



ISP Medium No. 3

M358

ISP Medium No. 3 is used for the cultivation and characterization of *Streptomyces* species as per International Streptomyces Project.

Composition**

Ingredients	Gms / Litre
Oat Meal	20.000
Agar	18.000
Trace salts,	-
Ferric sulphate heptahydrate	0.001
Manganese chloride tetrahydrate	0.001
Zinc sulphate heptahydrate	0.001
Final pH (at 25°C)	7.3±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 38 grams (equivalent weight of dehydrated medium per litre) 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. Cool to 45-50°C and mix intermittently while pouring into sterile Petri plates for even distribution of oatmeal.

Principle And Interpretation

ISP Medium No. 3 is formulated based on the original formula of Shirling and Gottlieb (1). The medium is often referred to as Oat Meal Agar.

Oatmeal provides the necessary nutrients for growth of *Streptomyces*. The trace salts solution that constitutes of ferric sulphate, manganese chloride and zinc sulphate provide the essential electrolytes and minerals. The concentration of these salts used per litre in the medium is 1.0 mg (concentration of 0.1 mg%). Inoculate ISP Medium No.1 (M356) with the test organisms and incubate at 30°C ± 0.2 for upto 96 hours.

Inoculate the plates of ISP Medium No. 3 by streaking, using 0.1 ml of this test culture inoculum.

Quality Control

Appearance

Cream to beige homogeneous free flowing powder

Gelling

Firm, comparable with 1.8% Agar gel

Colour and Clarity of prepared medium

Very light amber coloured opalescent gel with precipitation forms in Petri plates.

Reaction

Reaction of 3.8% w/v aqueous solution at 25°C. pH : 7.3±0.2

pH

7.10-7.50

Cultural Response

M358: Cultural characteristics observed after an incubation at 35-37°C for 48-72 hours.

Organism	Growth
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Cultural Response

Streptomyces achromogenes good-luxuriant

ATCC 12767

Streptomyces albus subsp good-luxuriant

albus ATCC 3004

Streptomyces lavendulae good-luxuriant
ATCC 8664

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

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