



Comparison of Major Commercial Plant Nuclei Isolation Kits

The nuclear proteome has recently gained importance in basic and applied research due to the fact that identification of novel nuclear proteins helps to understand protein functions and protein-protein/protein-nucleic acid interactions. Currently there just a few commercial kits available for isolation of plant nuclei. Following table is a side by side comparison of two major brands.

Brand/Manufacturer	<u>Leading Brand</u>	<u>Minute™</u> (Invent Biotechnologies, Inc.)
Product Name	Plant Nuclei Isolation /Extraction Kit	Minute™ Plant Cytosolic and Nuclear Protein Isolation Kit
Mechanism of Isolation	Solution-based	Spin column-based
Average sample size	20 g	150 mg
List of required buffers	Nuclei Isolation Buffer 4X (NIB) Percoll Sucrose 2.3 M TRITON X-100 10% Extraction Buffer Nuclei PURE Storage Buffer	Buffer A Buffer B Buffer C
Liquid nitrogen	Required	Not required
Buffer dilution prior to experiment	Required	Not required
Fractions obtained	Nuclei	Cytosol Microsomal Chloroplast Nuclei
Purity of isolated Nuclei	Low to high	High
Protocol Time	>90 min	<60 min