



## Egg Meat Medium

M735

Egg Meat Medium is used for the determination of proteolytic activity and maintaining stock cultures of anaerobic microorganisms.

### Composition\*\*

Ingredients	Gms / Litre
Beef muscles	454.000
Calcium carbonate	5.000
Egg white from (eggs)	6.000
Final pH ( at 25°C)	7.2±0.2

\*\*Formula adjusted, standardized to suit performance parameters

### Directions

Suspend 15 grams in 100 ml distilled water. Allow to stand with frequent agitation for thorough wetting. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Note : Due to presence of Calcium carbonate, the prepared medium forms opalescent solution with white precipitate.

### Principle And Interpretation

Organisms that are able to grow in the absence of oxygen are termed as anaerobic organisms. Depending upon their absolute requirement for an on-oxygen environment, they are either classified as facultative or obligate. Egg Meat Medium was used by Rettger for his studies on *Escherichia coli* and *Enterobacter aerogenes* (1). This medium contains particles of beef muscles, calcium carbonate and egg white. This medium was later used in studies of intestinal putrefaction (2). Egg Meat Medium was subsequently used in the study of spore-forming anaerobes including *Clostridium perfringens* (3, 4). This medium is also recommended by AOAC for maintenance of *Clostridium* used in testing of sporicidal activity of liquid and gaseous chemicals (5).

Beef muscle serves as sources of carbon, nitrogen, salts, vitamins and other nutrients required to support bacterial growth. Egg white serves a source of protein for the determination of proteolytic activity. Calcium carbonate helps to neutralize the acids and also helps in creating anaerobic atmosphere by displacing the oxygen in the medium.

Refer standard procedures for inoculation (5).

### Quality Control

#### Appearance

Light brown to brown homogeneous free flowing powder

#### Colour and Clarity of prepared medium

Light amber coloured, clear to slightly opalescent solution with white precipitate over brown coloured meat granules.

#### Reaction

Reaction of 15% w/v aqueous solution at 25°C. pH : 7.2±0.2

#### pH

7.00-7.40

#### Cultural Response

M735: Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours.

Organism	Inoculum (CFU)	Growth
<i>Clostridium perfringens</i> ATCC 12924	50-100	luxuriant
<i>Clostridium sporogenes</i> ATCC 11437	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. Rettger L. F., 1906, J. Biol. Chem., 2:71.
2. Rettger L. F., 1903. Am. J. Physiol., 8:284.
3. Reddish G. F. and Rettger L. F., 1924, J. Bacteriol., 9:13.
4. Reddish G. F. and Rettger L. F., 1923, J. Bacteriol., 8:375.
5. Horwitz, (Ed.), 2000, Official Methods of Analysis of AOAC International, 17th Ed., Vol. I,6. 3.05A (a) (4), AOAC International, Gaithersburg, Md.

Revision : 2 / 2015

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