Indole and Oxidase tests are carried out in the following media respectively: Tryptophan Culture Broth and Tryptone Soy Agar.

Composition

See in Data Sheet (TDS).

Microbiological Test

The following results were obtained in the performance of the medium from type cultures, with the Supplement added, after incubation at a temperature of $36 \pm 2^\circ\text{C}$ and observed after 21 ± 3 hours.

Microorganism	Inoculum (cfu/ml)	Reference media (cfu)	Media test (cfu)	Productivity Quantitative	Characteristic Reaction	Specificity Qualitative	Selectivity Qualitative
<i>Escherichia coli</i> ATCC 25922	10^2	-	-	PR \geq 70%	yellow in the central part below the membrane	-	-
<i>Escherichia coli</i> ATCC 8739	10^2	-	-	PR \geq 70%	yellow in the central part below the membrane	-	-
<i>Enterococcus faecalis</i> ATCC 19433	$10^4/10^6$	-	-	-	-	-	Inhibited Total
<i>Pseudomonas aeruginosa</i> ATCC 27853	$10^3/10^4$	-	-	-	-	colonies red with blue in the centre	-

Storage

Once opened keep powdered medium closed to avoid hydration.