TANBead® Nucleic Acid Extraction Kit

Plant RNA Auto Plate

(for use with the SLA-16/32 and SLA-E132 Series)

CE IVD

6K3A46

(For Professional Use Only) V2

1. Intended Use

TANBead® Nucleic Acid Extraction Kit (6K3A46) is suitable for isolating RNA from a wide range of plant species. Pretreated tissue samples can be processed through a series of exaction steps, which is operated by the magnetic bead-based technology of TANBead® Nucleic Acid Extractor SLA-16/32, SLA-E13200. With the features of high quality and quantity, the purified extracts can be applied for downstream assays including real time PCR and next generation sequencing.

2. Purpose

TANBead® Nucleic Acid Extraction Kit (6K3A46) is employed in RNA isolation from a variety of plant tissues. After pretreatment and transferring of the sample, with automated nucleic acids extractor, SLA-16/32, SLA-E13200, your precious time will be saved, and the isolation of RNA will be remarkably consistent. The isolated nucleic acids samples can be used in subsequent applications, such as real time PCR and sequencing. It is suitable for laboratories with high throughput requirement.

Principle

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

Sample Types: 30 – 50 mg plant tissues

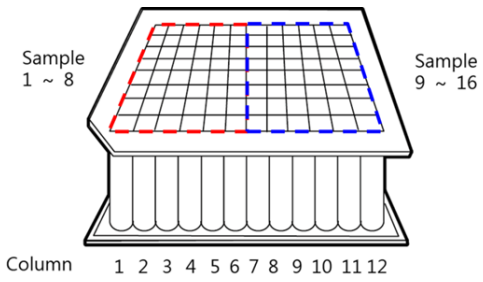
Suitable Instrument: SLA-16/32 and SLA-E132 series

3. Kit Components

6K3A46		Σ 96 Assays
Auto Plates	6	96 well plate with reagent buffers
Lysis Buffer	90 mL	Sodium salt, Tris buffer, surfactants
Elution Buffer	20 mL	Nuclease-Free Water
Strip	12	8-channel strip
Protocol	1	Instruction guide for user

Auto Plate Content

Column	Buffer Solution	Volume
1/ 7	-	-
2/ 8	Washing Buffer 1	800 µL
3/ 9	Magnetic Beads	800 µL
4/ 10	Washing Buffer 2	800 µL
5/ 11	Washing Buffer 2	800 µL
6/ 12	Elution Buffer	100 µL



4. Storage and shelf life

1) Components under room temperature (15 - 35°C) can be stored until the expiration date labeled on the box.

5. Precautions

1) It can only be used for *in vitro* diagnostic.
2) Avoid using expired reagents.
3) When the temperature is below 20°C, place the auto plates in an oven (preheated 42 - 60°C) 5 to 10 minutes.
4) Avoid vigorous shaking to prevent excessive formation of foam.
5) Do not expose the opened reagents or plates to air. The evaporation would lead to pH change or effect on the extraction effectiveness.
6) Only Washing Buffer 2 and Elution Buffer are colorless and transparent. Colored reagent indicates contamination, please replace it with a fresh Plate before proceeding.
7) Please check the integrity of the reagent plates 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) Carefully remove aluminum foil to avoid splashing.
10) Use sterile consumables to avoid nuclease contamination.
11) Reagent solution contains guanidine salt, avoid using bleach containing detergent.
12) Avoid eyes, skin, and clothing contact with reagents. In case of any contact, flush with flowing water.
13) 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.

6. Materials required but not provided

1) TANBead® Nucleic Acid Extraction System
   Model: SLA-16/ 32 and SLA-E132 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
7) Isopropanol Alcohol (Molecular biology grade)
8) Liquid Nitrogen

7. Sample collection, transport, storage and pre-treatment

■ For tissue(30 – 50 mg tissues)

1) Use liquid nitrogen to homogenize the samples.
2) Add 800µL Lysis Buffer to lysis the samples.
3) Mix well and stand for 10 minutes on ice.
4) Centrifuge at 6000 RPM under 4°C for 5 minutes.

8. Nucleic acids extraction protocol

1) Carefully remove the aluminum foil from Auto Plate.
2) Transfer **450 µL lysate** into **Column #1/ #7.**
3) Load **450 µL IPA** into **Column #1/ #7.**
4) Place the Auto Plate completely to the bottom of plate rack. Make sure that the missing corner of the Auto Plate faces toward the door panel.
5) Push strips completely to the bottom of strip rack frame.
6) Close the door panel.
7) Select the program "**B10-W4-AUTO**" The steps are given in the following section.
8) Once the program has ended, take out the Auto Plate carefully.
9) Use micropipette to transfer the purified nucleic acids from column **#6/ #12** to a clean tube.
10) Discard the used Auto Plate and Strips into the waste recovery can.

9. Program

■ **SLA-16/32 and SLA-E132 Series**

Program Name: B10-W4-AUTO						Model: SLA-16/ 32, SLA-E132 series			
Step	Well	Temp (°C)	Mixing (M)	Collect(S)	Rod	Mixing Speed(RPM)	Volume(µL)	Pause	Vapor(M)
1	3	45	1	60	ON	Medium	800	OFF	0
2	2	45	1	60	ON	Medium	800	OFF	0
3	1	45	10	60	ON	Medium	800	OFF	0
4	2	45	2	60	ON	Medium	800	OFF	0
5	3	45	2	60	ON	Medium	800	OFF	0
6	4	45	2	60	ON	Medium	800	OFF	0
7	5	45	2	60	ON	Medium	800	OFF	10
8	6	45	10	120	ON	Medium	150	OFF	0
9	5	NA	1	0	OFF	Medium	800	OFF	0
10	0	NA	0	0	OFF	Medium	0	OFF	0

10. Result

- Total DNA yield: 2 - 5 µg

11. Reagent performance

■ Repeatability

Under repeatability conditions where nucleic acids are extracted with the same reagent kit on the same source samples by the same operator. The coefficient of variation of nucleic acids extraction concentration is less than 5%.

■ Reproducibility

A five-day reproducibility test was carried out with the same source samples for 5 consecutive days with the same reagent kit by different operators. The coefficient of variation of nucleic acids extraction concentration is less than 5%.

■ The stability of extracted DNA/ RNA

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

12. Explanation of symbols

	Manufacturer		**Consult instructions for use**
15°C 25°C	**Temperature limitation**	Σ	**Contains sufficient for <N> test**
	Use by date	IVD	**For in vitro diagnostic use**
REF	**Catalog number**		**Caution**
LOT	**Batch code**	NON STERILE	**Non-sterile**
	Do not use if package is damaged		**Keep away from sunlight**
	Keep dry		**Do not re-use**

EC REP

mdi Europa GmbH, Langenhagener Str. 71, 30855 Langenhagen, Germany