



Dehydrated Culture Media  
Bases / Media Supplements

## Technical Information

### Burks Medium

**Product Code: DM 1707**

**Application:** - Burks Medium is used for isolation and cultivation of nitrogen fixing bacteria such as *Azotobacter* species from soil.

### Composition\*\*

Ingredients	Gms / Litre
Magnesium sulphate	0.200
Dipotassium phosphate	0.800
Monopotassium phosphate	0.200
Calcium sulphate	0.130
Ferric chloride	0.00145
Sodium molybdate	0.000253
Sucrose	20.000

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

### Principle & Interpretation

Nitrogen fixing organisms are free-living bacteria, which grow well on a nitrogen free medium by utilising atmospheric nitrogen gas for their cell protein synthesis. This cell protein is then mineralised in soil after the death of the cells, thereby increasing the nitrogen availability for the crop plants in the soil. Burks medium is recommended for detection of nitrogen fixing organisms such as *Azotobacter* species from soil<sup>(1)</sup>.

This medium contains inorganic salts along with carbohydrate source but lacks nitrogen source. Nitrogen fixing bacteria are able to fix atmospheric nitrogen and grow when cultured on this nitrogen-free medium.

### Methodology

Suspend 21.3 grams of powder media in 1000 ml distilled water. Shake well & heat if necessary to dissolve the medium completely.

Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and dispense as desired.

### Quality Control

#### Physical Appearance

White to cream homogeneous free flowing powder

**Colour and Clarity of prepared medium** Colourless clear solution over a white precipitate.

#### Cultural Response/ characteristics

DM 1707: Cultural characteristics after an incubation at 30°C for 7 days.

#### Organism

#### Growth

*Azotobacter beijerinckii* ATCC 12981

good-luxuriant

*Azotobacter nigri cans* ATCC 35009

good-luxuriant

### Storage and Shelf Life

**Dried Media** : Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

**Prepared Media** : 2-8° in sealable plastic bags for 2-5 days.





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## Further Reading

1. Subba Rao N. S. 1977, In: Soil Microorganisms and Plant Growth, Oxford & IBH Publishing Co., New Delhi, Pages 254-255.

## Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at **CDH** is true and accurate
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