Azospirillum Medium w/ 0.17% Agar (Twin Pack)

M518

Azospirillum Medium with 0.17% Agar is used for the cultivation of *Azospirillum* species.

Composition**

Ingredients	Gms / Litre
Part A	-
Malic acid	5.000
Dipotassium phosphate	0.500
Ferrous sulphate	0.500
Manganese sulphate	0.010
Magnesium sulphate	0.200
Sodium chloride	0.100
Bromo thymol blue	0.002
Sodium molybdate	0.002
Calcium chloride	0.020
Agar	1.750
Part B	-
Potassium hydroxide	4.000
Final pH (at 25°C)	6.8±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 8.08 grams of dehydrated Part A in 950 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45°C and aseptically add 1.3 to 1.5 grams* Potassium hydroxide (Part B) dissolved in 50 ml of sterile distilled water.

* - As per standard it is recommended to use 4.000 grams of Potassium hydroxide (Part B)

Principle And Interpretation

Azospirillum species occur as free-living in soil or in association with the roots of cereal crops, grasses and tuber plants (1). *Azospirillum* species are plant-associated diazotrophs of the alpha subclass of *Proteobacteria* . Azospirillum Medium with 0.17% Agar is used for cultivation of *Azospirillum* species.Malic acid is used as the carbon source. *Azospirillum* species grow well in presence of Malic acid and are not overgrown by other nitrogen fixers. Dipotassium phosphate provides buffering effect and other inorganic salt ingredients provide necessary growth nutrients. Agar at 0.17% concentrations provides microaerophillic conditions necessary for nitrogen fixation by *Azospirillum* species (1).

Quality Control

Appearance

Part A : Cream to yellow homogeneous free flowing powder Part B :White to cream pellets

Gelling

Semisolid, comparable with 0.17 % Agar gel.

Colour and Clarity of prepared medium

Light yellow coloured clear to slightly opalescent solution.

Reaction

Reaction of 0.81% w/v aqueous solution (containing KOH) at 25°C pH : 6.8±0.2

pH

6.60-7.00

Cultural Response

M518: Cultural characteristics observed after an incubation at 30°C for upto 8 days .

Organism	Growth
Azospirillium brasiliensis ATCC 29710	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. Bergey's Manual of Determinative Bacteriology, 1994, 9th Ed, Williams R. H., (Eds.), Williams and Wilkins, Maryland, USA.

Revision : 1 / 2011