

# Plant genomic DNA Extraction in Full Bloom

## Highlights

- High quality genomic, bacterial, fungal and viral DNA extraction from various plant tissue types
- Minimizes heat-induced DNA damage during lysis
- EzPure™ Filter allows efficient removal of secondary metabolites
- Simple 40 minute scalable DNA (mini, Midi, Maxi) extraction
- Ready for any downstream application including PCR, qPCR, and NGS

## Accommodates Various Samples



Root



Leaf, Stem



Seed



Fruit  
(fruit flesh, fruit skin)



Seaweed

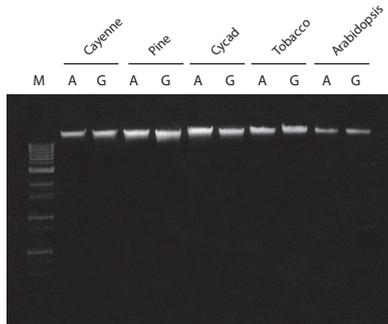


Tree bark



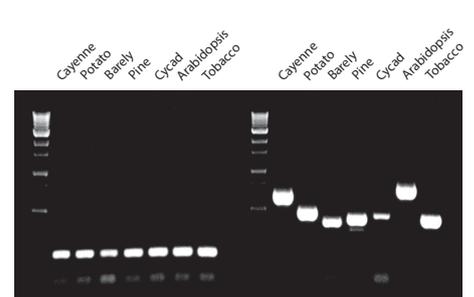
Commercial tea

## Comparison performance I



**Superior DNA yield and integrity across diverse plant types**  
 Genomic DNA was extracted from each 100 mg of plant species (Cayenne, Pine, Cycad, Tobacco, Arabidopsis) and visualized on 0.8% agarose gel. Compared to a leading supplier, Exgene™ Plant consistently delivered brighter and sharper bands, indicating higher yield and purity.

Lane A: Supplier A, Lane G: Exgene Plant  
 Lane M: 1 kb ladder

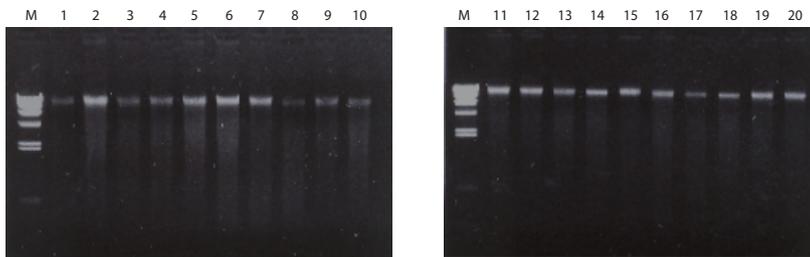


PCR reaction was performed with purified DNA using Exgene™ Plant SV kit. Two primer sets were used : trnL region (left lanes) and large subunit rRNA gene (right lanes).

## Key Technologies &amp; Advantage

Technology	Key Feature	Benefit
Silica spin column	Fast and stable DNA recovery	Reliable performance, no special equipment needed
Grinding in liquid nitrogen for homogenization	Minimizes heat and mechanical shearing	Ideal for applications demanding preservation of DNA integrity
Dual-buffer lysis system ((Buffer PL + PD)	Efficient lysis and inhibitor removal	High-purity DNA, free from polysaccharides and polyphenols
EzSep™ Filter Column	Clarifies lysate by removing debris and viscous material	Smoother workflow and higher consistency
Solvent-free protocol	No phenol or chloroform required	Simple waste handling, lab-safe

## Comparison performance II



(User-provided)

## Comparable Quality, Easier Workflow

Genomic DNA was extracted from leaf tissues of 10 different plant species using two commercial kits:

Supplier A (Lane 1–10) and Exgene™ Plant SV Kit (Lane 11–20).

Both kits yielded DNA with similar integrity and concentration, but GeneAll's Exgene™ Plant SV produced cleaner bands with less background smearing, thanks to its dual-column system and streamlined workflow.

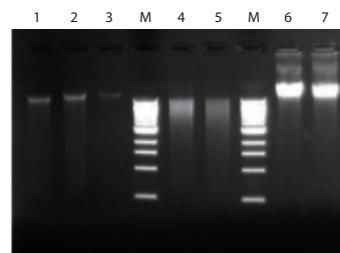
## Extraction Efficiency

## Reliable DNA Extraction from Challenging Plant Tissues

Genomic DNA was extracted from leaves and pollen using the Exgene™ Plant SV mini Kit. DNA concentration was measured using the Qubit™ dsDNA BR Assay Kit, and purity was assessed using NanoDrop 2000 (Table 1) and clear genomic DNA bands confirmed via agarose gel electrophoresis (Figure 1).

Even mucilage-rich leaves like *Deutzia* and challenging samples like pollen — known for their tough outer wall and low DNA content — yielded high-quality DNA using the Exgene™ Plant SV mini Kit.

Figure 1.



Lane 1-3: *Deutzia* (leaf)  
Lane 4-5: Pollen  
Lane 6-7: *Ginkgo biloba* (leaf)  
Lane M: 1kb DNA Ladder

Table 1. DNA concentration and purity assessment.

Sample	Concentration (ng/μl)	A <sub>260</sub> /A <sub>280</sub>	A <sub>260</sub> /A <sub>230</sub>
<i>Deutzia</i> (leaf)	24.7 ng/μl	1.47	0.63
Pollen	31.7 ng/μl	1.80	2.14
<i>Ginkgo biloba</i> (leaf)	61.6 ng/μl	1.85	2.30

## Ordering Information

Cat. No.	Product	Size	Starting vol.	Typical yield	Preps
117-101	Exgene™ Plant SV	mini	Up to 100 mg wet (30 mg dry)	4-40 μl	100
117-152					250
117-201		Midi	Up to 400 mg wet (100 mg dry)	200-600 μl	100
117-226					26
117-310		Maxi	Up to 1 g wet (300 mg dry)	400-2000 μl	10
117-326					26