GMR Genetics and Molecular Research
Online Journal
ISSN:1676-5680

Short Communication

Comparison of methods to isolate DNA from *Caesalpinia ferrea*

C.C. Sousa[1], S.O. Gomes[2], A.C.A. Lopes[3], R.L.F. Gomes[2], F.B. Britto[3], P.S.C. Lima[4] and S.E.S. Valente[3]

[1]Departamento de Ciências Naturais, Universidade Federal do Maranhão, Campus Grajaú, Grajaú, MA, Brasil
[2]Departamento de Agronomia, Universidade Federal do Piauí, Campus Ininga, Teresina, PI, Brasil
[3]Departamento de Biologia, Universidade Federal do Piauí, Campus Ininga, Teresina, PI, Brasil
[4]Empresa Brasileira de Pesquisa Agropecuária, EMBRAPA Meio-Norte, Teresina, PI, Brasil

Corresponding author: C.C. Sousa
E-mail: camilacampelobr@hotmail.com

Genet. Mol. Res. 13 (2): 4486-4493 (2014)
Received September 26, 2013
Accepted March 7, 2014
Published June 16, 2014
DOI http://dx.doi.org/10.4238/2014.June.16.7

ABSTRACT. Molecular markers are important for characterizing the genetic diversity of plants and can provide the basis for strategies to protect and conserve endangered populations. However, numerous molecular techniques are used, requiring an evaluation of fast and efficient methods to extract DNA. Since molecular studies of *Caesalpinia ferrea* are rare, it is important to develop and/or adapt a DNA extraction protocol that produces quality DNA samples to enable the design of strategies for the conservation of this threatened species. This study aimed to compare five methods for DNA extraction and to determine the most efficient protocol for *C. ferrea*. Sufficient genomic DNA was obtained from the leaves of *C. ferrea* using all the tested protocols to perform techniques

involving molecular markers. Two protocols based on the detergent cetyl trimethyl ammonium bromide, as well as a commercial kit, yielded high concentrations of pure DNA. However, when polymerase chain reaction amplifications were performed, DNA was only successfully amplified from extractions performed with the commercial kit, which produced sufficient genomic DNA of good quality from the leaves of *C. ferrea* to perform techniques involving molecular markers.

Key words: DNA isolation; Polymerase chain reaction; Protocol

