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NUCLEIC ACID EXTRACTION OF TREE SPECIES FROM THE BRAZILIAN CERRADO FOR VIRUS INFECTION DIAGNOSIS / Extração de ácidos nucleicos de espécies arbóreas do cerrado brasileiro para diagnose de infecção viral. G.A. ROCHA¹; E.C. DIANESE¹. ¹ Nucleus of Phytopathology Research, Agronomy School, Federal University of Goiás, 74690-900, Goiania, Brazil. E-mail: edianese@ufg.br

ABSTRACT

Few methods of total RNA extraction from tree species have proven to be efficient. Considering the lack of information on this process for these plants, specifically from the Brazilian savanna areas, the objective of this work was to determine the most efficient total RNA extraction method for tree species native to these areas. Four distinct methods for total RNA extraction from leaves of *Xylopia aromatica* and *Piper arboreum* were tested: TRIzol® reagent (method 1), TRIzol® reagent with modifications (method 2), and two methods using CTAB buffer (methods 3 e 4). The one with the best results was used to obtain purified RNA from thirty tree species from Brazilian savanna areas. The TRIzol® reagent protocol was not effective for *P. arboreum* and *X. aromatica* in agarose gel analysis, where the respective bands of the 18S and 28S rRNA were not visualized. The spectrophotometer analysis showed high yield, but the absorbance ratio A260/A280 was not satisfactory. Method 4 was chosen for testing with thirty woody species, due to its results in absorbance ratio (A260/A280). This method showed high efficiency for RNA extraction of most species, confirming the result of the previous extraction. In this work, the RT-PCR of twelve species of Brazilian savanna areas showed good results after RNA extraction performed through method 4, qualifying this method as appropriate for obtaining quality RNA for molecular analysis, and as basis for diagnosis of viral infections on these tree species.

Key words: Woody species, Brazilian savanna, RT-PCR