TANBead® Nucleic Acid Extraction Kit

Rice DNA Auto Tube

(For use with the SLA-16 / 32 / E13200 series)

RUO

619S45

(For Research Use Only) V3

1. Intended Use

This product is designed for isolating nucleic acid from various samples, which can be performed by using TANBead® Nucleic Acid Extractor and is intended for research use only.

2. Purpose

TANBead® Nucleic Acid Extraction Kit (619S45) with TANBead® Nucleic Acid Extractor (SLA-16/32, SLA-E132 Series) simplifies the process of isolating rice DNA from grinding grain and cell lysis to DNA purification completely by automated system. In addition, because TANBead has its own nano-beads for nucleic acid binding with high efficiency, it takes only one single grain of rice for nucleic acid extraction and is ideal for applications such germplasm identification and laboratories of academic research. TANBead® Nucleic Acid Extractor can handle 32 rice samples simultaneously and the automated process can save labor and time by enhancing the extraction efficiency, consistency and reproducibility.

3. The basic principle

The silicon dioxide layer coated on the magnetic beads can adsorb the negatively charged molecules to purify nucleic acids from samples.

4. Specification

Starting Materials	One single grain of rice
Elution Volume	90~130 μL

5. Component Supplied with the Kit

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Auto Tube	4 trays	Auto Tube with reagent buffers
Lysis Buffer 1	25 mL x 1	Tris buffer, surfactants, pH 8.0
Lysis Buffer 2	80 mL x 1	Guanidine salt, Tris buffer, surfactants
Elution Buffer	20 mL x 1	Nuclease-Free Water
Proteinase K	1.0 ml x 1	Proteinase K
Base	2	A rack for 8 Auto Tubes
Strip	12	8-channel strip
Protocol	1	Instruction guide for user

6. Auto Tube Content

Well	Buffer	Volume (μL)
1 / 7	Elution Buffer	130
2 / 8	Washing Buffer 3	800
3 / 9	Magnetic Beads	800
4 / 10	Washing Buffer 1	800
5 / 11	-	-
6 / 12	-	-

7. Kit Storage and Shelf Life

1) Components under room temperature (15~35°C) can be stored until the expiration date labeled on the box.
2) The proteinase K is transported at room temperature. Upon received, please store proteinase K at 2~8°C.

8. Precautions

1) For research use only.
2) Avoid using expired reagents.
3) When the temperature is below 20°C, place the Auto Plates / Auto Tubes in an oven (preheated 42~60°C) 5 to 10 minutes.
4) Avoid vigorous shaking, in order to avoid excessive formation of foam.
5) Carefully remove aluminum foil to avoid splashing.
6) Do not expose the opened reagents or Auto Plates / Auto Tubes to air. The evaporation would lead to pH change, or effect on the extraction effectiveness.
7) Please check the integrity of the Auto Plates / Auto Tubes and remember to insert the strips into the appropriate position of the suitable instrument before operating them.
8) Please wear a mask and disposable gloves when handling.
9) Use sterile consumables to avoid nuclease contamination.
10) Reagent solution contains guanidine salt, avoid using bleach containing detergent.
11) Avoid eyes, skin, and clothing contact with reagents. In case of any contact, flush with flowing water.
12) If any serious incident occurs, please report to the manufacturer and the competent authority of the member state in which the user and / or the patient is established.

9. Materials required, Not Supplied

1) TANBead® Nucleic Acid Extraction System
   Model: SLA-16 / 32 / E13200 series (non-sterile)
2) Disposable gloves
3) Scissors, utility knives
4) Micropipette, disposable tips (10 μL / 200 μL / 1000 μL)
5) 1.5 mL microcentrifuge tube
6) 15 mL / 50 mL conical tube

10. Nucleic Acids Extraction Protocol

Before operating, turn on the warm-up system of TANBead® Nucleic Acid Extractor, if it is equipped with temperature controller, please setting at **70°C.**

