

RAPID FUNGAL PHYTO-PATHOGEN IDENTIFICATION BY FOURIER-TRANSFORM INFRARED (FTIR) MICROSCOPY

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Abstract

Fungal pathogens are involved in serious damage to a wide range of crops, causing significant negative impacts on the economy. Early detection and identification of phytopathogens are crucial for for effective prevention and treatment strategies. Currently, fungal identification relies on classic microbiological, biochemical, immunological, and molecular methods. However, these methods are often time-consuming, lack specificity and ineffective for screening a large number of samples. Our study proved the potential of FTIR microscopy as a sensitive and effective method for detecting and distinguishing between various fungal genera.

Keywords: *fungal pathogens, FTIR microscopy, spectral characteristics*