

ISOLATE II Plant DNA Kit

A Precious Find

- **Fast:** streamlined protocol for reliable recovery of genomic DNA in as little as 30 minutes
- **High-performance:** extraction of high-quality DNA, ideal for use in all downstream applications
- **Efficient:** optimized lysis conditions and column matrix for improved recovery of genomic DNA from a wide range of plant samples
- **Versatile:** a choice of two lysis buffers ensures excellent genomic DNA recovery from any plant material
- **Convenient:** kit includes all necessary components, including filters (shredders) and RNase A
- **Safe:** no hazardous phenol/chloroform extraction

ISOLATE II Plant DNA Kit provides a simple, efficient column-based method for the isolation of genomic DNA from a wide variety of plant materials, without the need for hazardous reagents such as phenol.

By combining the stringency of CTAB lysis with the speed and ease-of-use of silica-membrane purification, ISOLATE II Plant DNA Kit provides a fast method for the purification of high-quality genomic DNA from most plant cells, particularly those rich in polysaccharides, including leaves, bark, roots and fruits as well as dung, animal-fecal, soil and compost samples.

Some plant tissues do not lyse well in CTAB and so an SDS-based lysis buffer is also provided as an alternative. Residual amounts of RNA remaining can be removed using RNase treatment during lysis with the RNase A supplied in the kit.

ISOLATE II Plant DNA Kit has been designed to deliver optimal performance in qPCR with SensiFAST™ SYBR® and Probe Kits, or in end-point PCR with MyTaq™ DNA Polymerase.

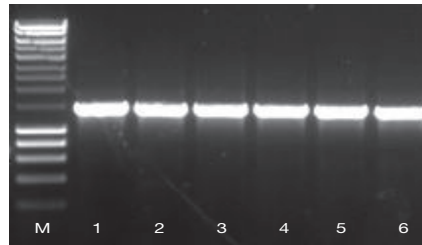


Fig. 1 High recovery of plant DNA using different homogenization techniques

Freeze-dried budding leaves of *A. thaliana* were homogenized using a pestle and mortar in the presence of liquid nitrogen (lanes 1-3 respectively) and with a rotor homogenizer (lanes 4-6 respectively, HyperLadder 1 kb (M)). Genomic DNA was isolated using ISOLATE II Plant DNA Kit. A 1.4 kb fragment of *AOS* gene was amplified from the isolated DNA using MangoMix™. The results illustrate that the ISOLATE II Plant DNA Kit gives consistent results with either extraction technique.

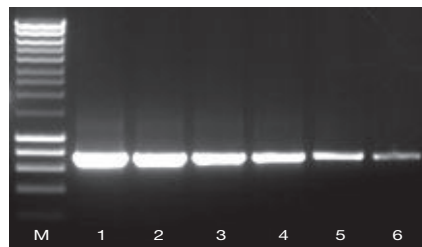


Fig. 2 High-yields of plant genomic DNA

Genomic DNA was isolated from 20 mg freeze-dried budding leaves of *A. thaliana* using ISOLATE II Plant DNA Kit. A 2-fold serial dilution of the isolated DNA (200 ng to 6.25 ng, lanes 1-3 respectively) was used to amplify a 1.4 kb fragment of *AOS* gene. The results illustrate that the ISOLATE II Plant DNA Kit gives high-yields of high-quality DNA, ideal for all downstream applications.

APPLICATIONS

- qPCR
- End-point PCR
- Southern, dot and slot blotting
- Genotyping
- Restriction digestion
- Next generation sequencing
- Bisulfite conversion/methylation analysis

EXCELLENT RECOVERY AND HIGH YIELDS

ISOLATE II Plant DNA Kit shows excellent recovery of plant DNA when different homogenization techniques are used (Fig. 1). The silica membrane in the columns is optimized to improve DNA binding to give high-yields of high-quality DNA, even from difficult samples such as freeze-dried budding leaves. The extracted DNA is ready to use for subsequent downstream reactions such as PCR (Fig. 2).

FLEXIBLE

The product manual contains protocols for purifying DNA from plant samples as well as more difficult samples such as fungal, dung, animal fecal material, soil and compost.

“*Isolating DNA from soil samples is a big challenge because samples are full of inhibitors like polymers or low-molecular substances, which inhibit downstream applications. Therefore it is difficult to find a kit which can deliver stable DNA. The ISOLATE II Plant DNA Kit is able to handle these kinds of samples and worked well for soil samples.*”

Katharina Schulte, Technical College Zweibruecken, Germany

Ordering Information

ISOLATE II Plant DNA Kit	Size	Cat. #
	10 Preps	BIO-52068
ISOLATE II Plant DNA Kit	50 Preps	BIO-52069
	250 Preps	BIO-52070

For related products such as our end-point PCR and qPCR kits please visit www.bioline.com

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