

# PrecisionPak™ for genomic DNA Extraction from Plant Matter

## Summary

The Next Advance PrecisionPak™ is a complete set of kits and reagents that simplifies the homogenization and extraction workflow, while also enabling excellent results. Several different packs are available, each one tailored for the specific sample for DNA extraction. The kit is versatile, suitable for Arabidopsis, tree genetics, grasses, crop research, and much more. These Plant DNA packs contain DNA extraction reagents along with FoamBlocker to reduce foaming of the homogenate, and an optimized protocol for your specific sample.

### Key Benefits

- Superior Yield and Quality
- Simplified Workflow
- No Organic Solvents
- Saves Time
- High Value

## Step 1. Homogenization

The bead lysis kits in the PrecisionPak have been used and cited by researchers worldwide for over a dozen years. They contain a combination of bead sizes for thorough homogenization of samples including leaves, nuts and fungal samples. A range of plant matter samples can be seen above the beads in the bead lysis tubes, which are thoroughly homogenized at recommended settings (compare before and after images in Figure 1).

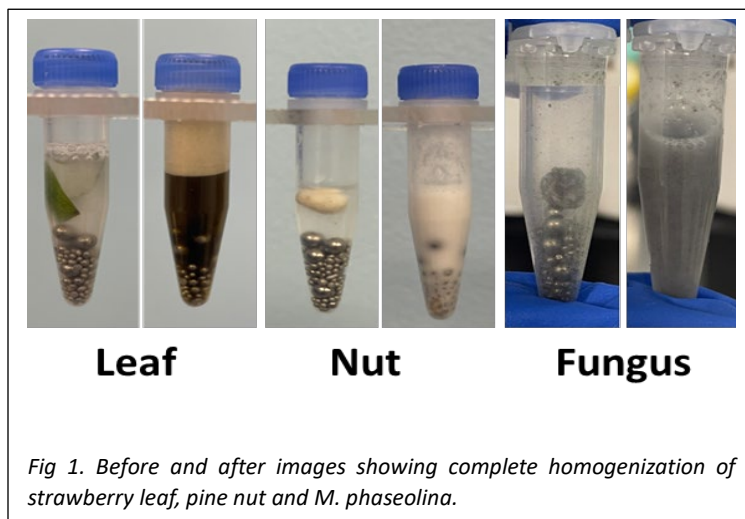


Fig 1. Before and after images showing complete homogenization of strawberry leaf, pine nut and *M. phaseolina*.

## Step 2. Extraction of DNA

These DNA extraction kits are streamlined for achieving high yield and high-quality DNA. They are innovatively designed to be faster and more efficient than spin-column methods. DNA extraction happens in just three simple steps: lysis, precipitation of protein and other unwanted biomolecules, and cleaning. Additionally, no organic solvents are used. Figure 2 compares the results from our extraction kits with those from the leading competitor. The quality of extracted DNA is suitable for PCR amplification, NGS, Micro-array Genotyping and enzymatic reactions.

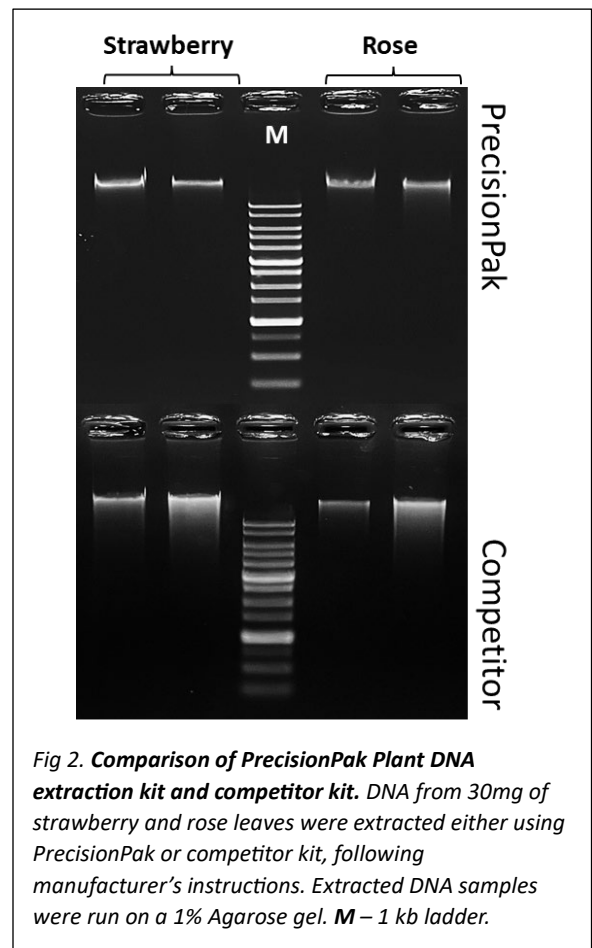


Fig 2. Comparison of PrecisionPak Plant DNA extraction kit and competitor kit. DNA from 30mg of strawberry and rose leaves were extracted either using PrecisionPak or competitor kit, following manufacturer's instructions. Extracted DNA samples were run on a 1% Agarose gel. M – 1 kb ladder.

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## Ordering Information

We have PrecisionPak DNA extraction protocols tailored to your specific sample. We currently have protocols for over thirty plant samples. To order, select the part number based upon the toughness of your sample type and desired sample tube from the table below. If you are unsure of the toughness of your plant matter, refer to our webpage, <https://www.nextadvance.com/plant-matter-precisionpak/>. If you do not see your specific plant matter, we can work with you to provide a protocol in a day or two, at no charge.

cat. no.:	Homogenization lysis kit specifics
PP-PDGS	1.5 mL snap cap tubes used in Bullet Blenders – for soft plant matter
PP-PDGT	1.5 mL snap cap tubes used in Bullet Blenders – for tough plant matter
PP-PDRS	1.5 mL screw cap tubes used in Bullet Blenders – for soft plant matter
PP-PDRT	1.5 mL screw cap tubes used in Bullet Blenders – for tough plant matter
PP-PD2S	2 mL screw cap tubes for all other homogenizers – for soft plant matter
PP-PD2T	2 mL screw cap tubes for all other homogenizers – for tough plant matter