DNAquick Plant System

For quick purification of DNA from plant or fungi

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Cat. no.: 4992709/4992710

Kit Contents

Contents	4992709 (50 preps)	4992710 (200 preps)
Buffer FP1	25 ml	100 ml
Buffer FP2	10 ml	40 ml
Buffer TE	15 ml	60 ml
RNase A (10 mg/ml)	300 µl	1.25 ml
Handbook	1	1

Storage

DNAquick Plant System can be stored dry at room temperature (15-25°C) for up to 12 months without showing any reduction in performance and quality. For longer storage, these kits can be stocked at 2-8°C. If a precipitate has formed in Buffer under 2-8°C, please place the buffer at room temperature or warm at 37°C for 10 min to dissolve the precipitate.

Introduction

DNAquick Plant System adopts unique buffer system and is especially suitable for purification of DNA from lyophilized or fresh plant tissues. The kit avoids the use of hazardous organic solvents such as phenol and removes the vast majority of proteins and other organic purities. There is no limit to starting amount of samples, the experimenter could adjust that according to actual demand. The genomic DNA extracted by this kit has good integrity and high purity.

DNA purified with this kit is ready to use in downstream applications including enzyme digestion reaction, PCR, library construction, southern blot and so on.

Important Notes Before Starting

1. Avoid repeated thawing and refreezing, as this will lead to smaller fragments of DNA and lower yield.
2. Buffer FP1 may turn yellow upon storage. This does not affect the performance.
3. If there is precipitate formed in Buffer FP1 or Buffer FP2, please warm at 37°C to redissolve and mix well before use.
4. All centrifugation steps should be carried out at room temperature (15-25°C) in a microcentrifuge.

Protocol

All the procedures as below are used for DNA extraction from 100 mg fresh plant tissue or 20 mg lyophilized tissue. For more tissues, usage amount of buffer should be increased in proportion.

1. Place the sample material (100 mg fresh or 20 mg lyophilized tissue) into a mortar, and add liquid nitrogen to the mortar and grind the sample thoroughly.

   Add 400 µl Buffer FP1 and 6 µl RNase A (10 mg/ml), vortex vigorously for 1 min and let the sample stand at room temperature for 10 min.

   Note: Due to plant diversity, starting amount of plant tissues should be adjusted according to different species and different parts of the plant.

2. Add 130 µl Buffer FP2 to the lysate and mix by vortex for 1 min.
3. Centrifuge at 12,000 rpm (~13,400 × g) for 5 min and transfer the supernatant into a new centrifuge tube.
4. Optional: Centrifuge the lysate for 5 min at 12,000 rpm (~13,400× g) again and transfer the supernatant into a new centrifuge tube.

   Note: Some plant materials can generate very viscous lysates and large amounts of precipitates during this step. This can result in shearing of the DNA in the next step. In this case, optimal results are obtained if the majority of these precipitates are removed by centrifugation.
5. Add 0.7 volume of isopropanol, mix by vortex, and the supernatant will form precipitate (for example, add 350 µl isopropanol into 500 µl supernatant). Centrifuge at 12,000 rpm (~13,400× g) for 2 min, discard the supernatant and keep the precipitate.
6. Add 600 µl 70% ethanol and vortex for 5 sec. Centrifuge at 12,000 rpm (~13,400 × g) for 2 min and discard the supernatant.
7. Repeat step 6.
8. Open the lid, and incubate at room temperature (15-25°C) for 5-10 min to dry the precipitate and remove the residual ethanol.

   Note: Ensure that no ethanol is carried over. Residual ethanol may interfere with downstream reactions (enzyme digestion reaction, PCR, etc.).
9. Pipet appropriate volume of Buffer TE, incubate at 65°C for 10-60 min in water bath. Turn upside down during the incubation, Purified DNA will dissolve in Buffer TE.