Ashby's Mannitol Agar

Intended Use
Ashby's Mannitol Agar is used for cultivation of *Azotobacter* species by using mannitol as carbon source.

Summary
Azotobacter is a genus of free-living diazotrophic bacteria which have the highest metabolic rate. *Azotobacters* are chemoorganotrophic, using sugars, alcohols and salts of organic acids for growth. They can non-symbiotically fix atmospheric nitrogen aerobically by their unique mode of metabolism. They also synthesize biologically active substances, which attributes to improving seed germination, plant growth etc.

Principle
Ashby's Media are formulated as described by Subba Rao, 1977. It is used for isolation of *Azotobacter*, a non-symbiotic nitrogen fixing bacteria which uses mannitol as a carbon source and atmospheric nitrogen as nitrogen source. Dipotassium phosphate provides buffering to the medium. Various essential ions required for promoting growth of *Azotobacter* are also available in this medium.

Formula*

Ingredients	g/L
Mannitol	20.0
Dipotassium Phosphate	0.2
Magnesium Sulphate	0.2
Sodium Chloride	0.2
Potassium Sulphate	0.1
Calcium Carbonate	5.0
Agar	15.0
Final pH (at 25°C)	7.4± 0.2

*Adjusted to suit performance parameters

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Type of Specimen
Soil and Water samples

Specimen Collection and Handling
Ensure that all samples are properly labelled.
Follow appropriate techniques for handling samples as per established guidelines.
Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure The samples must be stored and tested within the permissible time duration.
After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions
1. Suspend the 40.7 g of the powder in 1000 mL purified / distilled water.
2. Mix thoroughly.
3. Heat gently with frequent agitation to dissolve the powder completely.
4. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.

Quality Control
Dehydrated Appearance: Off white coloured, homogenous, free flowing powder.
Prepared Appearance: Whitish opalescent gel forms in petridishes.
Cultural Response: Cultural characteristics observed after incubation of 5 days at 30°C-35°C.

Organism (ATCC)	Growth
Azotobacter nigricans (35009)	Good
Azotobacter vinelandii (478)	Good

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. Subba Rao, 1977, Soil Microorganisms and Plant Growth, Oxford and IBH Publishing Co., India.
2. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201010300100	Dehydrated Culture Media	100 g
201010300500	Dehydrated Culture Media	100 g