



## Azotobacter Agar (Sucrose)

M1944

Azotobacter Agar (Sucrose) is recommended for isolation, cultivation and identification of sucrose positive *Azotobacter* species from soil.

### Composition\*\*

Ingredients	Gms / Litre
Sucrose	20.000
Potassium dihydrogen phosphate	0.200
Ferric chloride	0.001
Dipotassium hydrogen phosphate	0.800
Yeast Extract	0.500
Magnesium sulphate.7H <sub>2</sub> O	0.200
Calcium sulphate.2H <sub>2</sub> O	0.100
Sodium molybdate, 2H <sub>2</sub> O	0.001
Agar	15.000
Final pH ( at 25°C)	7.2±0.2

\*\*Formula adjusted, standardized to suit performance parameters

### Directions

Suspend 36.67 grams (the equivalent weight of dehydrated medium per litre) in 1000 ml of distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15lbs pressure (121°C) for 15 minutes. If slight precipitate occurs after autoclaving distribute it evenly before pouring into sterile Petri plates.

### Principle And Interpretation

Bacteria of the family *Azotobacteraceae* constitute the majority of heterotrophic free-living nitrogen fixing bacteria (1). *Azotobacter* is a genus of free-living diazotrophic bacteria which have the highest metabolic rate compared to any other microorganisms. *Azotobacters* have generated a good deal of interest in the scientific community because of their unique mode of metabolism, by which they can fix nitrogen aerobically. Azotobacter Agar (Sucrose) is used for isolation and cultivation of sucrose positive *Azotobacter* species from soil (2).

### Quality Control

#### Appearance

Off white to beige homogeneous free flowing powder

#### Gelling

Firm, comparable with 1.5% Agar gel

#### Colour and Clarity of prepared medium

Yellow coloured, clear to slightly opalescent gel with a slight precipitate forms in Petri plates.

#### Reaction

Reaction of 3.67% w/v aqueous solution at 25°C. pH : 7.2±0.2

#### pH

7.00-7.40

#### Cultural Response

Cultural characteristics observed after an incubation at 25-30°C for 24-48 hours.

#### Cultural Response

Organism	Growth
<i>Azotobacter beijerinckii</i> ATCC 12981	good-luxuriant
<i>Azotobacter nigricans</i> ATCC 35009	good-luxuriant

## Storage and Shelf Life

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 N. S., 1977, Soil Microorganisms and Plant Growth, Oxford and IBH Publishing Co., New Delhi.
- 2.Pelczar M. Jr., 1957, Manual of Microbiological Methods.

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