Cooked Meat Medium (Robertson Cooked Meat Medium)

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

Summary
Clostridium is a large genus of Gram-positive spore-bearing anaerobes. They are normally present in soil, some are responsible for human and animal diseases and others are associated with food spoilage. Cooked Meat Medium was originally developed by Robertson for the cultivation of certain anaerobes isolated from wounds. The present formulation is a modification, also called as Chopped Meat Medium, which supports the growth of many spores forming and non-spore forming strict anaerobes. It has the ability to initiate growth of bacteria from very small inocula and to maintain the viability of cultures over long period. Mixed cultures of bacteria survive in Cooked Meat Medium without displacing the slower-growing organisms. The products of growth do not rapidly destroy the inoculated organisms and therefore it is an excellent medium for the storage of aerobic and anaerobic organisms. It is used for cultivation and maintenance of *Clostridia* and for determining proteolytic activity of anaerobes. FDA has recommended this medium for enumeration and identification of *Clostridium perfringens* from foods.

Principle
Cooked Meat Medium contains beef heart, the muscle protein, which provides amino acids and other nutrients. Beef heart also contains glutathione, a reducing substance that permits the growth of obligate anaerobes. The sulphydryl groups, which impart reducing effect, are more available in denatured protein and hence cooked meat is added in the medium. The addition of dextrose allows rapid and heavy growth of anaerobic bacteria in a short time and leads to more rapid identification of important anaerobes. 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. Inoculation should be made near the bottom of the tube in the meat particles for anaerobic cultures. Aerobes grow at the top whilst more anaerobic species grow deeper in the medium.

Formula*
Ingredients	**g/L**
Beef Heart, Infusion from 454 g	98.0
Proteose Peptone	20.0
Sodium Chloride	5.0
Dextrose	2.0
Final pH (at 25°C)	7.2 ± 0.2

*Adjusted to suit performance parameters

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2ºC-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Type of Specimen
Clinical samples – Blood; Food and dairy samples; Water samples

Specimen Collection and Handling
Ensure that all samples are properly labelled.
Follow appropriate techniques for handling samples as per established guidelines.
Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure.
The samples must be stored and tested within the permissible time duration.
After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions

1. Suspend 12.50 g of powder in 100 mL purified / distilled water.
2. Mix thoroughly and allow it to stand for 15 minutes until all the particles are thoroughly wetted.
3. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.

Quality Control

Dehydrated Appearance: Brown coloured granules.
Prepared Appearance: Medium amber coloured, clear to slightly opalescent supernatant over insoluble granules.
Cultural Response: Cultural characteristics observed after an incubation of 24-48 hours at 30°C -35°C.

Organism (ATCC)	**Growth**
Clostridium sporogenes (11437)	Good
Clostridium perfringens (12924)	Good
Enterococcus faecalis (29212)	Good
Streptococcus pneumoniae (6303)	Good

Interpretation of Results

1. Growth in this medium is indicated by turbidity or bubble formation by some organisms.
2. Blackening and disintegration of the meat particles indicate proteolysis.
3. Aerobes grow at the top whilst more anaerobic species grow deeper in the medium.

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Precautions/Limitations

1. 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.
2. Inoculation should be made near the bottom of the tube in the meat particles for anaerobic cultures.

Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. MacFaddin J. F., 1985, Media for Isolation - Cultivation - Identification - Maintenance of Medical bacteria, Vol. I, Williams & Wilkins, Baltimore.
2. Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Yolken R. H., (Ed.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
3. Robertson, 1916, J. Pathol. Bacteriol., 20:327.
4. U. S. Food and Drug Administration, 1984, Bacteriological Analytical Manual, 6th Ed., AOAC, Arlington, Va.
5. Collins C. H., Lyne P. M., Grange J. M., 1985, 7th Ed., Microbiological Methods.
6. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	**Product description**	**Pack Size**
201030170100	Dehydrated Culture Media	100 g
201030170500	Dehydrated Culture Media	500 g
203030310100	Bottle Media	100 mL