**OXFORD LAB FINE CHEM LLP**
ISO 9001-2008 Certified Company

**Regd Office:** Unit no 12, 1st Floor,
Neminath Industrial Estate No.6,
Navghar, Vasai (East), Palghar - 410210.
Maharashtra, INDIA.

**Tel:** +91 250 2390032 / 2390989 / 2390990
**Email:** sales@oxfordlabchem.com /
info@oxfordlabchem.com
**Web:** www.oxfordlabchem.com

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# TECHNICAL DATA SHEET

# Actinomycete Isolation Agar

## Principle

**Actinomycete agar contains sodium caseinate and asparagine serve as nitrogen and amino acid source. Sodium propionate is a substrate for anaerobic fermentation. Dipotassium phosphate provides the buffering system. The magnesium sulfate and ferrous sulfate provide sources of sulfates and metallic ions required for enzyme activity and other metabolic process. The addition of glycerol serves as an additional carbon source.**

**Use: For isolation and propagation of Actinomycetes from soil and water.**

## Contents*

| Ingredients | Gram/Liter |
|---|---|
| Sodium Caseinate | 2.000 |
| L-Asparagine | 0.100 |
| Sodium Propionate | 4.000 |
| Dipotassium Phosphate | 0.500 |
| Magnesium Sulphate | 0.100 |
| Ferrous Sulphate | 0.001 |
| Agar | 15.000 |
| pH at 25 ˚C | 8.1 ±0.2 |

*** Formula adjusted for optimum performance and parameters**

**Directions: Dissolve 22.00 grams in 5% glycerol solution, boil to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 min, cool it to 42-45 °C and distribute aseptically in petri plates. Ensure complete solidification and inoculate test sample aseptically.**

## Specimens' types analyzed

**Soil and water samples etc.**

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## Precautions to be taken

**All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.**

## Performance and Evaluation

**The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.**

## Quality Control

| | |
|---|---|
| **Appearance** | **Light beige colored free flowing, homogeneous powder** |
| **Reaction of 2.2% solution** | **8.1 ±0.2 at 25 ˚C** |
| **pH** | **7.90- 8.30** |
| **Gelling** | **Firm comparable with 1.5% agar gel** |
| **Color and clarity of ready medium** | **Light amber colored opalescent gel** |
| **Growth Promotion properties** | **Best at ≤ 100 CFU at 33-37 ºC for 24-72 h** |
| **Indicative properties** | **Optimum at ≤ 100 CFU at 33-37 ºC for 24-72 h** |
| **Negative control** | **Performed using sterile distilled water** |

**Different Microbial Response: Cultural characteristics observed after incubation at 33-37°C for 36-72 hours. Inoculum 50-100 CFU.**

| Organism | ATCC | Growth | Recovery |
|---|---|---|---|
| ***Streptomyces lavendulae*** | **8664** | **Luxuriant** | **≥ 60%** |

**Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label.**
**Note: Sterilize media immediately after reconstitution.**

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**Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.**

## Reference

1. ***Adams B. A., (929), Water and Water Eng., 31:327.***
2. ***Atlas, R. M. (2005). Handbook of media for environmental microbiology. CRC press.***
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4. ***Difco Manual (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.***
5. ***Eaton A. D., Clesceri L. S. and Greenberg A. W., (Eds.), (2005), Standard Methods for the Examination of Water and Wastewater, 21st Ed., APHA, Washington, D.C.***
6. ***Lechevalier H. A., (1975), Environ. Protection Technol. Ser., EPA-600/ 2-75-031, U. S. Environmental Protection Agency, Cincinnati, Ohio***

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