ALLIANCE BIO EXPERTISE

Reference: BGWR3010 **A.B.E. - Technical Data Sheet**

Product: **Baggywel - MacConckey Broth - 3x3L**

Specification

Liquid medium, for the detection and enumeration of coliforms, according to the Pharmacopeial Harmonised Method.

Presentation

	Packaging Details	Shelf Life	Storage
3 Prepared Bags /3 L Bags 3L with: 3000 ± 10 ml	1 box with 3 bags of 3L. PVC plasticizer free sterile bag with: 1 vial stopper + 1 penetrable cap. Dimensions: 23 x 32 cm. For use in food testing.	16 months	8-25 ºC

Composition

Composition (g/l):
Gelatin Peptone..... 20.00
Lactose..... 10.00
Ox Bile dried..... 5.00
Bromcresol purple.....0.01

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 a 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.
Advancements is the knowledge of bacterial physiology has allowed adaptation of this media faciliting coliform detection.

Technique
The MacConkey Broth is used for the enumeration of coliforms by the MPN technique, selecting the positive tubes that show turbidity, a colour change to yellow and gas production. Confirmation of the presence of coliform 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 must evaluate the results according to their specifications.
Each Bag is intended for use with an automatic dispenser in laboratories requiring large volumes of broth media or diluent.
Discard any partially used bag to avoid contamination.
The bag has multiple connection points: 1 penetrable cap (injection port) latex-free polycarbonate, for any additive injection required.
And an injection (vial stopper) to connect to any standard equipment laboratory dosing with a connector.
Once completely empty, the bag can be disposed of along with normal plastic (PVC).

Quality control

Physical/Chemical control

Color : Violet pH: 7.3 ± 0.2 at 25ºC

Microbiological control

Prepare bottle (100 ml) or tube (10 ml), Inoculate: 10-100 CFU (productivity)/ 10^3-10^4 CFU (selectivity)

According to USP & European Pharmacopoeia

Analytical methodology according to ISO 11133:2014/A1:2018; A2:2020.

Aerobiosis. Incubation at 42-44 ºC. Reading after 24-48 hours. S. typhimurium 30-35ºC

Microorganism	Growth
Escherichia coli ATCC® 8739, WDCM 00012	Good - Yellow medium -Gas (+)
Salmonella typhimurium ATCC® 14028, WDCM 00031	Good Violet medium Gas -
Staphylococcus aureus ATCC® 6538, WDCM 00032	Inhibited
Escherichia coli ATCC® 25922, WDCM 00013	Good - Yellow medium -Gas (+)

Sterility control

Incubation 48 h at 30-35 ºC and 48 h at 20-25 ºC: NO GROWTH.
Check at 7 days after incubation in same conditions.

Bibliography

· ATLAS, R.M., L.C. PARKS (1993) Handbook of Microbiological Media. CRC Press, Inc. London.
· EUROPEAN PHARMACOPOEIA 11.0 (2023) 11th ed. § 2.6.13. Microbiological examination of non-sterile products: Test for specified microorganisms. Harmonised Method. EDQM. Council of Europe. Strasbourg.
· MacCONKEY, A.T. (1905) Lactose-Fermenting Bacteria in Faeces. J. Hyg 5:333.
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