96 Well SYNERGY™ Plant DNA Extraction Kit

Product No. SYNP 02-96-03

The 96 Well SYNERGY™ Plant DNA Extraction Kit is a high throughput solution for individuals extracting DNA from plant samples. The 96 Well SYNERGY™ Plant DNA Extraction Kit features a proprietary chemistry for the rapid isolation of high-quality DNA from plant tissue using the SYNERGY™ grinding matrix/buffer system. SYNERGY™'s unique bead beating chemistry replaces laborious CTAB DNA isolation procedures requiring chloroform extraction. SYNERGY™'s prefilled homogenization plates contain a grinding matrix that acts in conjunction with the Plant Homogenization Buffer to liberate DNA and capture contaminants from samples that could be detrimental to downstream manipulations of DNA.

Plant samples (50 mg) and Plant Homogenization Buffer are placed into each well and disrupted with a high velocity plate homogenizer. Individual eight tube strips can be removed for partial plate homogenization. The cell debris and PCR inhibitors bind to the grinding matrix and are removed by centrifugation, leaving the liberated DNA in the supernatant. DNA is further purified, especially for plants containing high levels of phenolic compounds and polysaccharides, by binding, washing, and eluting the DNA from the filter plates.

96 Well SYNERGY™ Plant DNA Extraction Kit contains:
2 96 Well Homogenization Plates with grinding matrix
1800 µl RNase A Solution
100 ml Plant Homogenization Buffer
2 Filter Plates
2 Binding Plates
4 Collection Plates
2 Elution Plates
2 Well Support Mats
Instructions

Additional Materials Required:
High Throughput Bead Beater
Plate Centrifuge
Incubator
Isopropanol
70% Ethanol
Molecular Biology Grade Water or TE Buffer (pH 8) if storage of samples is required

Storage:
RNase A Solution should be stored at -20°C*, while Plant Homogenization Buffer and all other components should be stored at room temperature.*

Related Products	Format	Product No.
SYNERGY™ 2.0 Plant DNA Extraction Kit	100 preps	SYNP 02-100-02
2010 GenoGrinder®	120 V	SP 2010-115
1600 Mini G™	120 V	SP 1600

This product is made for research purposes only, not for clinical use. Please follow safety and institutional guidelines when using this product. **WARNING: Harmful if dust is inhaled. Buffer may cause irritation when in contact with skin and if swallowed.**

Protocol
96 Well SYNERGY™ Plant DNA Extraction Kit

Materials (per 96 preps)

- 96 Well SYNERGY™ Homogenization Plate
- Filter Plate
- Binding Plate
- 2 Collection Plates
- Elution Plate
- Well Support Mat
- Plant Homogenization Buffer
- RNase A Solution
- 70% Ethanol (Ethyl alcohol)
- Isopropanol (2-propanol)
- Molecular Biology Grade Water or TE buffer (pH 8)

Protocol

1. Remove the strip caps from the 96 Well SYNERGY™ Homogenization Plate and add up to 50 mg of plant sample to each well. Next, add 350 µl of Plant Homogenization Buffer to each well. (If the entire plate is not being used, evenly distribute the strips across the plate. At least two strips at opposite ends of the plate are necessary.)

2. Reseal the wells with the strip caps. Press the seals in firmly so they are even across the plate. Replace the lid plate.

3. Place the Well Support Mat underneath the Homogenization Plate to support wells during grinding. Homogenize using a plate homogenizer for 10 minutes at 1,500 rpm. If the sample is not completely homogenized, run the machine for an additional 5 minutes. When adequately processed, the tubes will lack foam.

4. Centrifuge the Homogenization Plate for 10 minutes at 2,100 x g.

5. Transfer up to 180 µl of supernatant from each well to the Filter Plate. Place a Collection Plate under the Filter Plate and centrifuge for 10 minutes at 2,100 x g.

6. Add 5 µl of RNase A Solution to each well in the Collection Plate. Incubate at 37°C for 15 minutes.

7. Add 120 µl of isopropanol to the solutions, mix and incubate at -20°C for 15 minutes.

8. Place a new Collection Plate under the Binding Plate. Transfer the lysates to the Binding Plate and centrifuge for 10 minutes at 2,100 x g. Discard the filtrate from the Collection Plate and move the plate back under the Binding Plate.

9. Wash the bound DNA by adding 200 µl of ice cold 70% ethanol to each well. Centrifuge for 5 minutes at 2,100 x g. Discard the filtrate from the Collection Plate and place the plate back under the Binding Plate.

10. Repeat the wash (step 9). Centrifuge for 5 minutes at 2,100 x g.

11. Replace the Collection Plate with an Elution Plate.

12. Elute the DNA by adding 50 µl of Molecular Biology Grade Water or TE Buffer. Centrifuge for 10 minutes at 2,100 x g.

13. Cover the Elution Plate with the provided lid, seal with parafilm and store at -80°C.

If you have questions about this product, please contact OPS Diagnostics:

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