

Specification

Selective enrichment of all species of Enterobacteriaceae, according to harmonized pharmacopoeial monographs and test methods.

Presentation

	Packaging Details	Shelf Life	Storage
10 Prepared bottles			
Bottle 125 ml	1 box with 10 bottles 125 ml	12 months	8-25°C
with: 90 ± 5 g	Non injectable cap		

Composition

Composition (g/l):	
Gelatin Peptone.....	10,0
D(+) Glucose.....	5,00
Ox bile dried.....	20,0
Brilliant green.....	0,015
Disodium hydrogen phosphate.....	8,00
Potassium dihydrogen phosphate....	2,00

Description /Technique

Description

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

To use, the contents of the bottle should be poured into plates. The melting of the culture medium should be carried out according to the manufacturer's instructions, either in a water bath or microwave oven. Never apply direct heat to melt a medium. The melting temperatures and times depend on the shape of the container, the volume of medium and the heat source. Before melting any medium loosen the screwcap of the container to avoid breaking the container. The medium should be melted only once and used. Media with agar should not be melted repeatedly as their characteristics change with each remelting. Overheating should be avoided as much as prolonged heating, especially with regard to media with an acidic or alkaline pH. Once melted pour the plates using aseptic techniques. To inoculate, follow standard laboratory methods or the applicable norms. Spiral plate method, streak plating, econometric methods, dilution banks, spread plating etc...

The most common technique is as follows: the sample to be studied is added to sterile broth in a proportion of 10%. After thorough homogenization, the mixture is incubated for a period of 18-20 hours at 35-37°C.

After incubation, subcultures are performed on a solid media appropriate for the selective isolation of enterobacteria.

For this step, Violet Red Bile Agar is recommended, although MacConkey, deoxycholate or brilliant green based media can also be used. Presumptive colonies isolated on this media, can be verified following the usual methodology.

Quality control

Physical/Chemical control

Color : Green pH: 7,2 ± 0,2

Microbiological control

Growth Promotion Test according to harmonized pharmacopoeial monographs and test methods

Aerobiosis. Incubation at 37 °C, reading after 24-48 hours

Microorganism	Growth
<i>Escherichia coli</i> ATCC 25922	Good
<i>Pseudomonas aeruginosa</i> ATCC 9027	Good
<i>Salmonella typhimurium</i> ATCC 14028	Good
<i>Staphylococcus aureus</i> ATCC 6538	Inhibited
<i>Enterococcus faecalis</i> ATCC 29212	Inhibited

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

(Do not autoclaved . heated up with constant stirring until Agar dissolution)

Bibliography

- EUROPEAN PHARMACOPOEIA 7.0 (2011) 7th 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/TS 11133-1: 2009. Microbiology of food and animal feeding stuffs.- Guidelines on preparation and production of culture media. Part 1: General guidelines on quality assurance for the preparation of culture media in the laboratory.
- ISO/TS 11133-2: 2003 Corr. 2004. Microbiology of food and animal feeding stuffs.- Guidelines on preparation and production of culture media. Part 2: Practical guidelines on 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.