

Simple Modified Method for DNA Isolation from Lyophilised Cassava Storage Roots (*Manihot esculenta* Crantz.)

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Abstract : There is need to identify an efficient protocol for use in extraction of high quality DNA for purposes of molecular work. Cassava roots are known for their high starch content, polyphenols and other secondary metabolites which interfere with the quality of the DNA. These factors have negative interference on the various methodologies for DNA extraction. There is need to develop a simple, fast and inexpensive protocol that yields high quality DNA. In this improved Dellaporta method, the storage roots are lyophilized to reduce the water content; the extraction buffer is modified to eliminate the high polyphenols, starch and wax. This simple protocol was compared to other protocols intended for plants with similar secondary metabolites. The method gave high yield (300-950ng) and pure DNA for use in PCR analysis. This improved Dellaporta protocol allows isolation of pure DNA from starchy cassava storage roots.

Keywords : cassava storage roots, dellaporta, DNA extraction, lyophilisation, polyphenols secondary metabolites

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