1) Preparing the Assembled Auto Tubes by inserting Auto Tubes into the Base completely.
2) Carefully remove the aluminum foil on the Auto Tubes.
3) Use micropipette to load **400 μL** Lysis Buffer 1 and **20 μL** Proteinase K into column **#6 / #12** of Auto Tube.
4) Put one naked rice seed into column **#6 / #12** of Auto Tube.
5) Push Assembled Auto Tubes combined with conducting plate which is attached to column **#6 / #12** completely to the bottom of plate rack completely to the bottom of the plate rack. Make sure that the chamfer of the plate is at the lower left.
6) Push strips completely to the bottom of strip rack frame.
7) Close the door panel.
8) Select the program "**DNA RICE AUTO**". The parameters are given in following section.
9) The program will stop temporarily and the buzzer alarm after one hour.
10) If Nucleic Acid Extractor is equipped with temp. controller, please set at **45°C**.
11) Carefully pull out Assembled Auto Tubes and pay attention to high temperature of conducting plate.
12) Use micropipette to transfer half of the lysate from column **#6 / #12** to **#5 / #11** and load **750 μL** Lysis Buffer 2 into **#5 / #6** and **#11 / #12**.
13) Push Assembled Auto Tubes completely to the bottom of plate rack, make sure that chamfer of the plate is at the lower left and press "Pause" to go on program.
14) Carefully remove the Auto Tubes when the program is finished.
15) Use micropipette to transfer the purified nucleic acids from well **#6 / #12** to a clean tube.
16) Discard used Auto Tubes and strips into the waste recycling bin.

11. Program

■ **SLA-16 / 32 series**

Program Name: DNA-RICE-AUTO					Model: SLA-16 / 32 series			
Step	Well	Mixing (M)	Collect (S)	Rod	Mixing speed	Volume (μL)	Pause	Vapor (M)
1	6	20	0	Off	Medium	600	Off	0
2~26	6	1	0	Off	Medium	600	Off	0
27	6	10	0	Off	Medium	600	Off	0
28	6	5	0	Off	Medium	600	On	0
29	6	5	0	Off	Medium	900	Off	0
30	5	5	0	Off	Medium	900	Off	0
31	3	1	60	On	Medium	800	Off	0
32	4	1	60	On	Medium	800	Off	0
33	6	5	100	On	Medium	900	Off	0
34	5	5	100	On	Medium	900	Off	0
35	4	3	100	On	Medium	800	Off	0
36	3	2	60	On	Medium	800	Off	0
37	2	2	60	On	Medium	800	Off	10
38	1	5	100	On	Medium	150	Off	0
39	2	1	0	Off	Medium	800	Off	0
40	0	0	0	Off	Medium	0	Off	0

■ **SLA-E13200 series**

Program Name: DNA-RICE-AUTO						Model: SLA-E13200 series			
Step	Well	Temp (°C)	Mixing (M)	Collect (S)	Rod	Mixing speed	Volume (μL)	Pause	Vapor (M)
1	6	70	20	0	Off	Medium	600	Off	0
2~26	6	70	1	0	Off	Medium	600	Off	0
27	6	70	10	0	Off	Medium	600	Off	0
28	6	45	5	0	Off	Medium	600	On	0
29	6	45	5	0	Off	Medium	900	Off	0
30	5	45	5	0	Off	Medium	900	Off	0
31	3	45	1	60	On	Medium	800	Off	0
32	4	45	1	60	On	Medium	800	Off	0
33	6	45	5	100	On	Medium	900	Off	0
34	5	45	5	100	On	Medium	900	Off	0
35	4	45	3	100	On	Medium	800	Off	0
36	3	45	2	60	On	Medium	800	Off	0
37	2	45	2	60	On	Medium	800	Off	10
38	1	45	5	100	On	Medium	150	Off	0
39	2	N / A	1	0	Off	Medium	800	Off	0
40	0	N / A	0	0	Off	Medium	0	Off	0

12. Reagent performance

■ **The stability of extracted DNA**

Storage Conditions	DNA stability
-80°C	Over 90 days
-20°C	28 days
4°C	14 days
25°C	2 days
Freeze-thaw	10 times

13. Explanation of Symbols

	Manufacturer		Consult instructions for use
15°C 35°C	Temperature limit		Contains sufficient for test
REF	Catalogue number		Caution
LOT	Batch code	NON STERILE	Non-sterile
	Do not re-use		Keep away from sunlight
	Date of manufacture		Use-by date
RUO	For research use only		

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