

## TECHNICAL DATA SHEET

### Aleksandrow Agar (KSB)

#### Principle

Aleksandrow agar is consist of salts like magnesium sulphate, calcium carbonate and potassium alumino silicate, ferric chloride which support the growth of potassium solubilizing bacteria by providing the essential minerals. Dextrose is carbon and energy source. The potassium alumino silicates serve as inorganic source of potassium salts. Potassium solubilizing bacteria utilize and solubilizes potassium alumino silicates and form a clear zone around the colony.

**Use:** For isolation and detection of potassium solubilizing bacteria from soil sample

#### Contents\*

Ingredients	Gram/Litre
Magnesium Sulphate	0.500
Calcium Carbonate	0.100
Potassium Alumino Silicate	2.000
Ferric Chloride	0.005
Calcium Phosphate	2.000
Dextrose	5.000
Agar	20.000
pH at 25°C	7.2 ±0.2

\* Formula adjusted for optimum performance and parameters

**Directions:** Dissolve 29.60 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

Pure cultures, agriculture isolates and soil samples etc.

# OXFORD LAB FINE CHEM LLP

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**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



## 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	Cream to off white colored free flowing, homogeneous powder
Reaction of 2.96% solution	7.2 ±0.2 at 25 °C
pH	7.00- 7.40
Gelling	Firm comparable with 2.0% agar gel
Color and clarity of ready medium	Cream to off white colored opaque gel with white precipitate
Growth Promotion properties	Best at ≤ 100 CFU at 32-37 °C for 18-72 h
Indicative properties	Optimum at ≤ 100 CFU at 32-37 °C for 18-48 h
Negative control	Performed using sterile distilled water

**Different Microbial Response: Cultural characteristics observed after incubation at 35±2°C for 24-48 hours.**

Organism	Inoculum (CFU)	Growth	Potassium solubilizing
<i>Pseudomonas aeruginosa</i> (ATCC 27853)	50-100	Luxuriant	Positive reaction, clear zone surrounding the colony
<i>Potassium solubilizing</i> (Lab isolate)	50-100	Luxuriant	Positive reaction, clear zone surrounding the colony

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**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.

**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. *Atlas, R. M. (2004). Handbook of microbiological media. CRC press.*
2. *Atlas, R. M. (2005). Handbook of media for environmental microbiology. CRC press.*
3. *Difco Manual (1998). 11<sup>th</sup> Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.*
4. *Subba Rao, (1977), Soil Microorganisms and Plant Growth, Oxford and IBH Publishing Co., India.*

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