

TECHNICAL DATA SHEET

Article No. 9446

MacConkey Broth Ph. Eur. harm., ready-to-use medium

SPECIFICATION

Prepared medium, bottles/tubes, sterile. Liquid medium, for the detection and enumeration of coliforms according to the Pharmacopeial Harmonised Method.

Colour: Violet
pH: 7.3 ± 0.2 at 25 °C

COMPOSITION IN G/ L

Gelatin Peptone	20.00
Lactose monohydrate	10.00
Ox Bile dried	5.00
Bromcresol purple	0.01

PACKAGE DETAILS

9446-10x100ML

Bottle size 125 ml
Volume 100 ± 3 ml
Packaging unit 10 bottles
1 box with 10 x 100 ml in 125-ml-bottles. Injectable cap: Plastic screw inner cap.
For the use of syringe needles with a diameter ≤ 0.8 mm.

9446-10x450ML

Bottle size 500 ml
Volume 450 ± 5 ml
Packaging unit 10 bottles
1 box with 10 x 450 ml in 500-ml-bottles. Injectable cap: Plastic screw inner cap.
For the use of syringe needles with a diameter ≤ 0.8 mm.



DESCRIPTION/ TECHNIQUE

Description:

MacConkey media is a well-known popular enrichment media for coliform bacteria. This MacConkey Broth is a modification of the classic medium, where neutral red is replaced by the less aggressive indicator Bromcresol purple, according to the European Pharmacopoeia.

At the beginning of the last century, MacConkey made the original formulation and included ox bile as an inhibitor of Gram positive bacteria and litmus as the indicator of acid production from lactose sugar. More recently the litmus has been substituted by a neutral red indicator making interpretations easier and more precise.

Technique:

The MacConkey Broth is used for the enumeration of coliforms by the MPN (most probable number) technique, selecting the positive tubes that show turbidity, a colour change to yellow and gas production. Confirmation of the presence of coliforms should be 42-44 °C. The turning of the medium to yellow in the presence of *E. coli*, may be delayed 24h to 48h depending on the volume and concentration of inoculum. Each laboratory has to evaluate the results according to their specifications.

MICROBIOLOGICAL CONTROL

Prepare tubes with Durham bell - Inoculate: Practical range 100 ± 20 CFU; min. 50 CFU (productivity)/ 10⁴-10⁶ CFU (selectivity)

Growth Promotion Test according to harmonized pharmacopoeial monographs and test methods & ISO 11133:2014/A1:2018

Aerobiosis. Incubation 30-35 °C. Reading at 24-48 h. *E. coli* 42-44 °C

Microorganism	Growth
<i>Staphylococcus aureus</i> ATCC® 6538, WDCM 00032	Inhibiert
<i>Escherichia coli</i> ATCC® 8739, WDCM 00012	Good. Yellow Medium, Gas (+)
<i>Escherichia coli</i> ATCC® 25922, WDCM 00013	Good. Yellow Medium, Gas (+)
<i>Salmonella typhimurium</i> ATCC® 14028, WDCM 00031	Good. Violet Medium, Gas (-)

Sterility control:

Incubation 48 hours at 30-35 °C and 48 hours at 20-25 °C: NO GROWTH.

Check at 7 days after incubation in same conditions.

REFERENCES

- ATLAS, R.M., L.C. PARKS (1993) Handbook of Microbiological Media. CRC Press, Inc. London.
- EUROPEAN PHARMACOPOEIA 8.0 (2014) 8th ed. § 2.6.13. Microbiological examination of non-sterile products: Test for specified microorganisms. Harmonised Method. EDQM. Council of Europe. Strasbourg.

- ISO 11133:2014/ Adm 1:2018. Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.
- MacCONKEY, A.T. (1905) Lactose-fermenting bacteria in faeces. J. Hyg 5:333.
- USP 33 - NF 28 (2011) <62> Microbiological examination of non-sterile products: Test for specified microorganisms. Harmonised Method. USP Corp. Inc. Rockville. MD. USA.

STORAGE

8 - 25 °C

SHELF LIFE

16 months unopened from date of manufacture

updated: 15.02.2024

