

## TM 1639 -CHROMOGENIC UTI AGAR, MODIFIED

### INTENDED USE

For enumeration and differentiation of enteric pathogens in urinary tract infections.

### PRODUCT SUMMARY AND EXPLANATION

Chromogenic UTI Agar, Modified is formulated on the basis of work carried out by Pezzlo, Wilkie et al, Friedman et al, Murray et al, Soriano and Ponte & Merlino et al. This medium is the modification of Chromogenic UTI Agar (TM 1199), which can be used in place of MacConkey Agar for isolation and confirmation of various microorganisms. It facilitates and expedites the identification of some gram-negative bacteria and some gram-positive bacteria on the basis of different contrasted colony colours produced by reactions of genus or species specific enzymes with two chromogenic substrates.

### COMPOSITION

Ingredients	Gms / Ltr
Peptone	18.000
Agar	15.000
Chromogenic mixture	12.440
Meat extract	6.000
Tryptone	4.000

### PRINCIPLE

Presence of rich source of phenylalanine and tryptophan from peptone and tryptone provides an indication of tryptophan deaminase activity, revealed with TDA Reagent indicating the presence of *Proteus* species, *Morganella* species and *Providencia* species, which appear brown. One chromogenic substrate is cleaved by  $\beta$ -glucosidase possessed by Enterococci resulting in formation of blue colonies. *E. coli* produce purple-magenta colonies due to the enzyme  $\beta$ -D-galactosidase which cleaves the other chromogenic substrate. Further confirmation of *E. coli* can be done by performing indole test using DMACA Reagent (TS 207). Also, some strains of *Enterobacter cloacae* lacking  $\beta$ -glucosidase show pink-colonies indistinguishable from *E. coli*. The DMACA reagent for indole test (should be performed on filter paper) distinguishes between *E.coli* and *Enterobacter*, and also between *Proteus mirabilis* and other species. Coliforms produce purple colour colonies due to cleavage of both the chromogenic substrates. Peptone, Meat extract and tryptone provides nitrogenous, carbonaceous compounds and other essential growth nutrients.

### INSTRUCTION FOR USE

- Dissolve 55.44 grams in 1000 ml 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	:	Cream to yellow colour, homogeneous free flowing powder
Appearance of prepared medium	:	Light amber colour, clear to slightly opalescent gel
pH (at 25°C)	:	7.2± 0.2

### INTERPRETATION



Culture 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	Reaction with TDA reagent	Reaction with DMACA reagent	Incub.* Temp	Incub.* period
<i>Escherichia coli</i>	25922	50-100	Luxuriant	Pink-purple colonies	>=70%	Negative reaction	Positive reaction*	35 ± 2°C	18-24 Hours
<i>Enterococcus faecalis</i>	29212	50-100	Luxuriant	Small blue colonies	>=70%	Negative reaction	Negative reaction	35 ± 2°C	18-24 Hours
<i>Klebsiella pneumoniae</i>	13883	50-100	Luxuriant	blue to purple, mucoid	>=70%	Negative reaction	Negative reaction	35 ± 2°C	18-24 Hours
<i>Proteus mirabilis</i>	12453	50-100	luxuriant	light brown	>=70%	Positive reaction##	Negative reaction	35 ± 2°C	18-24 Hours
<i>Pseudomonas aeruginosa</i>	27853	50-100	luxuriant	colourless (slightly green pigment may be observed)	>=70%	Negative reaction	Negative reaction	35 ± 2°C	18-24 Hours
<i>Staphylococcus aureus</i>	25923	50-100	luxuriant	golden yellow	>=70%	Negative reaction	Negative reaction	35 ± 2°C	18-24 Hours

# = Formation of blue purple colour around growth

## = Development of brown colouration

Incub\*=Incubation

## 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

- Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and Wastewater, 23rd ed., APHA, Washington, D.C.
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- Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
- Merlino et al. (1995), Abstr. Austr. Microbiol., 16(4):17-3.
- Murray P., Traynor P. and Hopson D., (1992), Journal of Clinical Microbiology, 30:1600-1601.
- Pezzlo M, (1998), Clinical Microbiology Reviews, 1:268-280
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8. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C
9. Wilkie M.E., Almond M.K. and Marsh F.P., (1992), British Medical Journal, 305:1137-1141.

 GMP Good Manufacturing Practices Certified	 IVD For In Vitro Diagnostic Use	 QTY. Quantity	 LOT/ B. NO. Lot / Batch Number	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 EC REP Authorized Representative <small>MedNet GmbH Barkstrasse 10, 48163 Moenster, Germany</small>	 European Conformity	 QR Code	 Consults Instructions for Use	 Best Before

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

**\*For Lab Use Only**  
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