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CHROMOGENIC UTI AGAR, MODIFIED TM 1639

INTENDED USE

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

COMPOSITION

Ingredients	Gm\Ltr.
Peptone	18.000
Agar	15.000
Chromogenic mixture	12.440
Beef extract	6.000
Tryptone	4.000

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.

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 ß-glucosidase possessed by *Enterococci* resulting in formation of blue colonies. *E. coli* produce purple-magenta colonies due to the enzyme ß-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 ß-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, Beef extract and tryptone provides nitrogenous, carbonaceous compounds and other essential growth nutrients.

Type of specimen

Clinical samples: urine, faeces, Food samples, Water samples.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines. For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines. For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards. After use, contaminated materials must be sterilized by autoclaving before discarding.

INSTRUCTION FOR USE

1. Dissolve 55.44 grams in 1000 ml distilled water.
2. Gently heat to boiling to dissolve the medium completely.
3. Sterilize by autoclaving at 15 psi (121°C) for 15 minutes.
4. Cool to 45-50°C.
5. Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of dehydrated Powder: Cream to yellowcolour, homogeneous free flowing powder

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

pH: 7.2 ± 0.2

INTERPRETATION

Culture characteristics observed after inoculating 50-100 CFU, for incubation period of 18 - 24 hours at 35 ± 2°C.

Microorganisms	ATCC	Inoculum (CFU)	Appearance of colony	Standard recovery %	Reaction with TDA reagent	Reaction with DMACA reagent
Escherichia coli	25922	50-100	Pink-purple colonies	≥ 70%	Negative reaction	Positive reaction
Pseudomonas aeruginosa	27853	50-100	Colourless colonies with slightly green pigmentation	≥ 70%	Negative reaction	Negative reaction
Klebsiella pneumoniae	13883	50-100	Bluish purple, mucoid colonies	≥ 70%	Negative reaction	Negative reaction
Enterococcus faecalis	29212	50-100	Small blue colonies	≥ 70%	Negative reaction	Negative reaction

STORAGE & STABILITY

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 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.

REFERENCES

1. 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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4. Merlino et al. (1995), Abstr. Austr. Microbiol., 16(4):17-3.
5. Murray P., Traynor P. and Hopson D., (1992), Journal of Clinical Microbiology, 30:1600-1601.
6. 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.

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

***For professional use only.**
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