TM 1825 -CHROMOGENIC UTI SELECTIVE AGAR

INTENDED USE

For identification, differentiation and confirmation of enteric bacteria from specimens such as urine.

PRODUCT SUMMARY AND EXPLANATION

Chromogenic UTI Selective Agar is formulated on the basis of work carried out by Pezzlo, Wilkie et al, Friedman et al, Murray et al, Soriano and Ponte and Merlino et al. This media is a 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
Casein enzymic hydrolysate	4.000
Bile salts	1.500

PRINCIPLE

Enzymes produced by *Enterococcus* species, *Escherichia coli* and coliforms cleave the chromogenic substrates incorporated in the medium. Presence of rich source of phenylalanine and tryptophan from peptone and casein enzymic hydrolysate provides an indication of tryptophan deaminase activity, revealed with TDA Reagent (TS 208) 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 coloured colonies due to cleavage of both the chromogenic substrates.

Peptone, meat extract and Casein enzymic hydrolysate provides nitrogenous, carbonaceous compounds and other essential growth nutrients. Chromogenic UTI Selective Agar is made selective by the addition of bile salts, which selectively inhibits grampositive bacteria.

INSTRUCTION FOR USE

- Dissolve 56.94 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 homogeneous free flowing powder
Appearance of prepared medium : Light amber coloured, clear to slightly opalescent gel
pH (at 25°C) : 7.2± 0.2

INTERPRETATION

Cultural characteristics observed after an 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
Escherichia coli	25922	50-100	Luxuriant	Pink-purple colonies	>=70%	Negative reaction	Positive reaction#	35 ± 2°C	18-24 Hours
Enterococcus faecalis	29212	50-100	Luxuriant	Small blue colonies	>=70%	Negative reaction	Negative reaction	35 ± 2°C	18-24 Hours
Klebsiella pneumoniae	13883	50-100	Luxuriant	blue to purple, mucoid	>=70%	Negative reaction	Negative reaction	35 ± 2°C	18-24 Hours
Proteus mirabilis	12453	50-100	luxuriant	light brown	>=70%	Positive reaction##	Negative reaction	35 ± 2°C	18-24 Hours
Pseudomonas aeruginosa	27853	50-100	luxuriant	colourless (slightly green pigment may be observed)	>=70%	Negative reaction	Negative reaction	35 ± 2°C	18-24 Hours
Staphylococcus aureus	25923	50-100	Inhibited	-	0%	-	-	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.

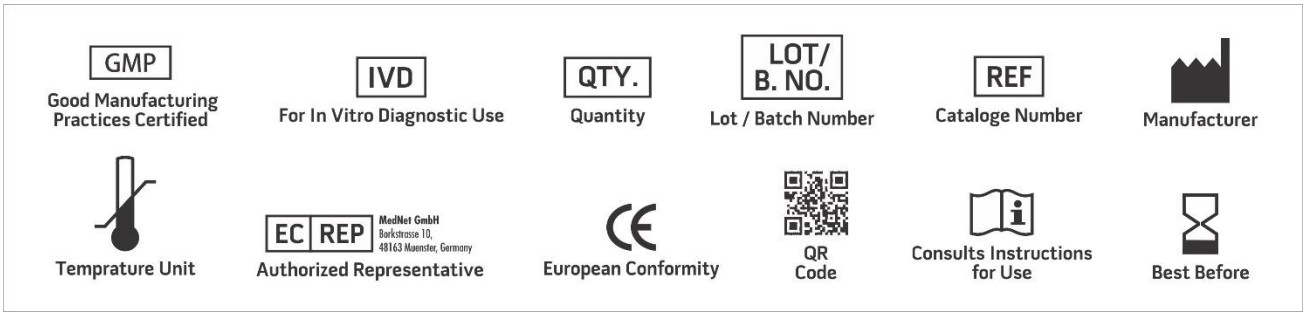
DISPOSAL

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

REFERENCES

1. Pezzlo M, (1998), Clinical Microbiology Reviews, 1:268-280
2. Wilkie M.E., Almond M.K. and Marsh F.P., (1992), British Medical Journal, 305:1137-1141.
3. Friedman M.P. et al. (1991), Journal of Clinical Microbiology, 29:2385-2389.
4. Murray P., Traynor P. and Hopson D., (1992), Journal of Clinical Microbiology, 30:1600-1601.
5. Soriano F. and Ponte C., (1992), Journal of Clinical Microbiology, 30:3033-3034.

6. 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**

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