

MacConkey agar without salt

A differential medium which restrict the swarming of most *Proteus* species. Useful for culturing urine specimens which may contain large number of *Proteus* species.

REF: BS.1/MA01.100.0100	100 Gram	REF: BS.1/MA01.250.0250	250 Gram
REF: BS.1/ MA01.500.0500	500 Gram		

CLINICAL SIGNIFICANCE

MacConkey Agar without Salt (NaCl) is a differential medium particularly recommended for urine examination. This medium, in contrast to regular MacConkey Agar, does not contain sodium chloride nor crystal violet, resulting in the prevention of *Proteus* species from spreading while certain Gram-positive bacteria, such as *Staphylococcus* and *Enterococcus* spp., are allowed to grow.

METHOD PRINCIPLE

Peptone provides nitrogen and other essential growth nutrients. Most gram positive organisms are inhibited by bile salts. This medium does not contain sodium chloride and therefore provides a "low electrolyte medium" on which most *Proteus* species do not spread. Due to this ability it is preferably used for the examination of urine so that overgrowth of other organisms is prevented. Lactose together with the pH indicator Neutral red are used to detect lactose-positive colonies. Lactose-positive colonies are red and often surrounded by a turbid zone due to the precipitation of bile acids.

MEDIA COMPOSITION

Item	Formula per liter of medium
- Peptone	20.00 gm.
- Lactose	10.00 gm.
- Bile Salt	5.000 gm.
- Neutral red	0.075 gm.
- Agar	12.00 gm.

PRECAUTIONS AND WARNINGS

Media to be handled by entitled and professionally educated person. Do not ingest or inhale.

Good Laboratories practices using appropriate precautions should be followed in:

- Wearing personnel protective equipment (overall, gloves, glasses,).
- Do not pipette by mouth.
- In case of contact with eyes or skin; rinse immediately with plenty of soap and water. In case of severe injuries; seek medical advice immediately.
- Respect country requirement for waste disposal.

S56: dispose of this material and its container at hazardous or special waste collection point.

S57: use appropriate container to avoid environmental contamination.

S61: avoid release in environment.

For further information, refer to the MacConkey agar without salt Material safety datasheet.

EQUIPMENT REQUIRED NOT PROVIDED

- Sterile plates
- Incubator
- Autoclave

STORAGE AND STABILITY

BioScien MacConkey agar without salt should be stored between 10-30°C in a firmly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to avoid lump development due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in a dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

PREPARATION

1. Suspend 47 g in 1 liter of distilled water.
2. Adjust pH to 7.4 +/-0.2 at 25°C
3. Bring to the boil to dissolve completely.
4. Sterilize by autoclaving at 121°C for 15 minutes.
5. Pour into sterile petri plates.
6. Dry the surface of the gel before inoculation.

Deterioration

The color of **BioScien** MacConkey agar without salt is homogeneous beige-pink free flowing powder. Prepared medium is slightly opalescent, pinkish-red. If there are any physical changes for powder or signs of deterioration (shrinking, cracking, or discoloration), and contaminations for hydrated media, discard the medium.

SPECIMEN

Clinical samples

QUALITY CONTROL











To ensure adequate quality control, it is recommended that positive and negative control included in each run. If control values are found outside the defined range, check the system performance. If control still out of range please contact **BioScien** technical support.

PERFORMANCE CHARACTERISTICS

Oranism	Growth	Colony color	Precipitate
<i>Escherichia coli</i> (25922)	luxuriant	Pink to red	Positive
<i>Enterobacter aerogenes</i> (13048)	luxuriant	Pink to red	Negative
<i>Salmonella typhi</i> (6539)	luxuriant	colorless	Negative
<i>Salmonella enteritidis</i> (13076)	luxuriant	colorless	Negative
<i>Salmonella paratyphi A</i>	luxuriant	colorless	Negative
<i>Salmonella paratyphi B</i>	luxuriant	colorless	Negative
<i>Shigella flexneri</i> (12022)	luxuriant	colorless	Negative
<i>Proteus vulgaris</i> (13315)	luxuriant	colorless	Negative
<i>Staphylococcus aureus</i> (25923)	Good growth	Pale pink to red	Negative
<i>Enterococcus faecalis</i> (29212)	Good growth	Pale pink to red	Negative

REFERENCES

- Greenberg A.E., Trussell R.R., Clesceri L.S. (Eds.), Standard Methods for the Examination of Water and Wastewater, 16th ed., A.P.H.A, Washington, D.C. (1985)
- A. MacConkey, J. Hyg. 8, 333 (1905)
- European Pharmacopeia II, Chapter VIII, 10
- A. MacConkey, Bile salt media and their advantages in some bacteriological examinations, J. Hyg., 8; 322 (1908)
- J. MacFaddin, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore (1985)
- A. MacConkey, Bile salt broth, Thompson Yates Lab. Rep., VI/1, 151 (1901)
- Karmali M.A., Petric M., Lim C., et al, J. Infect. Dis., 151, 775 (1985)

SYMBOLS IN PRODUCT LABELLING		
	For in-vitro diagnostic use	 Number of <n> test in the pack
	Batch Code/Lot number	 Caution
	Catalogue Number	 Do not use if package is damaged
	Temperature Limitation	 Consult Instruction for use
	Expiration Date	
	Manufactured by	

