



PRODUCT SPECIFICATION SHEET

Glycerol Asparagine Agar B (ISP Medium No. 5) (DM778)

Intended Use

Glycerol Asparagine Agar B (ISP Medium No. 5) (DM778) is recommended for cultivation of *Streptomyces* species as per International Streptomyces Project.

Product Summary and Explanation

The original formulation of ISP Medium No. 5 (Glycerol Asparagine Agar Base) is as described by Shirling and Gottlieb⁽¹⁾ and is used for cultivation and characterization of *Streptomyces* species as recommended by the International Streptomyces Project. *Streptomyces* is the largest genus of Actinobacteria, found predominantly in soil and are most commonly limited to causing actinomycotic mycetoma. Formation of mycetomas arises in those areas that are frequently traumatized or that come into contact with soil.⁽²⁾

Principles of the Procedure

Glycerol Asparagine Agar B (ISP Medium No. 5) contains nutrients which provide steady and reproducible characteristic features of *Streptomyces*. Glycerol serves as the carbon source. Asparagine is an amino acid source for the growth of *Streptomyces* species. The trace salt solution contains various salts, which satisfies the trace mineral requirement of *Streptomyces*. Dipotassium phosphate acts as the buffering agent in the medium.

Formula / Liter

Ingredients	Gms / Liter
L-Asparagine	1.00
Dipotassium phosphate	1.00
*Trace salt solution (ml)	1.00
Agar	20.00
1ml of Trace salt solution contains	--
Ferrous sulphate heptahydrate	0.001
Manganese chloride tetrahydrate	0.001
Zinc sulphate heptahydrate	0.001
Final pH: 7.4 ± 0.2 at 25°C	
Formula may be adjusted and/or supplemented as required to meet performance specifications	

Precautions

1. For Laboratory Use only.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.

Directions

1. Suspend 23 grams of the medium in one liter of distilled water containing 10 ml glycerol.
2. Heat to boiling to dissolve the medium completely.
3. Autoclave at 121°C, 15 psi pressure, for 15 minutes / validated cycle.
4. Mix well and pour into sterile Petri plates.

Quality Control Specifications

Dehydrated Appearance	Off-white to yellow homogeneous free flowing powder
Prepared Medium	Light amber coloured, clear to slightly opalescent gel forms in Petri plates
Reaction of 2.3% Solution containing 1.0% glycerol	pH : 7.3 ± 0.2 at 25°C
Gel Strength	Firm, comparable with 2.0% agar gel





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Expected Cultural Response: Cultural characteristics observed after an incubation at 25-30°C upto 15 days.

Sr. No.	Organisms	Results to be achieved
		Growth
1.	<i>Streptomyces albus subsp albus ATCC 3006</i>	good-luxuriant
2.	<i>Streptomyces lavendulae ATCC 8664</i>	good-luxuriant
3.	<i>Streptomyces peucetius ATCC 29050</i>	good-luxuriant

The organisms listed are the minimum that should be used for quality control testing.

Test Procedure

Refer appropriate references for standard test procedures.

Results

Refer appropriate references and test procedures for interpretation of results.

Storage

Store the sealed bottle containing the dehydrated medium at 10- 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light.

Expiration

Refer to the expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitations of the Procedure

1. For identification, organisms must be in pure culture. Morphological, biochemical and/or serological tests should be performed for final identification.
2. Consult appropriate texts for detailed information and recommended procedures.

Packaging

Product Name : Glycerol Asparagine Agar B (ISP Medium No. 5)

Product Code : DM778

Available Pack sizes : 100gm / 500gm

References

1. Shirling E. B. and Gottlieb D., 1966, International J. Systemic Bacteriol., 16:3.
2. Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Tenover F. C., (Eds.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.

Further Information

For further information please contact your local MICROMASTER Representative.





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MICROMASTER LABORATORIES PRIVATE LIMITED
 Unit 38/39, Kalpataru Industrial Estate,
 Off G.B. Road, Near 'R-Mall', Thane (W) - 400607. M.S. INDIA.
 Ph: +91-22-25895505, 4760, 4681. Cell: 9320126789.
 Email: micromaster@micromasterlab.com
sales@micromasterlab.com

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Prepared By	Checked By	Approved By
 01.01.2018	 01.01.2018	 01.01.2018
Microbiologist	Head Quality Control	Head Quality Assurance

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