

Product Data Sheet

AZOTOBACTER AGAR (MANNITOL)

Product No. GB-DCM-00053-1A

INTENDED USE

For isolation, cultivation and identification of mannitol positive Azotobacter species from soil.

PRODUCT SUMMARY

Bacteria of the family Azotobacteraceae constitute the majority of heterotrophic free-living nitrogen fixing bacteria. 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 (Mannitol) is used for isolation and cultivation of mannitol positive Azotobacter species from soil. It is also useful for maintenance of Azotobacter species by adding extra 1% Mannitol to the medium as specified by the American Type Culture Collection.

Product Specifications

Ingredients	Gms / Ltr
Dipotassium hydrogen phosphate	1.000
Magnesium sulphate	0.200
Sodium chloride	0.200
Ferrous sulphate	0.005
Soil extract	5.000
Mannitol	20.000
Glucose	10.000

PRINCIPLE

The medium contains glucose which provides nutrients to the media. Sodium chloride helps in the maintenance of the equilibrium. Phosphates present maintain buffering action to the media.



INSTRUCTION FOR USE

- Dissolve 41.4 grams in 1000 ml of purified / distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes. Cool to 45-50°C.
- If slight precipitate occurs after autoclaving, distribute it evenly before pouring into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder: Off-white to beige homogeneous free flowing powder.
 Appearance of prepared medium : Yellow coloured, clear to slightly opalescent gel with a slight precipitate forms in Petri plates.
 pH (at 25°C) : 8.3 ± 0.2

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 25°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration:

Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
Azotobacter beijerinckii	12981	50-100	Luxuriant	>=50%	35 - 37°C	18-24 Hours
Azotobacter nigricans	35009	50-100	Luxuriant	>=50%	35 - 37°C	18-24 Hours

This product is for research use only.