



Ashbys Glucose Agar

M713

Ashbys Glucose Agar is used for cultivation of *Azotobacter* species that can use glucose and atmospheric nitrogen as source of carbon and nitrogen respectively.

Composition**

Ingredients	Gms / Litre
Glucose	20.000
Dipotassium phosphate	0.200
Magnesium sulphate	0.200
Sodium chloride	0.200
Potassium sulphate	0.100
Calcium carbonate	5.000
Agar	15.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 40.7 grams in 1000 ml distilled water. Heat just to boiling. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and pour into sterile Petri plates.

Note: Due to presence of calcium carbonate, the prepared medium forms opalescent solution with white precipitate .

Principle And Interpretation

Azotobacter is a genus of free-living diazotrophic bacteria which have the highest metabolic rate compared to any other microorganism.

Azotobacters are chemoorganotrophic, using sugars, alcohols and salts of organic acids for growth.

Ashbys Agar Media are formulated as described by Subba Rao (1). It is used for isolation of *Azotobacter* , a non-symbiotic nitrogen fixing bacteria which uses glucose as a carbon source and atmospheric nitrogen as nitrogen source. Besides the ability to fix atmospheric nitrogen, *Azotobacter* also synthesize biologically active substances which attributes to improving seed germination, plant growth etc. Dipotassium phosphate provides buffering to the system. Various essential ions required for promoting growth of *Azotobacter* are also available in this medium

Quality Control

Appearance

White to cream homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Whitish, opalescent gel forms in Petri plates

Reaction

Reaction of 4.07% w/v aqueous solution at 25°C. pH : 7.4±0.2

pH

7.20-7.60

Cultural Response

M713: Cultural characteristics observed after an incubation at 35-37°C for upto 5 days.

Organism

Azotobacter vinelandii
ATCC 478

Growth

good-luxuriant

Storage and Shelf Life

Please refer disclaimer Overleaf.

Store below 30°C in tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label.

Reference

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

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Disclaimer :

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