

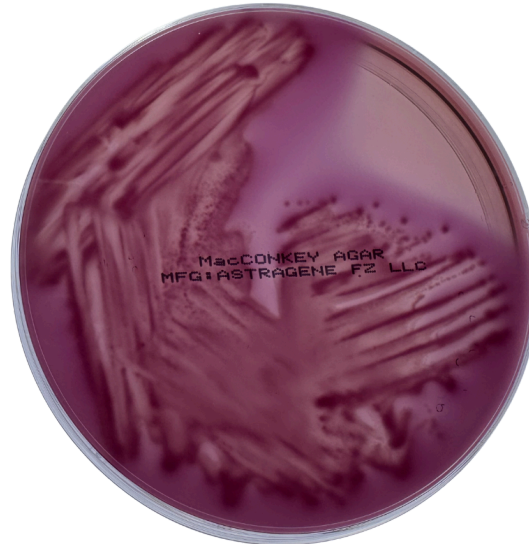
AG - MACCONKEY AGAR - INSTRUCTIONS FOR USE

(Ready Plated Media)

● INTENDED USE:

In vitro diagnostic. Selective and differential medium for the isolation and differentiation of *Enterobacteriaceae* and other Gram-negative bacilli from clinical and non-clinical specimens.

● PRINCIPLE:



MacConkey Agar: *E. coli* (colonies with red halo) and *P. aeruginosa* (greenish colonies)

MacConkey agar is a selective and differential media used for the isolation of Enterobacteriaceae and other Gram-negative bacilli and for the differentiation of lactose fermenting from lactose non-fermenting Gram-negative enteric bacilli. The selective action of MacConkey is due to the presence of bile salts which inhibit the growth of Gram-positive bacteria, which is also enhanced by crystal violet. The fermentation of lactose by coliforms causes acidification of media and consequent precipitation of bile salts and absorption of neutral red. Hence, the coliform bacteria grow with red-pink to red-violet colonies surrounded by a red precipitation zone. Lactose non-fermenting strains (*Salmonella*, *Shigella*, *Proteus*, *Pseudomonas*, etc.) develop transparent, colorless colonies without bile precipitation zone.

● MATERIALS PROVIDED:

PRODUCT	TYPE	REF	PACK
AG - MacConkey Agar Plates	Ready Plated Media	AG/MCA/22/01	10 plates in a pack

MATERIALS REQUIRED BUT NOT PROVIDED:

Sterile loops, incubator, and laboratory equipment as required.

● SPECIMENS:

MacConkey Agar is intended for the bacteriological examination of several human clinical specimens with mixed flora (e.g. urine, stool, materials from respiratory tract, wounds and abscesses etc.) and non-clinical specimens, as food, non sterile pharmaceutical products, cosmetics. Good laboratory practices for collection, storage and transport of the specimens to the Laboratory should be applied.

● TEST PROCEDURE, READING AND INTERPRETATION:

- Allow plates to come to room temperature.
- Inoculate and streak the specimen with a loop over the four quadrants of the plate. Alternatively, if the material is being cultured directly from a swab sample, roll the swab over a small area of the surface at the edge; then streak from this inoculated area.
- Incubate inoculated MacConkey Agar plates with the specimen or with a specimen enriched in liquid medium, in aerobic conditions at 35-37°C for 18-24 hours.

● USER QUALITY CONTROL:

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All manufactured lots of the product are released for sale after Quality Control has been performed to check the compliance with the specifications. However, the end user can perform its own Quality Control in accordance with the local applicable regulations, in compliance with accreditation requirements and the experience of the Laboratory. Here below are listed some test strains useful for quality control.

CONTROL STRAINS	INCUBATION	EXPECTED RESULTS
<i>E. coli</i> ATCC 8739	37°C /18-24H-Aerobic	Red-violet, colonies with red opaque halo
<i>P. mirabilis</i> ATCC 12453	37°C /18-24H- Aerobic	Non- swarming colorless colonies
<i>S. typhimurium</i> ATCC 14028	37°C /18-24H-Aerobic	Colorless, colonies
<i>E. faecalis</i> ATCC 29212	37°C /18-24H-Aerobic	Growth inhibited

Key: ATCC is a trademark of American Type Culture Collection

LIMITATIONS OF THE METHOD:

- Prolonged incubation may lead to confusion of results; do not incubate longer than 48 hours.
- Due to selective properties of this medium some strains of Gram-negative enteric bacteria fail to grow or grow poorly; similarly some Gram-positive organisms may not be inhibited or are partially inhibited.
- Some enterococci strains may exhibit growth after prolonged incubation.
- MacConkey agar is not a satisfactory medium for the detection and enumeration of coliform organisms in food. One of the most reliable methods used is Violet Red Bile Glucose Agar with pour plate counts.
- Even if the microbial colonies on the plates are differentiated on the basis of their morphological and chromatic characteristics, it is recommended that biochemical, immunological, molecular, or mass spectrometry testing be performed on isolates from pure culture for complete identification. If relevant, perform antimicrobial susceptibility testing.
- This culture medium could be used as an aid in the diagnosis of infectious diseases; the interpretation of the results must be made considering the patient's clinical history, the origin of the sample and the results of other diagnostic tests.







PRECAUTIONS AND WARNINGS:

- This product is for microbiological control and for professional use only; it is to be used by adequately trained and qualified laboratory personnel, observing approved biohazard precautions and aseptic techniques.
- All laboratory specimens should be considered infectious.
- The laboratory area must be controlled to avoid contaminants such as culture medium or microbial agents.
- Sterilize all biohazard waste before disposal. Dispose of the unused medium and the sterilized plates inoculated with samples or microbial strains in accordance with current local legislation.
- The Certificates of Analysis and the Safety Data Sheet of the product are available with AstraGene and can be provided on request.

STORAGE CONDITIONS AND SHELF LIFE:

- Upon receipt, store at +2 - 8°C away from direct light in a cool, dry place. Storage below 2°C may lead to crystallization of media components due to near freezing temperature. The user is responsible for the storage method (temperature) of the medium.
- For optimal use, it is advisable to utilize the entire pack of 10 plates once they have been taken out of the packaging.
- If properly stored, the product may be used up to the expiration date. Do not use it beyond the mentioned expiry date.

SYMBOLS:

 Date of manufacture	 Use-by-date	 Do not use if package is damaged	 Manufacturer
 Batch Code	 Refer to the instructions	 ISO	 GMP
 <i>In-Vitro</i> diagnostic Medical devices	 Mark of conformity		

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Astragene FZ LLC, Office No. 208 – 209, Dubai Science Park Building, Dubai, United Arab Emirates
+971-4-8781222, contact@astragene.com