

TM 130 - GLYCEROL ASPARAGINE AGAR BASE (ISP MEDIUM NO. 5)

INTENDED USE

For cultivation of *Streptomyces* species as per International Streptomyces Project.

PRODUCT SUMMARY AND EXPLANATION

ISP Medium No. 5 (Glycerol Asparagine Agar Base) is based on the formulation described by Shrilling and Gottlieb and is used for cultivation and characterization of *Streptomyces* species as recommended by the International Streptomyces Project. Being primarily soil inhabitants, *Streptomyces* are most commonly limited to causing actinomycotic mycetoma. Areas more prone to formation of mycetomas are those that are frequently traumatized or that come into contact with soil.

COMPOSITION

Ingredients	Gms / Ltr
L-Asparagine	1.000
Dipotassium hydrogen phosphate	1.000
Trace salt solution (ml)	1.000
Agar	20.000
1ml of Trace salt solution contains	-
Ferrous sulphate heptahydrate	0.001
Manganese chloride tetrahydrate	0.001
Zinc sulphate heptahydrate	0.001

PRINCIPLE

This medium provides consistent and reproducible characteristic features of *Streptomyces*. Glycerol serves as the carbon source while asparagine is the amino acid source for the growth of *Streptomyces* species. Trace mineral requirement of *Streptomyces* is satisfied by the trace salt solution, which contains various salts. Dipotassium phosphate buffers the medium.

INSTRUCTION FOR USE

- Dissolve 23.00 grams in 1000 ml purified/distilled water containing 10 ml glycerol.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Off-white to yellow homogeneous free flowing powder.
Appearance of prepared medium	: Light amber coloured, clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C)	: 7.4±0.2

INTERPRETATION

Cultural characteristics observed after an incubation.



Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
<i>Streptomyces albus</i> subsp <i>albus</i>	3006	50-100	Good-luxuriant	>=50 %	25-30°C	up to 15 days
<i>Streptomyces lavendulae</i>	8664	50-100	Good-luxuriant	>=50 %	25-30°C	up to 15 days
<i>Streptomyces peucetius</i>	29050	50-100	Good-luxuriant	>=50 %	25-30°C	up to 15 days

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. Shirling E. B. and Gottlieb D., 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

