Chaitanya Group Of Industries

ReadyMED®
Dehydrated Cell Culture Media

Technical Data Sheet

MacConkey Agar w/o CV & NaCl, with 0.5% Bile salt — RDM-MCA-02

Principle

MacConkey agar is a modification of the original bile salt-neutral red-lactose agar recommended by MacConkey (1905) and used for selective isolation and differentiation of *Escherichia coli* and other enteric bacteria in pharmaceutical testing and microbial limit testing of pharmaceutical products and raw material used in pharmaceutical industries. Media consists of pancreatic digest of gelatin, lactose monohydrate, Bile salt, neutral red and agar. The pancreatic digest of gelatin provides essential nutrients, vitamins and nitrogenous factors and growth factors required for growth of microorganisms. Lactose monohydrate is a carbon and energy source for gram-negative lactose-fermenting *Escherichia coli* and other enteric bacteria. The Bile salt provides selectivity to media and inhibits the growth of most species of gram-positive organisms.Whereas, the neutral red is pH indicator, due to lactose fermentation, acid is produced and the absorption of neutral red and subsequent color change of the dye take place below pH 6.8. Lactose fermenting strains observed as red or pink colored.

Use: Recommended for selective isolation and differentiation of *E.coli* and other enteric bacteria from pharmaceutical products.

Contents*

Ingredients	Gram/Litre
Pancreatic Digest of Gelatin	20.000
Lactose Monohydrate	10.000
Bile salt	5.000
Neutral Red	0.070
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. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 min, cool it to 42-45 °C and distribute aseptically in petri plates and allow to solidify. Ensure complete solidification and inoculate test sample aseptically.

Specimens types analyzed

Pharmaceutical samples, clinical and non-clinical 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	Pinkish beige colored free flowing, homogeneous powder
Reaction of 4.70% 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	Orange red, slightly 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	ATCC	Inoculum CFU	Growth	Recovery	colony color
Escherichia coli	8739	50-100	Luxurious	70-75%	Pink to red color
Salmonella typhi	14028	50-100	Luxurious	70-75%	colorless

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

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