

Isolation of plant genomic DNA from *Arabidopsis thaliana* using the QuickPick™ Plant DNA kit

KEY WORDS: plant genomic DNA, magnetic particle separation, purification, PickPen®

ABSTRACT

The QuickPick Plant DNA purification kit provides a fast and simple means of isolating genomic DNA from plant tissues. The technique does not require any organic solvents and eliminates the need for repeated centrifugation, vacuum filtration or column separation. The purified DNA typically shows an approximate size of 20-30 kb.

PRINCIPLE OF QuickPick Plant DNA

DNA in the sample is released using Proteinase K and Plant DNA Lysis Buffer. The released DNA is bound specifically to the magnetic particles in the presence of Plant DNA Binding Buffer. PickPen® 1-M is used to capture the magnetic particles with bound DNA, and to carry out subsequent washes to remove contaminants. Finally, DNA is eluted from the particles using Plant Elution Buffer, and DNA is ready for use in downstream applications. The protocol, starting from homogenized plant sample, and ending with purified takes less than 40 minutes, and throughput can be further increased by using PickPen® 8-M.

MATERIALS & METHODS

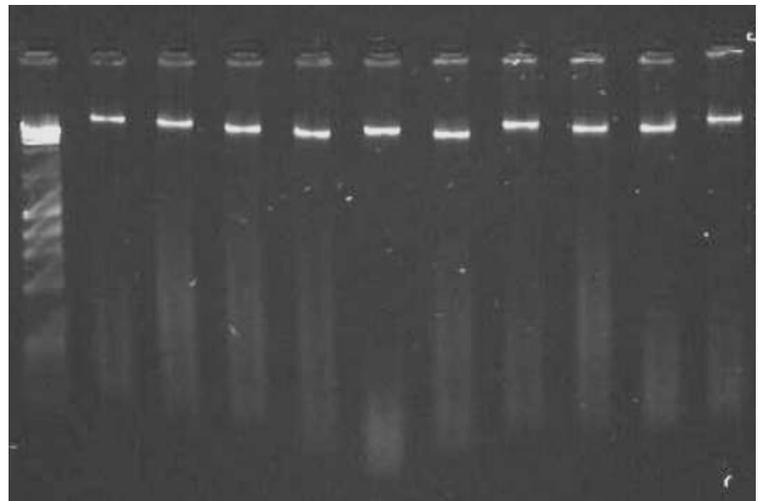
250 mg of *Arabidopsis thaliana* leaves were homogenized in liquid nitrogen. The powder was resuspended into the Plant DNA Lysis Buffer, and divided into 10 aliquots of 25 mg each. The 10 samples were purified with the QuickPick Plant

DNA and PickPen® 1-M, following the protocol as described in the kit insert.

RESULTS

The isolated DNA was loaded onto a 1% agarose gel. Intact high molecular weight DNA was detected from all samples with good reproducibility.

M 1 2 3 4 5 6 7 8 9 10



M = Marker

1-10 = DNA isolated from 25 mg of *A.thaliana* leaf tissue.