TM 2231 - MacCONKEY SORBITOL AGAR BASE W/RHAMNOSE

INTENDED USE

For improved differentiation of *Escherichia coli* O157:H7 from background flora.

PRODUCT SUMMARY AND EXPLANATION

E. coli O157:H7 is a human pathogen associated with hemorrhagic colitis that results from the action of a shiga-like toxin. MacConkey agars are selective media and recommended as differential plating media for detection and isolation of coliforms from various samples clinical, dairy, food, water, pharmaceuticals etc. Of different *E. coli* strains, *E. coli* O157:H7 which is a hemorrhagic strain does not ferment sorbitol or rhamnose. This biochemical feature aids in differentiating *E. coli* O157:H7 from other *E. coli* strains. Generally, on standard MacConkey Agar medium containing lactose, this strain cannot be differentiated from other lactose fermenting *E. coli.* Rhamnose is often fermented by most sorbitol negative *Escherichia coli* of other serogroups.

MacConkey Sorbitol Agar Base w/ Rhamnose contains two sugars as sorbitol and rhamnose. Since *E. coli* O157:H7 do not usually ferment sorbitol or rhamnose it appears as colourless to straw coloured colonies. While rhamnose positive and sorbitol negative appear as pink or red coloured colony and it should not be counted as presumptive *Escherichia coli* O157:H7.

COMPOSITION

Ingredients	Gms / Ltr
Peptic Digest of Animal Tissue	20.000
Rhamnose	5.000
D-Sorbitol	10.000
Bile salts mixture	1.500
Sodium chloride	5.000
Neutral red	0.030
Crystal violet	0.001
Agar	15.000

PRINCIPLE

MacConkey Sorbitol Agar Base w/ Rhamnose contains peptic digest of animal tissue in the medium which supplies necessary nutrients to growing cells. Crystal violet and bile salts mixture present in the medium inhibits growth of gram positive bacteria. Addition of cefixime significantly reduces the number of sorbitol nonfermentors that are to be screened during the attempted isolation of *E. coli* O157: H7. The isolated suspected colonies of *E. coli O157: H7*obtained on this medium can be further confirmed using the LK13 E. coli Latex Test kit.

INSTRUCTION FOR USE

- Dissolve 56.53 grams in 1000 ml distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 45-50°C and aseptically add rehydrated contents of 2 vials of Cefixime Supplement.
- Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Light yellow to pink homogeneous free flowing powder.
Appearance of prepared medium : Purplish red coloured, clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C) : 7.1±0.2

INTERPRETATION

Cultural characteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of Colony	Incubation Temperature	Incubation Period
Escherichia coli	25922	50-100	Good-luxuriant	>=50 %	Pink to red	35-37°C	18-24 Hours
Proteus mirabilis	29906	>=10^3	Inhibited	0%	-	35-37°C	18-24 Hours

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°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 they 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

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4. Sanderson, Gay, Hancock, Gay, Fox and Besser, 1955. J Clin Microbiol. 33: 2616.
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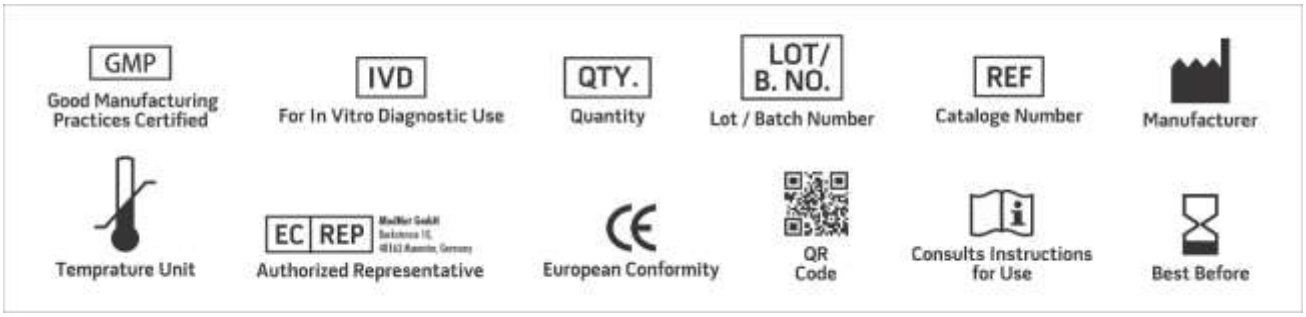

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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