

## Technical Information

### Kenknight & Munaier's Medium

**Product Code: DM 1695**

**Application:** - Kenknight & Munaier's Medium is recommended 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

### Principle & 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 dessication 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 acts as the source of nitrogen. Various salts in the medium not only buffer the medium but also supply essential ions required for the growth of *Actinomyces*.

### Methodology

Suspend 16.4 grams of dehydrated media in 1000 ml distilled water. Mix thoroughly & heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Shake well before pour into sterile Petri plates.

### Quality Control

#### Appearance

Light yellow to brownish yellow homogeneous free flowing powder

#### Gelling

Firm, comparable with 1.5% Agar gel

#### Colour and Clarity

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

#### Cultural Response

DM1695: Cultural characteristics observed after an incubation at 25-30°C for up to 7 days.

#### Organism

*Actinomyces israelii* ATCC 10049

#### Growth

luxuriant

*Streptomyces albus subsp albus* ATCC 3004

good



Dehydrated Culture Media  
Bases / Media Supplements

## Storage and Shelf Life

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

**Prepared Media:** 2-8° in sealable plastic bags for 2-5 days.

## Further Reading

1. Collee J. G, Fraser A. G, Marmion B. P, Simmons A., 14th Ed., Mackie and MacCartney Practical Medical Microbiology, Churchill Livingstone.
2. MacCartney A. J., 1989, FEMS Microbiol. Rev., 46:145-163
3. McBride M. J., and Ensign J. C., 1987, J. Bacteriol., 169:4995-5001
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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