Cooked Meat Medium w/ Glucose, Hemin and Vitamin K

M1040

Cooked Meat Medium w/ Glucose, Hemin and Vitamin K 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, granules	98.000
Peptic digest of animal tissue	20.000
Sodium chloride	5.000
Glucose	5.000
Yeast extract	5.000
Hemin	0.005
Vitamin K	0.001
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 13.3 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 with Glucose, Hemin and Vitamin K is a modification of the Cooked Meat Medium originally developed by Robertson (1) for cultivation of anaerobes isolated from wounds. Moore et al (2) have recommended this modified medium for subculturing of anaerobic isolates to be examined by gas liquid chromatography.

The medium contains Beef Heart granules, which provides amino acids and nutrients. It also contains glutathione, a reducing substance which permits the growth of obligate anaerobes. The sulphydryl groups which impart reducing effect are more available in denatured protein and hence the cooked meat is added in the medium. The added supplements glucose, yeast extract, hemin and vitamin K act as growth enhancers for anaerobic microorganisms.

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 13.3% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH
7.00-7.40

Cultural Response
M1040: Cultural characteristics observed after an incubation at 35-37°C for 40-48 hours.

Organism Cultural Response	Inoculum (CFU)	Growth
Clostridium butyricumATCC 13732	50-100	luxuriant

Clostridium perfringens ATCC 12924	50-100	luxuriant
Clostridium sporogenes ATCC 11437	50-100	luxuriant
Enterococcus faecalis ATCC 29212	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. Bacterial., 20:327.
2. Holdeman, Cato and Moore, 1977, Anerobic Laboratory Manual, 4th Ed, Virginia Polytechnical Institute and State Universtiy, Blacksburg, Va.

Revision : 2 / 2015