TM 528 - MacCONKEY AGAR (W/O CV, W/ 1.2% AGAR)

INTENDED USE

For selective isolation and differentiation of lactose fermenting and lactose nonfermenting enteric bacteria.

PRODUCT SUMMARY AND EXPLANATION

MacConkey Agar Medium is the earliest selective and differential medium for cultivation of enteric microorganisms from a variety of clinical specimens. MacConkey agars are slightly selective and differential plating media mainly used for the detection and isolation of gram-negative organisms from clinical, dairy, food, water, and industrial sources. It is also recommended for the selection and recovery of the *Enterobacteriaceae* and related enteric gram- negative bacilli.

COMPOSITION

Ingredients	Gms / Ltr
Peptone	17.000
Proteose peptone	3.000
Lactose	10.000
Bile salts	1.500
Sodium chloride	5.000
Neutral red	0.030
Agar	12.000

PRINCIPLE

This medium has peptone and proteose peptone which provides necessary nitrogen sources for growth of organisms. The selective action is due to bile salts in the medium. Lactose fermenting strains grow as pink to red colonies and may be surrounded by a zone of acid precipitated bile. The pink to red colour is due to production of acid from lactose, absorption of neutral red and a subsequent colour change of the dye due to pH drop of medium. Lactose non-fermenting strains, such as *Shigella* and *Salmonella* are colorless and transparent and typically do not alter appearance of the medium. Sodium chloride in the medium helps to maintain osmotic balance of the cells.

INSTRUCTION FOR USE

- Dissolve 48.53 grams in 1000 ml purified/distilled water.
- Heat to boiling with gentle swirling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes. Avoid overheating.
- Cool to 45-50°C and dispense approximately 20 ml amounts in sterile Petri plates
- The surface of the medium should be dry when inoculated.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Light yellow to pink homogeneous free flowing powder.

Appearance of prepared medium : Orange 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	Luxuriant	>=70 %	Pink to red with bile precipitate	35-37°C	18-24 Hours
Klebsiella aerogenes	13048	50-100	Luxuriant	>=70 %	Pink to red	35-37°C	18-24 Hours
Enterococcus faecalis	29212	50-100	Fair	20 -30 %	Pale pink to red	35-37°C	18-24 Hours
Proteus vulgaris	13315	50-100	Luxuriant	>=70 %	Colourless	35-37°C	18-24 Hours
Salmonella Paratyphi A	9150	50-100	Luxuriant	>=70 %	Colourless	35-37°C	18-24 Hours
Shigella flexneri	12022	50-100	Luxuriant	>=70 %	Colourless	35-37°C	18-24 Hours
Salmonella Paratyphi B	8759	50-100	Luxuriant	>=70 %	Colourless	35-37°C	18-24 Hours
Salmonella Enteritidis	13076	50-100	Luxuriant	>=70 %	Colourless	35-37°C	18-24 Hours
Salmonella Typhi	6539	50-100	Luxuriant	>=70 %	Colourless	35-37°C	18-24 Hours
Staphylococcus aureus susp.aureus	25923	>=10^3	Inhibited	0%	Pale pink to red	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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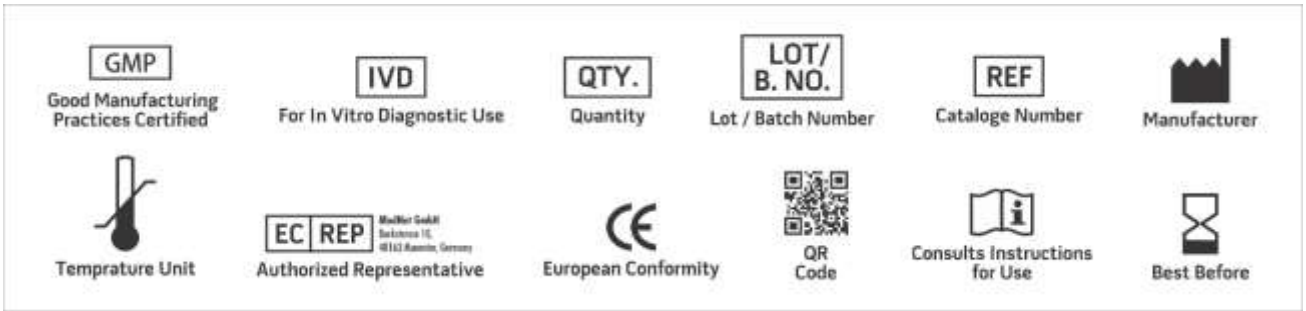

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

Revision: 08 Nov., 2019