TM 378 - MacCONKEY AGAR (W/ SODIUM TAUROCHOLATE W/O CV & NaCl.)

INTENDED USE
For cultivation and differentiation of enteric bacteria and gram positive organisms.

PRODUCT SUMMARY AND EXPLANATION
MacConkey Agar is the earliest selective and differential medium for cultivation of enteric microorganisms from a variety of clinical specimens. Subsequently MacConkey Agar and Broth have been recommended for use in microbiological examination of foodstuffs and for direct plating / inoculation of water samples for coliform counts. These media are also accepted by the Standard Methods for the Examination of Milk and Dairy Products and pharmaceutical preparations. Lactose non-fermenting strains, such as *Shigella* and *Salmonella* are colourless and transparent and typically do not alter appearance of the medium. *Yersinia enterocolitica* may appear as small, non-lactose fermenting colonies after incubation at room temperature.

COMPOSITION

Ingredients	Gms / Ltr
Peptone	20.000
Lactose	10.000
Sodium taurocholate	5.000
Neutral red	0.040
Agar	20.000

PRINCIPLE
Original medium contains protein, bile salts, sodium chloride and two dyes. The selective action of this medium is attributed to bile salts, which are inhibitory to most species of gram-positive bacteria. MacConkey Agar w/o CV, NaCl and W/ 0.5% Sodium taurocholate is a modification of the original formulation with the exclusion of crystal violet and inclusion of sodium taurocholate instead of bile salts. Gram-negative bacteria usually grow well on the medium and are differentiated by their ability to ferment lactose. Lactose fermenting strains grow as red or pink and may be surrounded by a zone of acid precipitated bile. The red colour is due to production of acid from lactose, absorption of neutral red and a subsequent colour change of the dye when the pH of medium falls below 6.8.

INSTRUCTION FOR USE
- Dissolve 55.0 grams of medium in 1000 ml purified/distilled water.
- Heat to boiling with gentle swirling to dissolve the agar completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes. Avoid overheating.
- Cool to 45-50°C.Mix well and pour into 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) : 7.4±0.2

INTERPRETATION
Cultural characteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of Colony	Incubation Temperature	Incubation Period
Salmonella Paratyphi B	*8759*	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
Salmonella Enteritidis	*13076*	50-100	luxuriant	>=70 %	colourless	35-37°C	18-24 Hours
Staphylococcus subsp. *aureus*	25923	50-100	fair-good	20 -40 %	pale pink -red	35-37°C	18-24 Hours
Salmonella Paratyphi A	*9150*	50-100	luxuriant	>=70 %	colourless	35-37°C	18-24 Hours
Escherichia coli	*25922*	50-100	luxuriant	>=70 %	pink to red with bile precipitate	35-37°C	18-24 Hours
Enterococcus faecalis	*29212*	50-100	fair to good	20 -40 %	pale pink to red	35-37°C	18-24 Hours
Shigella flexneri	*12022*	50-100	fair to good	20 -40 %	colourless	35-37°C	18-24 Hours
Enterobacter aerogenes	*13048*	50-100	luxuriant	>=70 %	pale pink to red	35-37°C	18-24 Hours
Proteus vulgaris	*13315*	50-100	luxuriant	>=70 %	colourless	35-37°C	18-24 Hours

PACKAGING:
In pack size of 100 gm and 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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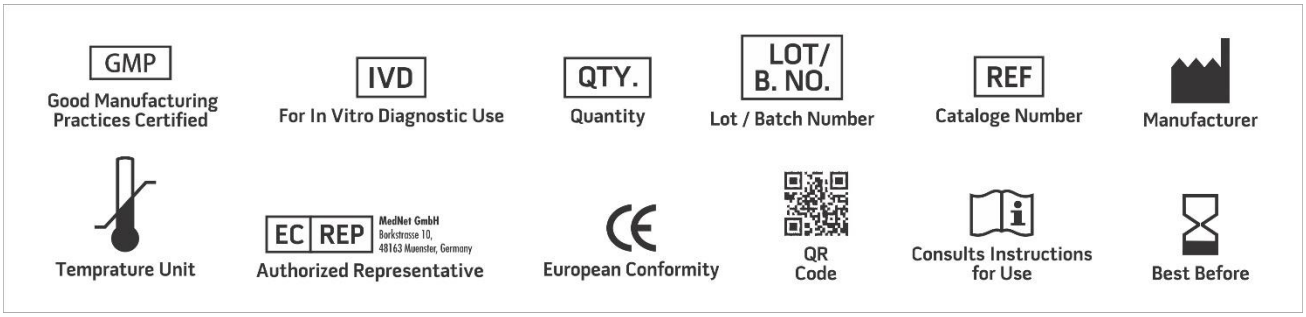

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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