



## Kenknight & Munaier's Medium

M695

Kenknight & Munaier's Medium is used for isolating *Actinomyces* species from soil samples.

### Composition\*\*

| Ingredients                        | Gms / Litre |
|------------------------------------|-------------|
| Dextrose                           | 1.000       |
| Monopotassium dihydrogen phosphate | 0.100       |
| Sodium nitrate                     | 0.100       |
| Potassium chloride                 | 0.100       |
| Magnesium sulphate                 | 0.100       |
| Agar                               | 15.000      |

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

### Directions

Suspend 16.4 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 genera *Actinomyces*, belong to the fermentative *Actinomycetes* group. They cause a number of diseases, notably, actinomycosis and some opportunistic diseases (1). *Actinomycetes* have some unique properties that may be related to their ability to survive and grow in the soils. They are prolific producers of extracellular enzymes that degrade the complex macromolecule substrates commonly found in soils (2). The desiccation resistance properties of spore formers such as *Streptomyces* (3) are likely to be important to survive in soils that are often dry (4).

Kenknight and Munaier's medium is used for isolating *Actinomyces* species from soil samples (5). Dextrose serves as carbohydrate source for the growth of *Actinomyces*. Sodium nitrate serves as the source of nitrogen. Various salts in the medium not only buffer the medium but also provide essential ions required for the growth of *Actinomyces*.

### Quality Control

#### Appearance

Light yellow to brownish yellow homogeneous free flowing powder

#### Gelling

Firm, comparable with 1.5% Agar gel

#### Colour and Clarity of prepared medium

Light amber coloured, clear to slightly opalescent gel forms in Petri plates

#### Cultural Response

M695: Cultural characteristics observed after an incubation at 25-30°C for upto 7 days.

| Organism   | Growth    |
|--|-----------|
| <i>Actinomyces israelii</i> ATCC 10049                 | luxuriant |
| <i>Streptomyces albus</i> subsp <i>albus</i> ATCC 3004 | 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

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4. Balows A., Truper H. G., Dworkin M., Harder W., Schleifer K. H. (Eds.), The Prokaryotes, 2nd Ed., Vol. I, Springer-Verlag  
5. N.S. Subba Rao, Soil Microorganisms and Plant Growth, Oxford and IBH Publishing Co.

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