

Specification

Highly nutritious general purpose medium for the isolation and cultivation of fastidious and non-fastidious microorganisms according to Pharmacopoeial Harmonized Methods.

Formula * in g/L

Casein peptone.....	10.00
Meat peptone.....	5.00
Heart peptone.....	3.00
Yeast extract.....	5.00
Maize starch.....	1.00
Sodium chloride.....	5.00
Agar	15.00

Final pH 7.3 ±0.2 at 25 °C

* Adjusted and /or supplemented as required to meet performance criteria

Directions

Suspend 44 g of powder in 1 l of distilled water. Heat to boiling with constant stirring. Distribute into suitable containers and sterilize by autoclaving at 121 °C for 15 minutes. If necessary, cool to 45-50 °C and add the supplements or inhibitors as per use. Homogenize and pour into plates.

Description

In 1966, Ellner et al. of Columbia University described a new culture medium for medical bacteriology that could be used with or without the addition of blood to obtain abundant growth and characteristic colonies. Since then a lot of modifications of this medium have been made to serve several purposes.

The present formulation complies with the description as per the Harmonized Method of the European Pharmacopoeia 6th ed. for the microbiological examination of non-sterile products. In the test for Clostridia, Columbia Agar is used to verify the identity of the colonies sub-cultured from Reinforced Clostridial Medium in anaerobic conditions. The European Pharmacopoeia Methodology recommends the sterile addition of gentamicin sulphate equivalent to 20 mg/l of gentamicin base wherever necessary, before pouring the plates.

Quality control

Incubation temperature: 30-35 °C

Incubation time: 48 - 72 h

Inoculum: Practical range 50-100 CFU (productivity), according to ISO 11133:2014/Amd 1:2018 and Ph. Eur. Spiral Plate Method.

Microorganism	Growth	Remarks
<i>Staphylococcus aureus</i> ATCC® 6538	Productivity > 0.70	-
<i>Escherichia coli</i> ATCC® 8739	Productivity > 0.70	-
<i>Clostridium sporogenes</i> ATCC® 19404	Productivity > 0.70	-

References

- ELLNER, P.D., C.J. STOESEL, E. DRACKENFORD & F. VASSI (1966) A new culture medium for medical bacteriology. Am. J. Clin. Pathol. 45:502-504.
- 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.
- MacFADDIN, J. F. (1985) Media for Isolation-Cultivation-Identification- Maintenance of Medical Bacteria. Vol I. William & Wilkins. Baltimore. USA.
- USP 33 - NF 28 (2011) <62> Microbiological examination of non-sterile products: Test for specified microorganisms. Harmonised Method. USP Corp. Inc. Rockville. MD. USA.
- ISO 10272-1 Standard (2017) Microbiology of the food chain - Horizontal Method for detection and enumeration of *Campylobacter* spp. - Part 1: Detection method.
- ISO 10272-2 Standard (2017) Microbiology of the food chain - Horizontal Method for detection and enumeration of *Campylobacter* spp. - Part 2: Colony count-technique.

Storage

For laboratory use only. Keep tightly closed, away from bright light, in a cool dry place (+4 °C to 30 °C).