



Cooked Meat Medium (R.C.Medium)

M149S

Cooked Meat Medium (R.C.Medium) is used for cultivation of aerobes and anaerobes, especially pathogenic Clostridia and also for the maintenance of stock cultures.

Composition**

Ingredients	Gms / Litre
Beef heart, infusion from	500.000
Peptic digest of animal tissue	5.000
Sodium chloride	2.500
Final pH (at 25°C)	7.8±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 11.54 grams in 100 ml distilled water. Mix thoroughly and allow to stand for 15 minutes until all the particles are thoroughly wetted. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle And Interpretation

Cooked Meat Medium was originally developed by Robertson (1) for the cultivation of certain anaerobes isolated from wounds. The present formulation is recommended by BIS for the detection and enumeration of bacteria responsible for food poisoning especially *Clostridium welchii* (2). This medium with addition of further 10% Sodium chloride is used as a salt medium for isolation of Staphylococci (3). It is used for cultivation and maintenance of Clostridia and for determining proteolytic activity of anaerobes (4,5). FDA has recommended a slight modification of this medium for enumeration and identification of *Clostridium perfringens* from foods (6).

Cooked Meat Medium contains beef heart, the muscle protein which provides amino acids and other nutrients. It also contains glutathione a reducing substance which permits the growth of obligate anaerobes. The sulphhydryl groups which impart reducing effect are more available in denatured protein and hence the cooked meat is added in the medium. The growth in this medium is indicated by the turbidity or bubble formation by some organisms. Blackening and disintegration of the meat particles indicate proteolysis. For best results, medium should be used on the day it is prepared, otherwise it should be boiled or steamed for a few minutes and allowed to cool without agitation and then inoculated.

Quality Control

Appearance

Brown coloured granules

Colour and Clarity of prepared medium

Medium amber coloured clear to slightly opalescent supernatant over insoluble granules.

Reaction

Reaction of 11.54% w/v aqueous suspension at 25°C. pH : 7.8±0.2

pH

7.60-8.00

Cultural Response

Cultural characteristics observed after an incubation at 35°C for 40 - 48 hours.

Cultural Response

Organism	Inoculum (CFU)	Growth
Cultural Response <i>Clostridium botulinum</i> ATCC 25763	50-100	luxuriant

<i>Clostridium perfringens</i> ATCC 12924	50-100	luxuriant
<i>Clostridium sporogenes</i> ATCC 11437	50-100	luxuriant
<i>Enterococcus faecalis</i> ATCC 29212	50-100	luxuriant
<i>Streptococcus pneumoniae</i> ATCC 6303	50-100	luxuriant

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Reference

1. Robertson, 1916, J. Pathol. Bacteriol., 20:327.
2. Bureau of Indian Standards IS : 5887 (Part II) 1976, Second Reprint December 1994.
3. Bureau of Indian Standards IS : 5887 (Part IV) 1976.
4. Lenette and others (Eds.), 1985, Manual of Clinical Microbiology, 4th ed., ASM, Washington, D.C.
5. MacFaddin J.F., 1985, Media for Isolation - Cultivation - Identification - Maintenance of Medical bacteria, Vol. I, Williams & Wilkins, Baltimore.
6. U.S. Food and Drug Administration, 1984, Bacteriological Analytical Manual, 6th ed., AOAC, Arlington, Va.

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