Version: FML1715

DNA/RNA Extraction Kit (Magnetic Beads)

[Packaging] 32 preps/kit, 40 preps/kit, 50 preps/kit, 64 preps/kit, 96 preps/kit

[Intended Use] It is suitable for separating and purifying high-quality genomic DNA from a variety of plant tissues.

[Principle] Nucleic acids DNA from a complex with magnetic beads in a specially formulated buffer. The beads nucleic acids complex is then separated from lysates using a magnet. Purified DNA are then eluted when the buffer condition is adjusted. Special magnetic beads technology enables purification of high-quality nucleic acids that are free of proteins, nucleases, and other impurities.

[Kit Contents] Composed of lysis, eluent and magnetic beads, etc.

[Storage]All Reagents can be stored at room temperature (15–25)°C for 12 months.

[Instrument] Automated purification extractor.

[**Sample Requirements**] Plant tissues.

[Protocol]

Table 1. Product Application

Type	M302	Y302-G10
Applicable method	Manual Operation	Automated purification (for GENFINE Purifier 32)

I. Manual operation

1. Place 100 mg wet weight plant tissue or 30 mg lyophilized plant tissue and grind the samples thoroughly in liquid nitrogen.

2. Quickly transfer the ground powder to a centrifuge tube added with 400 µl Buffer MLP1 and 5 µl RNase A (10 mg/ml) in advance. After quickly inverting and mixing, place the centrifuge tube in a 70°C water bath for 10 min. Invert the centrifuge tube during the water bath to mix the samples several times.

3. Centrifugate at 12,000 rpm (~13,400 × g) for 4 min and transfer 300 µl to a new centrifuge tube.

4. Add 550 µl Buffer MPN and 50 µl FineMag Particles F, inverting and mixing 20-30 times. Place at room temperature for 5 min, Invert the centrifuge tube to mix the samples several times.

5. Place the centrifuge tube on the magnetic stand and let it stand for 30 sec. Carefully remove the liquid when the magnetic beads are completely attached.

6. Remove the centrifuge tube from the magnetic stand, add 500 µl Buffer RW1P , and mix evenly for 15 sec.

7. Place the centrifuge tube on a magnetic stand and let it stand for 30 sec. After the magnetic beads are completely attached, carefully remove the liquid.

8. Remove the centrifuge tube from the magnetic stand, add 600 µl Buffer MWP, and mix evenly for 15 sec.

9. Place the centrifuge tube on a magnetic stand and let it stand for 30 sec. After the magnetic beads are completely attached, carefully remove the liquid.

10. Repeat steps 8 and 9 once.

11. Place the centrifuge tube on a magnetic stand and air dry at room temperature for 10-15 min.

12. Remove the centrifuge tube from the magnetic stand, add 50-100 µl Buffer EB, shake and mix evenly, and incubate at 65°C for 5 min.

13. Place the centrifuge tube on a magnetic stand and let it stand for 1 min. After the magnetic beads are completely attached, carefully transfer the DNA solution to a new centrifuge tube and store it under appropriate conditions.

II. Automated purification (for GENFINE Purifier 32)

1. Place 100 mg wet weight plant tissue or 30 mg lyophilized plant tissue and grind the samples thoroughly in liquid nitrogen.

2. Quickly transfer the ground powder to a centrifuge tube added with 400 µl Buffer MLP1 and 5 µl RNase A (10 mg/ml) in advance. After quickly inverting and mixing, place the centrifuge tube in a 70°C water bath for 10 min. Invert the centrifuge tube during the water bath to mix the samples several times.

3. Pre-prepare: take out pre-filled 96-well plates from the box, gently upside down to mix the beads. Carefully remove the seals from pre-filled plates to prevent liquid from spilling.

4. Centrifugate the reagent from step 2 at 12,000 rpm (~13,400×g) for 4 min and transfer 300 µl supernatant to rows 2 and 8 of a 96-well plate.

5. Place the 96-well plates and 8-rod combs into the right position of the GENFINE Purifier 32.

6. Select the program“Y302-G10” and start to run on the instrument.

7. At the end of the run, immediately remove 96-well plates from the instrument, then transfer the solution of rows 6 and 12 to the final tube and store.

Table 2. Protocol of“Y302-G10”for Purifier 32

Step	Well	Name	Mix time (s)	Amplitude	Frequency	Magnetic time (s)	Cycles	Stay time (s)	Volume (µl)	Temperature (°C)	Heat time (s)
1	1	Washing	15	Middle	Fast	30	2	0	500	--	0
2	2	Binding	300	Middle	Middle	45	2	0	800	--	0
3	3	Washing	60	Middle	Fast	60	1	0	600	--	0
4	4	Washing	60	Middle	Fast	45	1	0	600	--	0
5	5	Washing	60	Middle	Fast	45	1	300	600	--	0
6	6	Elution	600	Low	Middle	45	2	0	100	75	600
7	1	Discard Beads	15	Middle	Fast	--	--	0	500	--	--

[Precautions]

1. Please read the instructions carefully before use and operate in strict accordance with the requirements.
2. The operators can take up the post only after relevant trainings.
3. Note not to cause cross contamination during sample operation.
4. It is normal if there is crystallization in the lysate. Please incubate the lysate at 50~60°C for 30 minutes until the crystallization is completely melted, shake well, and cool to room temperature before use.
5. Failure to follow the instructions will result in inaccurate results
6. Please do not use the product beyond the expiration date, and do not mix the reagent components of different

batch numbers.

7. The samples to be tested involved in the kit should be considered as infectious substances, and should be handled and treated according to the requirements of *General Rules for Safety of Microorganism and Biomedical Laboratory* and *Regulations for Management of Medical Wastes*.

[Symbols]

Symbols	Meanings
	Manufacturer
	Authorized representative in the European Community
	This product fulfills the requirements of the European Directive 98/79 EC for in vitro diagnostic medical devices.
	Catalogue number
	Batch code
	Date of manufacture
	Use-by date
	Temperature limit
	Consult instructions for use
	Keep dry
	Keep away from sunlight
	Do not re-use
	Do not use if package is damaged
	n tests

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