



# Technical Data

## Streptomyces Medium

M1330

Streptomyces Medium is recommended for the cultivation and maintenance of *Streptomyces kanamyceticus*.

### Composition\*\*

Ingredients	Gms / Litre
Glucose	5.000
L-Glutamic acid	4.000
Monopotassium phosphate	1.000
Sodium chloride	1.000
Magnesium sulphate, 7H <sub>2</sub> O	0.700
Ferrous sulphate, 7H <sub>2</sub> O	0.003
Agar	25.000
Final pH ( at 25°C)	7.0±0.2

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

### Directions

Suspend 36.34 grams of dehydrated medium 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 dispense as desired.

### Principle And Interpretation

*Streptomyces* i.e. aerobic Actinomycetes usually inhabit soil. In humans, the infections are limited to actinomycotic mycetoma. *Streptomyces* are considered to be a treasure for production of antibiotics. *Streptomyces kanamyceticus* is especially useful for the production of kanamycin A, B and also acetyltransferases (2). Streptomyces Medium is used for the cultivation and maintenance of *S. kanamyceticus*. This species is of significant use as kanamycin antibiotic is prepared (extracted) using these fungi.

Though many carbon sources have been used for the growth of *S. kanamyceticus*, glucose is found to be the most suitable carbon source for the production of antibiotic from it (1). L-Glutamic acid is the nitrogen source. The salts provide essential ions for the growth of *S. kanamyceticus*.

### Quality Control

#### Appearance

Off -white to light yellow homogeneous free flowing powder

#### Gelling

Firm, comparable with 2.5% Agar gel

#### Colour and Clarity of prepared medium

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

#### Reaction

Reaction of 3.63% w/v aqueous solution at 25°C. pH : 7.0±0.2

#### pH

6.80-7.20

#### Cultural Response

M1330: Cultural characteristics observed after an incubation at 25-30°C for upto 7 days.

#### Organism

#### Growth

#### Cultural Response

*Streptomyces kanamyceticus* luxuriant

ATCC 12853

### 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. Rodney A, Shukla A and Majumdar. African Journal of Biotechnology Vol 4 (9). 909-910, 2005.
2. Balows A., Truper H. G., Dworkin M., Harder W., Schleifer K. H., (Ed.), The Prokaryotes, 1992, 2nd Edition, Vol. III, Springer-Verlag.

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