

## Technical Information

### ISP Medium No. 4 (Inorganic Salt Starch Agar)

**Product Code: DM 1359**

**Application:** - ISP medium No. 4 (Inorganic Salt Starch Agar) is used for cultivation and characterization of *Streptomyces* species as per International Streptomyces Project.

#### Composition\*\*

Ingredients	Gms / Litre
Starch, soluble	10.000
Dipotassium phosphate	1.000
Magnesium sulphate. heptahydrate	1.000
Sodium chloride	1.000
Ammonium sulphate	2.000
Calcium carbonate	2.000
Ferrous sulphate, heptahydrate	0.001
Manganous chloride, 7H <sub>2</sub> O	0.001
Zinc sulphate, 7H <sub>2</sub> O	0.001
Agar	20.000
Final pH ( at 25°C)	7.2±0.2

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

#### Principle & Interpretation

ISP Medium No. 4 is formulated on the original formula of Shirling and Gottlieb <sup>(1)</sup> and is used for characterization of *Streptomyces* species.

Starch provides the energy source. Dipotassium phosphate acts as buffering system while sodium chloride maintains the osmotic equilibrium of the medium. The salts provide essential electrolytes and minerals.

Inoculate the plates by streaking, using 0.1 ml of the test culture enriched in ISP Medium No. 1 (DM1356).

#### Methodology

Suspend 36.5 grams of dehydrated medium in 1000 ml distilled water. Shake well & Heat just to boiling. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Agitate constantly while pouring into sterile Petri plates to obtain a uniform suspension.

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

#### Quality Control

##### Physical Appearance

Cream to yellow homogeneous free flowing powder

##### Gelling

Firm, comparable with 2.0% agar gel.

##### Colour and Clarity of prepared medium

Light amber coloured, opalescent gel forms in Petri plates

##### Reaction

Reaction of 3.65% w/v aqueous solution at 25°C. pH : 7.2±0.2

**pH Range** 7.00-7.40



Dehydrated Culture Media  
Bases / Media Supplements

### Cultural Response/Characteristics

DM 1359: Cultural characteristics observed after an incubation at 30-32°C for 48-72 hours.

#### Organism

*Streptomyces achromogenes* ATCC 12767

*Streptomyces albus subsp albus* ATCC 3004

*Streptomyces lavendulae* ATCC 8664

#### Growth

good-luxuriant

good-luxuriant

good-luxuriant

## Storage and Shelf Life

**Dried media:** Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

**Prepared Media:** 2-8<sup>0</sup> in sealable plastic bags for 2-5 days.

## Further Reading

1. Shirling E. B. and Gottlieb D., 1966, International J. Systemic Bacteriol. Vol 16 (3) :313.

## Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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