

Product Data Sheet

MacCONKEY AGAR (W/O CV, W/ 0.075 NR & BILE SALTS, NaCl) (MacCONKEY AGAR NO.1)

Product No. GB-DCM-00386-1A

INTENDED USE

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

PRODUCT SUMMARY

MacConkey Agar Medium is the earliest selective and differential medium for cultivation of enteric microorganisms from a variety of clinical specimens. Subsequently MacConkey Agar is recommended for use in microbiological examination of foodstuffs and for direct plating / inoculation of water samples for coliform counts. This medium is also accepted by the Standard Methods for the Examination of Milk and Dairy Products and pharmaceutical preparations. The original MacConkey Agar incorporated peptones, lactose bile salts and two dyes. MacConkey Agar w/o CV w/ 0.5% Bile salts is a modification of the original medium with the exception of crystal violet.

Product Specifications

Ingredients	Gms / Ltr
Peptone	20.000
Lactose	10.000
Bile salts	5.000
Sodium chloride	5.000
Neutral red	0.030
Agar	15.000

PRINCIPLE

Peptone serves as the source of carbon, nitrogen, long chain amino acids and other essential nutrients. Lactose is the fermentable carbohydrate with neutral red serving as the pH indicator. Sodium chloride maintains the osmotic equilibrium of the medium. Bile salts serve to make the medium selective. 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. Lactose non-fermenting strains, such as Shigella and Salmonella are colourless and transparent and typically do not alter appearance of the medium.

INSTRUCTION FOR USE

- Dissolve 52.02 grams 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 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

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of Colony	Incubation Temperature	Incubation Period
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	fair to good	20 -40 %	Colourless	35-37°C	18-24 Hours
Salmonella Paratyphi B	8759	>=10 ³	inhibited	>=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
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



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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.

This product is for research use only.