

TM 129 - ISP MEDIUM NO. 4 (INORGANIC SALT STARCH AGAR)

INTENDED USE

For cultivation and characterization of *Streptomyces* as per International Streptomyces Project.

PRODUCT SUMMARY AND EXPLANATION

ISP Medium No. 4 is formulated based on the original formula of Shirling and Gottlieb and is used for characterization of *Streptomyces* species.

COMPOSITION

Ingredients	Gms / Ltr
Starch, soluble	10.000
Dipotassium hydrogen 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, heptahydrate	0.001
Zinc sulphate heptahydrate	0.001
Agar	20.000

PRINCIPLE

Starch provides the energy source. Dipotassium hydrogen 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.

INSTRUCTION FOR USE

- Dissolve 37 grams of dehydrated medium in 1000 ml purified/distilled water.
- Heat just to boiling.
- Sterilize by autoclaving at 15 psi 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 SPECIFICATIONS

Appearance of Powder	: Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium	: Light amber coloured, opalescent gel forms in Petri plates.
pH (at 25°C)	: 7.2±0.2

INTERPRETATION

Cultural characteristics observed after an incubation.



Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
<i>Streptomyces achromogenes</i>	12767	50-100	Good-luxuriant	>=50 %	30-32°C	48-72 Hours
<i>Streptomyces albus subsp albus</i>	3004	50-100	Good-luxuriant	>=50 %	30-32°C	48-72 Hours
<i>Streptomyces lavendulae</i>	8664	50-100	Good-luxuriant	>=50 %	30-32°C	48-72 Hours

PACKAGING:

In pack size of 100 gm and 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.










Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
2. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
3. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, American Public Health Association, Washington, D.C.
4. Sherling E.B. and Gotlieb.,1966, International J. Systemic Bacteriol., 16:3.

 GMP Good Manufacturing Practices Certified	 Best Before	 QTY. Quantity	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 LOT/ B. NO. Lot / Batch Number	 Consults Instructions for Use	 QR Code	

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**



Revision: 08 Nov., 2019

