An efficient method for DNA extraction from Cladosporioid fungi

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ABSTRACT. We developed an efficient method for DNA extraction from Cladosporioid fungi, which are important fungal plant pathogens. The cell wall of Cladosporioid fungi is often melanized, which makes it difficult to extract DNA from their cells. In order to overcome this we grew these fungi for three days on agar plates and extracted DNA from mycelium mats after manual or electric homogenization. High-quality DNA was isolated, with an A₂₆₀/A₂₈₀ ratio ranging between 1.6 and 2.0. Isolated genomic DNA was efficiently digested with restriction enzymes and produced distinct banding patterns on agarose gels for the different Cladosporium species. Clear DNA fragments from the isolated DNA were amplified by PCR using small and large subunit rDNA primers, demonstrating that this method provides DNA of sufficiently high quality for molecular analyses.

Key words: DNA extraction; Cladosporium spp; PCR; rDNA-ITS1