Chaitanya Group Of Industries

ReadyMED®
Dehydrated Cell Culture Media

Technical Data Sheet

MacConkey Agar w/o CV, NaCl , w/ 0.5% Sodium Taurocholate RDM-MCA-04

Principle
MacConkey agar without crystal violet and salt is modification of MacConkey agar, composed of peptone, lactose, sodium taurocholate, neutral red and agar. Peptone provide nitrogen and other nutrients necessary for the growth of microorganism. Lactose is a carbon source and plays a important role for selection of lactose fermenting microbes. Sodium taurocholate is selective agents, inhibit growth of gram-positive organisms. Neutral red is pH indicator dye. Agar is solidifying agent. Due to absence of salts the medium become differential, which restricts the swarming of *Proteus species*, and in addition, it does not contain crystal violet, allow *Staphyloccocus* and *Enterococcus species* to grow. When lactose is fermented, acid is produced and result pH reduction and sodium taurocholate precipitation. Since the lactose fermenting colonies of coliform bacteria are pink in color and may be surrounded by a zone of sodium taurocholate precipitation. The pink or red color is due to production of acid from lactose and absorption of neutral red. Lactose non-fermenting strains, such as *Shigella* and *Salmonella* are colorless and transparent and typically do not alter appearance of the medium.

Use: Recommended for isolation and differentiation of lactose fermenting and lactose non-fermenting gram-negative enteric bacilli from pharmaceutical, clinical and non-clinical samples, dairy, food and water samples.

Contents*

Ingredients	Gram/Litre
Peptone	20.000
Lactose	10.000
Sodium taurocholate	5.000
Neutral Red	0.075
Agar	12.000
pH at 25˚C	7.4 ±0.2

* Formula adjusted for optimum performance and parameters

Directions: Dissolve 47.00 grams in 1000 ml distilled water. Boil to dissolve the medium completely and sterilize by autoclaving at 15 lbs. pressure (121°C) for 15 min, cool it to 42-45 °C and distribute aseptically in petri plates. Ensure complete solidification and inoculate test sample aseptically.

Specimens types analyzed
Pharmaceutical samples, clinical and non-clinical samples. food, dairy and water samples etc.

Precautions to be taken
These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation
The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	Light pink colored free flowing, homogeneous powder
Reaction of 4.7% solution	7.4 ±0.2 at 25 ˚C
pH	7.20- 7.60
Gelling	Firm comparable with 1.2% agar gel
Color and clarity of ready medium	Reddish orange colored opalescent gel
Growth Promotion properties	Best at ≤ 100 CFU at 32-37 ºC for 18-72 h
Indicative properties	Optimum at ≤ 100 CFU at 32-37 ºC for 18-48 h
Negative control	Performed using sterile distilled water

Different Microbial Response

Organism	Inoculum	Growth	Recovery	Colony Color	Incubation
Escherichia coli (ATCC 8739)	50-100	Luxurious	80-90%	Pink red with zone of precipitation	33-37 ºC, 18-48 h
Salmonella typhimurium (ATCC14028)	50-100	Luxurious	50-60%	Colorless	33-37 ºC, 18-48 h
Staphylococcus aureus (ATCC 25923	50-100	Luxurious	70-80%	Pink colored	33-37 ºC, 18-48 h

Storage and Shelf Life

Hygroscopic; keep container tightly closed. Store in cool dry place.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. Atlas, R. M. (2005). *Handbook of media for environmental microbiology*. CRC press.
2. *Difco Manual* (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.
3. Rand, M. C., Arnold E. Greenberg, and Michael J. Taras, (1976), *Standard methods for the examination of water and wastewater*. Prepared and published jointly by American Public Health Association, American Water Works Association, and Water Pollution Control Federation.

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