Technical Data Sheet

AS-1183 · Cooked Meat Medium

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1. Product Information

Product name	Cooked Meat Medium (Robertson's Cooked Meat Medium)
Catalogue number	AS-1183
Product type	Dehydrated culture medium (granules), enriched, non-selective
Usage rate	12.5 g per 100 mL (125 g/L); 1.25 g per 10 mL tube
Final pH (25 °C)	7.2 ± 0.2
Appearance, powder	Brown granules
Appearance, prepared	Amber, clear to slightly opalescent broth over insoluble meat particles
Storage, powder	10–30 °C, tightly closed, dry (hygroscopic)
Shelf life	See expiry date on the product label and batch COA

2. Intended Use

Cooked Meat Medium is used for the cultivation and maintenance of anaerobic bacteria, especially *Clostridium* species, and also supports many aerobic and facultative organisms. Typical uses include food microbiology, maintenance of anaerobic stock cultures, recovery of spore-forming anaerobes and teaching.

For laboratory microbiological testing, quality control and research use only. Not intended for direct use in food, human or veterinary therapeutic applications, diagnosis, or consumption.

3. Mode of Action

Beef heart solids supply nutrients and sulfhydryl-containing reducing substances that lower the oxidation-reduction potential, so anaerobes can grow among the meat particles at the bottom of the tube. Proteose peptone and dextrose provide nitrogen and energy, and sodium chloride maintains osmotic balance.

4. Typical Composition (g/L)

Ingredient	g/L
Beef heart solids (equivalent to 454 g beef heart)	98.00
Proteose peptone	20.00
Dextrose (glucose)	2.00
Sodium chloride	5.00
Total	**125.00**

Formula may be adjusted and/or supplemented to meet performance specifications.

5. Preparation

1. Suspend 12.5 g of granules in 100 mL of cold purified or distilled water, or add 1.25 g to each tube with 10 mL of water.
2. Mix and allow to stand for 15 minutes so that all particles are wetted.
3. Dispense into tubes or flasks, keeping the particles evenly distributed.
4. Sterilise by autoclaving at 121 °C for 15 minutes.
5. Use on the day of preparation. Otherwise, boil or steam for a few minutes and cool without agitation before inoculation, to remove dissolved oxygen.

6. Inoculation, Incubation and Interpretation

Inoculation	Close to the bottom of the tube, among the meat particles
Temperature	35–37 °C
Time	24–48 hours; slow-growing isolates may need longer
Spore test	Heat one inoculated tube at 80 °C for 10 minutes, then incubate as above
Growth	Turbidity and/or gas bubbles
Saccharolytic reaction	Meat turns pink or red, with gas and a sour odour (for example *C. perfringens*)
Proteolytic reaction	Meat blackens and breaks down, with a foul odour (for example *C. sporogenes*)

Reactions in the meat are presumptive. Confirm identity with further biochemical, serological or molecular tests.

7. Quality Control

Recommended QC organisms and acceptance criteria. Results for each batch are reported on the Certificate of Analysis.

QC organism	Strain	Inoculum (CFU)	Expected result
Clostridium perfringens	ATCC 12924	50–100 (≤ 100)	Luxuriant growth
Clostridium sporogenes	ATCC 11437	50–100 (≤ 100)	Luxuriant growth
Enterococcus faecalis	ATCC 29212	50–100 (≤ 100)	Luxuriant growth

Incubation: 35–37 °C, 40–48 hours.

8. Storage and Stability

- Dehydrated medium: store at 10–30 °C in a tightly closed container in a dry place. The granules are hygroscopic: reseal immediately after use. Do not use if caked or discoloured.
- Prepared medium: store at 2–8 °C. The shelf life of prepared medium should be established by the user.

9. Limitations

- The medium is non-selective. Aerobic and facultative organisms will also grow.
- Stored medium must be boiled or steamed and cooled before use to restore reducing conditions.
- Toxigenic *Clostridium* species must be handled under appropriate biosafety containment and any applicable regulations.

10. Comparable Products

Source	Product	Relationship
HiMedia Laboratories	M149 Cooked Medium (R.C. Medium)	Comparable published formulation
US FDA Bacteriological Analytical Manual	Media M42 Cooked Meat Medium	Comparable published formulation

11. Literature and References

1. Robertson M. Notes upon certain anaerobes isolated from wounds. *J Pathol Bacteriol*. 1916;20:327–349.

2. US Food and Drug Administration. *Bacteriological Analytical Manual*, Media M42: Cooked Meat Medium.
3. MacFaddin JF. *Media for Isolation–Cultivation–Identification–Maintenance of Medical Bacteria*, Vol. I. Williams & Wilkins, Baltimore; 1985.
4. Atlas RM. *Handbook of Microbiological Media*, 4th ed. CRC Press, Boca Raton; 2010.
5. Salfinger Y, Tortorello ML (eds). *Compendium of Methods for the Microbiological Examination of Foods*, 5th ed. American Public Health Association, Washington DC; 2015.
6. HiMedia Laboratories. Technical Data, M149 Cooked Medium (R.C. Medium).

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