



C. T. Agar

M1349

C. T. Agar is recommended for cultivation of *Myxobacteria* species.

Composition**

| Ingredients | Gms / Litre |
|-------------------------------------------|-------------|
| Casein enzymic hydrolysate | 20.000 |
| Magnesium sulphate. heptahydrate | 2.000 |
| Potassium phosphate buffer(0.02M, pH 7.6) | 0.725 |
| Agar | 20.000 |
| Final pH (at 25°C) | 7.6±0.2 |

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 41.71 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and pour into sterile Petri plates.

Principle And Interpretation

The *Myxobacteria* (slime bacteria) are a group of bacteria that predominantly live in the soil. They produce a number of biomedically and industrially useful chemicals, such as antibiotics that are secreted extracellularly (3). They typically travel in swarms (also known as wolf packs), containing many cells kept together by intercellular molecular signals. This close concentration of cells may be necessary to provide a high concentration of extracellular enzymes used to digest food. C.T. Agar was originally described by Dworkin (1) for accurate viable count of *Myxobacteria*. A distinctive feature of *Myxobacteria* is that when cells on the surface of a solid medium are deprived of specific nutrients, they shift from growth to development and begin to migrate, by means of gliding motility, into aggregation centers (2). C.T. Agar is used to maintain *Myxobacteria* to study their gliding motility. All *Myxobacteria* rely to a large extent on peptides and amino acids for nitrogen, carbon and energy. Casein enzymic hydrolysate provides the nutrients required for growth of *Myxobacteria*. The phosphate buffer helps to maintain pH of the medium. Due to this the culture can be maintained for a longer time on the Petri plates.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 2.0% agar gel.

Colour and Clarity of prepared medium

Yellow coloured, opalescent gel forms in Petri plates

Reaction

Reaction of 4.27% w/v aqueous solution at 25°C. pH : 7.6±0.2

pH

7.40-7.80

Cultural Response

M1349: Cultural characteristics observed after an incubation at 30-35°C for 1-4 weeks.

Organism

Growth

Cultural Response

Myxococcus fulvus ATCC 23093 good

Myxococcus xanthus ATCC 25232 good

Storage and Shelf Life

Store below 30°C in tightly closed container and prepared medium at 2-8°C. Use before expiry period on the label.

Reference

1. Dworkin M., 1962, J. Bacteriol., 84: 250-257.
2. Dworkin M., 1963 J. Bacteriol., 86; 67-72.
3. Reichenback H., 2001, J. Ind. Microbiol. Biotechnol., 27 (3) : 149

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