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Research Note

Modified Selective Medium for Soil Population Enumeration of *Aspergillus niger*, a Potential Biocontrol Agent

Key words: *Aspergillus niger* - selective medium

Aspergillus niger van Teigh is a potential biocontrol agent in managing soil borne plant pathogens (Asalmol and Sen, 1990; Naik and Sen, 1993 and Sen *et al*., 1992). The soil invading antagonist is found to be the most common rhizosphere occupant. In studies involving biocontrol of soil borne plant pathogens, suitable selective media are essential for isolation and population monitoring of the antagonists from soil (Mukhopadhyay and Mukherjee, 1998).

Aspergillus niger selective liquid medium developed by Peters and Rippel Baldes (1948) uses the principle of *A.niger* utilizing tannic acid by producing tannase at very low pH. However, for enumeration of soil population, a solid medium is essential. Addition of tannic acid to agar medium degrades agar agar as tannic acid results in drastic reduction in pH. Hence different concentrations of tannic acid were tested and found that 0.1% tannic acid gave a pH of 4.8 and did not destroy the agar agar when added at 40-45 °C. Besides restricting the growth of *A. niger*, addition of Rose bengal will help in identifying the *A.niger* colonies as the dye turns pale with the growth of *A. niger* which lowers the medium pH through production of organic acids such as citric acid and oxalic acid.

Composition of the selective Medium :

Sucrose	: 5.0g
Ammonium Sulphate	: 10.0g
Potassium dihydrogen phosphate	: 2.5 g
Magnesium Sulphate	: 1.25g
Zinc Sulphate	: 0.05g
Agar agar	: 20.0g
Distilled water	: 1000ml

After sterilizing the above medium in flasks, add 1 g of tannic acid and 50 mg of Rose bengal were added just before pouring into plates by ensuring that the medium is cooled to a temperature of 40-45°C.

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