OXFORD LAB FINE CHEM LLP
ISO 9001-2008 Certified Company

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Oxford
Range of
Laboratory Chemicals

TECHNICAL DATA SHEET

Zinc Solubilizing Agar

Principle

Zinc is one of the essential micronutrients required for optimum growth of plants. Zinc solubilizing agar is composed of dextrose, ammonium sulphate, potassium chloride, dipotassium hydrogen phosphate, magnesium sulphate, zinc oxide and agar. Dextrose acts as an energy source. Ammonium sulphate, potassium chloride, magnesium sulphate and phosphates provide essential ions required for promoting growth of zinc solubilizing bacteria. Zinc oxide is source of zinc Agar is solidifying agent. The zinc solubilizing microorganisms are identified by clear haloes around the colonies.

Use: For isolation and detection of zinc solubilizing soil microorganisms.

Contents*

Ingredients	Gram/Litre
Dextrose	10.000
Ammonium Sulphate	1.000
Potassium Chloride	0.200
Magnesium Sulphate	0.200
Dipotassium Hydrogen Phosphate	0.100
Zinc Oxide	1.000
Agar	15.000

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

Directions: Dissolve 27.50 grams in 1000 ml distilled water. Boil to dissolve the medium completely and 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 samples, etc.

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Precautions to be taken

These microbial media are intended for the in-vitro use only. 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	**Off white colored free flowing, homogeneous powder**
Gelling	**Firm comparable with 1.5% agar gel**
Color and clarity of ready medium	**Off white colored opalescent gel**
Growth Promotion properties	**Best at ≤ 100 CFU at 32-37 ºC for 18-72 h**
Indicative properties	**Optimum at ≤ 100 CFU at 32-37 ºC for 18-48 h**
Negative control	**Performed using sterile distilled water**

Different Microbial Response: Cultural characteristics observed after incubation at 25-30°C for 3-4 days. Inoculum 50-100 CFU.

Organism	ATCC	Growth	Zinc solubilization
Pseudomonas fluorescens	**13525**	**Luxuriant**	**Clear haloes around the colonies**
Bacillus cereus	**10876**	**Luxuriant**	**Clear haloes around the colonies**

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

Subba Rao, (1977), Soil Microorganisms and Plant Growth, Oxford and IBH Publishing Co., India

Disclaimer:

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