

Specification

Liquid culture medium used for the enrichment of enterobacteria according to the ISO standard and the Pharmacopeial Harmonised Method.

Presentation

10 Prepared bottles
Bottle 125 ml
with: 90 ± 3 ml

Packaging Details

1 box with 10 bottles 125 ml. Injectable cap: Plastic screw inner cap. The use of syringes needles with a diameter greater than 0.8 mm is not recommended.

Shelf Life

16 months

Storage

2-25 °C

Composition

Composition (g/l):

| | |
|--|--------|
| Gelatin peptone..... | 10.000 |
| Dextrose..... | 5.000 |
| Ox bile..... | 20.000 |
| Di-sodium phosphate (2H ₂ O)..... | 8.000 |
| Monopotassium phosphate..... | 2.000 |
| Brilliant green..... | 0.015 |

Description /Technique

Description:

As the name suggests, this medium is for the enrichment of enterobacteria, and is a modification by Mossel (1963) of the classic Brilliant Green Bile 2% Broth . Substitution of lactose by glucose makes it more suitable for enteric bacteria detection, (including both gas or non-gas-producers), in food and other samples.

Technique:

The most common technique is as follows: the sample to be studied is added to sterile broth in a proportion of 10%. After through homogenization, the mixture is incubated for a period of 24-48 hours at 30-35 °C.

After incubation, subcultures are performed on a solid media appropriate for the selective isolation of enterobacteria (18-24h).

For this step, Violet Red Bile Glucose Agar is recommended, although MacConkey, VRBLA, deoxycholate or brilliant green based media can also be used.

Presumptive colonies isolated on this media, can be verified following the usual methodology.

Note: temperatures or culture media may vary according to normatives adopted by the laboratory.

Quality control

Physical/Chemical control

Color : Green

pH: 7.2 ± 0.2 at 25°C

Microbiological control

Inoculate: 10-100 CFU accord. to Eur. Pharm. & 100 ± 20 CFU; min. 50 CFU (productivity)/ 10⁴-10⁶ CFU (selectivity) acc. to ISO.

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

Aerobiosis. Incubation: 30-35 °C. Reading at 24h (E.P.) / 37 ± 1 °C. Reading at 24 h (ISO)

Note: results ATCC® 8739/6538/9027 (30-35 °C) (EP) & ATCC® 8739/14028/19433/(37 °C) (ISO).

Microorganism

Escherichia coli ATCC® 8739, WDCM 00012

Ps. aeruginosa ATCC® 9027, WDCM 00026

Staphylococcus aureus ATCC® 6538, WDCM 00032

Enterococcus faecalis ATCC® 19433, WDCM 00009

Mezcla *E. coli* ATCC® 8739 + *E. faecalis* ATCC® 19433

Mezcla *S. typhimurium* ATCC® 14028 + *E. faecalis* ATCC® 19433

Growth

Good. Recovery in VRBG

Good. Recovery in VRBG

Inhibited

Inhibited

> 10 CFU. Characteristic colonies of *E. coli*

> 10 CFU. Characteristic colonies of *Salmonella*

Sterility control

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

Check at 7 days after incubation in same conditions.

Bibliography

- 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 21528-1:2004 Standard. Microbiology of food and animal feeding stuffs - Horizontal methods for the detection and enumeration of Enterobacteriaceae - Part 1: Detection and enumeration by MPN technique with pre-enrichment.
- ISO 11133:2014/ Adm 1:2018. Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.
- MOSSEL, VISSER & CORNELISSEN (1963) The examination of foods for Enterobacteriaceae using a test of the type generally adopted for the detection of *salmonellae* J. Appl. Bact. 26:444-452.
- PASCUAL ANDERSON. M^a.R^o. (1992) Microbiología Alimentaria. Díaz de Santos. S.A. Madrid.
- USP 33 - NF 28 (2011) <62> Microbiological examination of non-sterile products: Test for specified microorganisms. Harmonised Method. USP Corp. Inc. Rockville. MD. USA.