



CHROMOGENIC UTI AGAR

TM 1199

INTENDED USE

For identification and confirmation of microorganisms causing urinary tract infections

COMPOSITION

Ingredients	Gms/Ltr
Agar	15.000
Peptone, special	15.000
Chromogenic mixture	2.450

PRODUCT SUMMARY AND EXPLANATION

Urinary tract infections are bacterial infections affecting parts of urinary tract. The common symptoms of urinary tract infection are urgency and frequency of micturition, with associated discomfort or pain. The common condition is cystitis, due to infection of the bladder with a uropathogenic bacterium, which most frequently is *Escherichia coli*, but sometimes *Staphylococcus saprophyticus* or especially in hospital-acquired infections, *Klebsiella species*, *Proteus mirabilis*, other coliforms, *Pseudomonas aeruginosa* or *Enterococcus faecalis*. Chromogenic UTI Agar is formulated on basis of work carried out by Pezzlo Wilkie et al, Friedman et al, Murray et al, Soriano and Ponte and Merlino et al.

PRINCIPLE

Peptone special provides nitrogenous, carbonaceous compounds and other essential growth nutrients while agar as a solidifying agent. UTI Agar contains two specific Chromogenic substrates which are cleaved by enzymes produced by *Enterococcus spp.*, *Escherichia coli* and coliforms. In addition, it contains phenylalanine and tryptophan, which provide an indication of tryptophan deaminase activity, indicating the presence of *Proteus spp.*, *Morganella spp.* and *Providencia spp.* One of the Chromogenic substrate is cleaved by β -glucosidase possessed by Enterococci resulting in formation of blue colonies. *E. coli* produces pink colonies due to the enzyme β -D-galactosidase that cleaves the other Chromogenic substrate. Further confirmation of *E. coli* can be done by performing the Indole test. Coliforms produce purple coloured colonies due to cleavage of both the Chromogenic substrate. Colonies of *Proteus spp.*, *Morganella spp.* and *Providencia spp.* appear brown because of tryptophan deaminase activity

INSTRUCTION FOR USE

1. Dissolve 32.45 grams in 1000 ml of distilled water.
2. Gently heat to boiling with gentle swirling, to dissolve the medium completely.
3. Sterilize by autoclaving at 15 psi (121°C) for 15 minutes.



4. Cool to 45-50°C and pour into sterile petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder: Cream to yellow colour, homogeneous mixture, free flowing powder.

Appearance of prepared medium: Light amber colour, clear to slightly opalescent gel

pH (at 25°C): 6.8± 0.2

INTERPRETATION:

Cultural characteristics observed after incubation at 35 – 37 °C for 18- 24 hours.

Microorganism	ATCC	*Inoculum (CFU)	Appearance of colony	Standard recovery %
<i>Escherichia coli</i>	25922	50-100	Pink-purple colonies	≥ 70%
<i>Pseudomonas aeruginosa</i>	27853	50-100	Colourless colonies with slightly green pigmentation	≥ 70%
<i>Klebsiella pneumoniae</i>	13883	50-100	Bluish purple, mucoid colonies	≥ 70%
<i>Enterococcus faecalis</i>	29212	50-100	Small blue colonies	≥ 70%
<i>Staphylococcus aureus</i>	25923	50-100	Cream - yellow	≥ 70%
<i>Proteus mirabilis</i>	12453	50-100	Light brown	≥ 70%

STORAGE & STABILITY

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 25°C and protect from direct Sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

REFERENCES

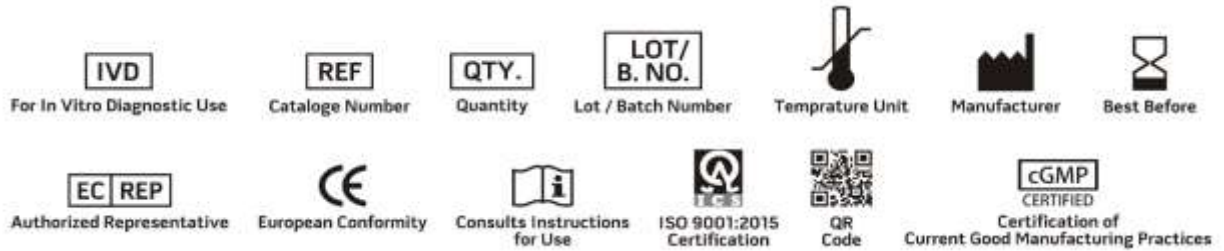
1. Collee J. G., Fraser A. G., Marmion B. P., Simmons A., (Eds.), Mackie and McCartney, Practical Medical Microbiology, 1996, 14th Edition, Churchill Livingstone.
2. Pezzlo M., 1998, Clin. Microbiol. Rev., 1:268-280.
3. Wilkie M. E., Almond M. K., Marsh F. P., 1992, British Medical Journal 305:1137-1141.
4. Friedman M. P. et al, 1991, J. Clin. Microbiol., 29:2385-2389.



www.tmmedia.in

PRODUCT DATA SHEET

5. Murray P., Traynor P. Hopson D., 1992, J. Clin. Microbiol. 30:1600-1601.
6. Soriano F., Ponte C., 1992, J. Clin. Microbiol. 30:3033-3034.
7. Merlino et al, 1995, Abstr. Austr. Microbiol. 16(4):17-3



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.