

## TECHNICAL DATA SHEET

### Azotobacter Broth (Glucose)

#### Principle

Azotobacter glucose broth consists of magnesium sulphate, potassium hydrogen phosphate, Dipotassium hydrogen phosphate, calcium chloride, sodium molybdate, ferric chloride and glucose. Glucose 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 isolation, cultivation and identification of Glucose positive Azotobacter species from soil.

#### Contents\*

Ingredients	Gram/Liter
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
Glucose	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.

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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	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 °C for 18-72 h
Indicative properties	Optimum at ≤ 100 CFU at 24-30 °C 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
<i>Azotobacter beijerinckii</i>	12981	50-100	Luxuriant

**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. Pelczar M. Jr., (1957), Manual of Microbiological Methods. McGraw Hill, New York.

## *Disclaimer:*

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