

Product Data Sheet

MacCONKEY AGAR, MODIFIED

Product No. GB-DCM-00389-1A

INTENDED USE

For isolation of Klebsiella species from water samples.

PRODUCT SUMMARY

MacConkey Agar is the earliest selective and differential medium for cultivation of enteric microorganisms from a variety of clinical specimens. The original medium contains protein, bile salts, sodium chloride and two dyes. The selective action of this medium is attributed to crystal violet and bile salts, which are inhibitory to most species of gram-positive bacteria. Klebsiella species are often associated with coliforms in water supply distribution systems and are present as a major component in industrial wastes of paper mill, textile and other industries. Thom developed a medium based on MacConkey Agar in which lactose is replaced by inositol with the addition of 100µg of carbenicillin per ml. Bagley and Seidler (1978) devised a similar medium with only 50µg of carbenicillin per ml. In the modified MacConkey agar medium, inositol is incorporated in place of lactose while added carbenicillin makes the medium selective for Klebsiella species. Further, this method reduces the necessity for biochemical testing of pure strains; however, preliminary verification of differentiated colonies is recommended.

Product Specifications

Ingredients	Gms / Ltr
Peptone	17.000
Proteose peptone	3.000
Bile salts	1.500
Inositol	10.000
Sodium chloride	5.000
Crystal violet	0.001
Neutral red	0.030
Agar	15.000

PRINCIPLE

Peptones are sources of nitrogen and other nutrients. Inositol is a fermentable carbohydrate, bile salts and crystal violet are selective agents that inhibit growth of gram-positive organisms.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of Colony	Incubation Temperature	Incubation Period
Klebsiella aerogenes	13048	$\geq 10^3$	Inhibited	0%	-	35-37°C	18-24 Hours
Escherichia coli	25922	$\geq 10^3$	Inhibited	0%	-	35-37°C	18-24 Hours
Klebsiella pneumoniae	13883	50-100	Luxuriant	$\geq 70\%$	Pink	35-37°C	18-24 Hours
Salmonella Typhi	6539	$\geq 10^3$	Inhibited	0%	-	35-37°C	18-24 Hours
Serratia marcescens	8100	$\geq 10^3$	Inhibited	0 %	-	35-37°C	18-24 Hours

INSTRUCTION FOR USE

- Dissolve 50.03 grams in 1000 ml purified/distilled water.
- Heat to boiling to dissolve the medium completely. Do not autoclave or overheat.
- Cool to 45-50°C and aseptically add two vials of Klebsiella Selective Supplement.
- Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

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

Appearance of prepared medium : Purplish red coloured clear to slightly opalescent gel forms in Petri plates.

pH (at 25°C) : 7.1±0.2

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.