OXFORD LAB FINE CHEM LLP
ISO 9001-2008 Certified Company

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Oxford
Range of
Laboratory Chemicals

TECHNICAL DATA SHEET

Azotobacter Broth (Mannitol)

Principle

Azotobacter mannitol broth consists of magnesium sulphate, potassium hydrogen phosphate, Dipotassium hydrogen phosphate, calcium chloride, sodium molybdate, ferric chloride and mannitol. Mannitol is carbon source. Magnesium sulphate, calcium chloride, sodium molybdate and ferric chloride provide essential ions and source of trace elements required for the metabolic activities of microorganisms. Potassium phosphates act as buffering agent.

Use: For cultivation of Mannitol positive Azotobacter species from soil.

Contents*

Ingredients	Gram/Litre
Dipotassium Hydrogen Phosphate	0.050
Potassium Hydrogen Phosphate	0.150
Magnesium Sulphate	0.200
Calcium Chloride	0.020
Sodium Ammonium Molybdate	0.002
Ferric Chloride	0.00009
Mannitol	10.000
pH at 25˚C	7.6 ± 0.2

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

Directions: Dissolve 10.40 grams in 1000 ml distilled water, 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 inoculate test sample aseptically.

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.

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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 1.04% solution	**7.6 ±0.2 at 25 ˚C**
pH	**7.40- 7.80**
Color and clarity of ready medium	**Clear slightly opalescent solution**
Growth Promotion properties	**Best at ≤ 100 CFU at 24-30 ºC for 18-72 h**
Indicative properties	**Optimum at ≤ 100 CFU at 24-30 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 24-48 hours

Organism	ATCC	Inoculum (CFU)	Growth
Azotobacter beijerinckii	**12981**	**50-100**	**Luxurious**

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.

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Reference

1. **Atlas, R. M. (2005).** ***Handbook of media for environmental microbiology*****. CRC press.**
2. **Pelczar M. Jr., (1957),** ***Manual of Microbiological Methods.*** **McGraw Hill, New York**

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