Cooked Meat Medium

**DM 120** For the isolation and cultivation of anaerobic and aerobic organisms.

**Typical Formulation** grams per litre.

- Beef extract (RM20) 10.0
- Peptone A (RM50) 10.0
- Heart 35.0
- Sodium chloride 5.0

pH approx. 7.3

**Directions**

1. Using the calibrated measure, distribute 1.2g amounts of particles from the sachet or bulk container into 25ml universal bottles. Add 20ml of distilled or deionised water.
2. Autoclave at 121°C (15 p.s.i.) for 15 minutes.
3. Allow to cool before use.

**Description**

MAST Cooked Meat Medium, based on Robertson's formulation ¹ is a nutritious medium for the culture of aerobic, microaerophilic and anaerobic organisms. The broth gives good growth from minimal inocula and is therefore useful in the primary culture of clinical specimens containing few pathogens. It is a good medium for the storage of strains of bacteria: Gram-negative enteric bacteria, staphylococci and streptococci can be maintained over long periods of time in sealed containers.

The medium is particularly suitable for the cultivation, differentiation and storage of clostridial species and will indicate the proteolytic and saccharolytic activity of the species. The high buffering capacity of the heart tissue enables spores to survive indefinitely in the medium.

**In Use**

All containers should be tightly sealed for anaerobic culture and when the cultures are to be stored for long periods. It is also recommended that freshly reconstituted and sterilised medium is used. However, stored media may be used after boiling in a water bath, with the cap loose, to remove dissolved oxygen.

**Differential characteristics of Clostridia.**

Clostridia often possess saccharolytic and proteolytic activities but one generally predominates.

**Saccharolytic activity**

The heart tissue particles are not digested but reddened. Acid and gas are produced, possibly giving the cultures a sour smell. Examples of strains having saccharolytic activity are *Cl. septicum* and *Cl. welchii*.

**Proteolytic activity**

The heart tissue particles are totally decomposed or reduced in volume and blackened. The culture gives off a foul sulphurous odour. Examples of strains having proteolytic activity are *Cl. sporogenes*, *Cl. tetani* and *Cl. histolyticum*.

**References**

1. Robertson M. *J Path Bact.* 1916; 1 **20**: 327-348