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QuickExtract™ Plant DNA Extraction Solution

Cat. No. QEP70750

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1. Introduction

The QuickExtract™ Plant DNA Extraction Solution is a fast, simple and inexpensive method for preparing plant genomic DNA for PCR amplification. Subsequent DNA extraction requires only heat treatment to lyse the plant material, release the DNA and to degrade compounds inhibitory to amplification. Following heat treatment, sample DNA is ready for PCR.

The solution has been used to successfully extract PCR-amplifiable DNA from: *Arabidopsis*, maize, pepper, soybean, spelt, and spinach leaves. The gene targets included several single-copy and multiple-copy genes.

QuickExtract Plant DNA Extraction Solution is provided at a 50-ml volume, sufficient for 500 (100-µl) extractions.

2. Product Specifications

Storage: Store at –20°C in a freezer without a defrost cycle. Minimize the number of freeze/thaw cycles. Thawed QuickExtract solution can be stored at 4°C for 1 month or refrozen in small aliquots.

Quality Control: QuickExtract Plant DNA Extraction Solution is function-tested by assaying for the production of a PCR product from spinach leaf. A single copy gene for heat shock protein HSP70 is used as the PCR template.

3. Related Products

The following products are also available:

- FailSafe™ PCR PreMix Selection Kit
- FailSafe™ PCR System
- MasterAmp™ *Taq, Tth, Tfl*, and AmpliTherm™ DNA Polymerases
- MasterPure™ Complete DNA and RNA Purification Kit
- dNTP Solutions

4. Protocol

1. Cut a 3-5 mm leaf disc, using a leaf punch or the cap of a 500-µl microfuge tube (simply snap the tube closed over the portion of the leaf to be sampled).
2. Place the leaf disc into a 500-µl tube or a well of a 96-well plate, add 100 µl of QuickExtract Plant DNA Extraction Solution and immerse the leaf tissue.

   DO NOT GRIND THE LEAF TISSUE !
3. Heat the samples at 65°C for 6 minutes then at 98°C for 2 minutes.
4. Place the samples on ice. Use 1 µl of sample as template for PCR (25-50-µl reaction volumes).

5. Troubleshooting

1. If the PCR is unsuccessful using undiluted extract, try using a 1:10 dilution of the extract as template. While it may be counterintuitive to use less starting DNA material, better results are sometimes achieved by reducing the amount of potential PCR inhibitors in the reaction.
2. Optimization of the PCR may be necessary. Epicentre's FailSafe™ PCR PreMix Selection Kit (Cat. No. FS99060) provides a quick optimization procedure to increase success rates.

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