TM 1909- CHROMOGENIC UTI AGAR

INTENDED USE

For presumptive identification of microorganisms mainly causing urinary tract infections.

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 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.

COMPOSITION

Ingredients	Gms / Ltr
Chromogenic mixture	26.800
Peptone	15.000
Agar	15.000

PRINCIPLE

Peptone special provides nitrogenous, carbonaceous compounds and other essential growth nutrients while agar acts 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 ß- glucosidase possessed by Enterococci resulting in formation of blue colonies. *E. coli* produces pink colonies due to the enzyme ß-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

- Dissolve 56.8 grams in 1000 ml of distilled water.
- Gently heat to boiling with swirling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi (121°C) for 15 minutes.
- Cool to 45-50°C.
- Mix well and pour into sterile petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of powder	:	White to cream colour, homogeneous free flowing powder
Appearance of prepared medium	:	White colour, opaque gel with precipitate
pH (at 25°C)	:	6.8±0.2

INTERPRETATION

Cultural characteristics observed after incubation. Recovery rate is considered 100% for bacteria growth on Soya Agar.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Colour of colony	Recovery	Incubation Temp.	Incubation Period

Escherichia coli	25922	50-100	Luxuriant	Pink-purple colonies	>=70%	35 – 37°C	18- 24 Hours
Pseudomonas aeruginosa	27853	50-100	Luxuriant	Colourless colonies with slightly green pigmentation	>=70%	35 – 37°C	18- 24 Hours
Klebsiella pneumoniae	13883	50-100	Luxuriant	Bluish purple, mucoid colonies	>=70%	35 – 37°C	18- 24 Hours
Enterococcus faecalis	29212	50-100	Luxuriant	Small blue colonies	>=70%	35 – 37°C	18- 24 Hours
Staphylococcus aureus	25923	50-100	Luxuriant	Golden yellow	>=70%	35 – 37°C	18- 24 Hours
Proteus mirabilis	12453	50-100	Luxuriant	Light brown	>=70%	35 – 37°C	18- 24 Hours

PACKAGING
In pack size of 100gm & 500gm bottles.

STORAGE
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 2-8°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.
Product Deterioration: Do not use if powder show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL
After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

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.
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.

***For Lab Use Only**

Revision: 25 February, 2022