



MacConkey Agar w/o Crystal Violet

Selective and differential medium for detection of coliforms and enteric pathogens from clinical samples and other materials.

DESCRIPTION

MacConkey Agar without Crystal Violet is used for isolating and differentiating enteric organisms from faeces, urine, foodstuffs, waste water and other materials of sanitary importance.

The exclusion of crystal violet renders the medium less selective than the original formula, permitting the growth of staphylococci, enterococci and *Mycobacterium* spp.

TYPICAL FORMULA*	(g/litre)
Pancreatic Digest of Gelatin	17.0
Peptone from Meat	1.5
Peptone from Casein	1.5
Lactose	10.0
Sodium Chloride	5.0
Bile Salts	1.5
Agar	13.5
Neutral Red	0.03

Final pH 7.4 ± 0.2 at 25°C

*Adjusted and/or supplemented as required to meet performance criteria.

METHOD PRINCIPLE

Pancreatic digest of gelatin and peptones from meat and casein provide amino acids, nitrogen, carbon, vitamins and minerals for organisms growth. Lactose is the fermentable carbohydrate. Sodium Chloride maintains the osmotic balance of the medium. Bile salts inhibit Gram-positive organisms while allowing Gram-negative bacteria to grow. Agar is the solidifying agent. Neutral red is the pH indicator.

PREPARATION

Dehydrated medium Suspend 50 g of the powder in 1 liter of distilled or deionized water. Mix well. Heat to boil for 1 minute shaking frequently until completely dissolved. Sterilize in autoclave at 121°C for 15 minutes. Cool to 45-50°C, mix well avoiding foam formation and aseptically distribute into Petri dishes.

TEST PROCEDURE

Inoculate the plates by directly streaking the specimen over the agar surface or spread the sample from an enrichment culture. Incubate aerobically at 35 ± 2°C for 18-72 hours. **Note:** Incubation temperature and time may vary depending on the intended use.

INTERPRETING RESULTS

Lactose-nonfermenting organisms, such as *Salmonella*, *Shigella* and *Proteus* spp, form colorless colonies.

Lactose-fermenting organisms, such as *E. coli* and *Klebsiella* spp, grow as pink to red colonies with or without a zone of precipitated bile.

Enterococci and staphylococci appear colorless to pink.

Other Gram-positive bacteria are partially or completely inhibited.

Common saprophytic species of acid-fast bacilli are inhibited while the potentially pathogenic rapid growers of the *Mycobacterium fortuitum-chelonae* complex grow within 5-11 days and usually produce a color change in the medium.

Identification of the microorganisms isolated should be followed by appropriate biochemical/serological tests.

APPEARANCE OF THE MEDIUM

Dehydrated medium: free-flowing, homogeneous, beige-pink.

Prepared medium: slightly opalescent, pinkish-red.

STORAGE

The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment, in its original container tightly closed. Store prepared plates at 10-25°C away from light. Do not use the product beyond its expiry date on the label or if product shows any evidence of contamination or any sign of deterioration.

SHELF LIFE

Dehydrated medium: 4 years.
Ready-to-use plates: 6 months.

QUALITY CONTROL

To check the performance of the medium the following microbial strains can be used.

QC Table.

Strain	Inoculum	Incubation	Growth	Colony Color	
<i>Escherichia coli</i>	ATCC® 25922	50-100 CFU	35 ± 2°C / 18-24 h	Good	Pink
<i>Proteus mirabilis</i>	ATCC® 12453			Good	Colorless
<i>Salmonella Typhimurium</i>	ATCC® 14028			Good	Colorless
<i>Enterococcus faecalis</i>	ATCC® 29212	10 ⁴ -10 ⁶ CFU		Poor	Pink
<i>Staphylococcus aureus</i>	ATCC® 25923			Poor	Pink

WARNING AND PRECAUTIONS

The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. It is nevertheless recommended to consult the safety data sheet for its correct use. The product is intended for professional use only and must be used by properly trained operators.

DISPOSAL OF WASTE

Disposal of waste must be carried out according to national and local regulations in force.

BIBLIOGRAPHY








- Murray, Baron, Jorgensen, Landry and Pfaller ed. (2007) Manual of clinical microbiology, 9th ed. American Society for Microbiology, Washington, D.C.
- MacConkey A. (1905) Lactose-fermenting bacteria in faeces. J. Hygiene 8:333-379.

The product is available in the various configurations listed below. There may be additional product ref. numbers as well. For an updated listing of available products, visit liofilchem.com

Product	Format	Packaging	Ref.
MacConkey Agar w/o Crystal Violet	90 mm Plate	20 plates	11503 ♦
MacConkey Agar w/o Crystal Violet	Dehydrated media	500 g of powder	610195
MacConkey Agar w/o Crystal Violet	Dehydrated media	100 g of powder	620195

♦, not CE marked

TABLE OF SYMBOLS

LOT Batch code	IVD In vitro Medical Diagnostic Device	 Manufacturer	 Use by	 Fragile, handle with care
REF Catalogue number	 Temperature limitation	 Contains sufficient for <n> tests	 Consult Instruction For Use	 Do not reuse

This document is available from the online Support Center:

liofilchem.com/ifu-sds



LIOFILCHEM® s.r.l.

Via Scozia, 64026 Roseto degli Abruzzi (Te) Italy
Tel. +39 0858930745 Fax +39 0858930330

www.liofilchem.com

liofilchem@liofilchem.com

