TANBead® Nucleic Acid Extraction Kit

Tissue RNA Auto Plate

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

RUO

6K2A46

(For Research Use Only) V1

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 (6K2A46) is employed in RNA isolation from a variety of animal cells or tissues. After pretreatment and transferring of the sample with automated nucleic acid extractor (SLA-16 / 32 / E13200 series) your precious time will be saved and the isolation of RNA will be remarkably consistent. The isolated nucleic acid samples can be used in subsequent applications such as real time PCR and other clinical tests. It is suitable for laboratories with high throughput requirement.

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	2~5 x 10^5 cells or 30~50 mg tissues
Elution Volume	70~100 µL
Typical RNA yield	Up to 2~5 µg

5. Component Supplied with the Kit

Auto Plate	6	Auto Plate with reagent buffers
Lysis Buffer	90 mL x 1	Guanidine salt, Tris buffer, surfactants
Elution Buffer	1.5 mL x 1	Nuclease-Free Water
Strip	12	8-channel strip
Protocol	1	Instruction guide for user

6. Auto Plate Content

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

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.

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.
13) Only Washing Buffer 2 and Elution Buffer are colorless and transparent. Colored reagent indicates contamination, please replace it with a fresh Plate before proceeding.

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
7) Isopropanol Alcohol (Molecular biology grade)

10. Sample Collection, Transportation, and Storage

■ **Sample collection and storage**

1) For cell (2~5 x 10^5 cells)
   a. Cultured cells are centrifuged at **3000 RPM**, **4°C for 10 minutes** and then remove supernatant thoroughly.
   b. Resuspend the pellet with **500 µL Lysis Buffer** and incubate on ice **for 10 minutes**.
2) For tissue (30~50 mg tissues)
   a. Use **800 µL Lysis Buffer** to homogenize tissue sample.
   b. Mix well and stand for **10 minutes** on ice.
   c. Centrifuged at **6000 RPM for 5 minutes**.

11. 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 **45°C**.

1) Carefully remove the aluminum foil on the Auto Plates.
2) Gently transfer **450 µL Lysate** into wells of **well #1 / #7** and place **450 µL of IPA** into **well #1 / #7** as well.
3) Push Auto Plates completely to the bottom of the plate rack. Make sure that the chamfer of the plate is at the lower left.
4) Push strips completely to the bottom of strip rack frame.
5) Close the door panel.
6) Select the program **"B10-W4-AUTO"**. The parameters are given in following section.
7) Carefully remove the Auto Plates when the program is finished.
8) Use micropipette to transfer the purified nucleic acids from **well #6 / #12** to a clean tube.
9) Discard used Auto Plates and strips into the waste recycling bin.

12. Program

■ **SLA-16 / 32 series**

Program Name: B10-W4-AUTO					Model: SLA-16 / 32 series			
Step	Well	Mixing (M)	Collect (S)	Rod	Mixing speed	Volume (µL)	Pause	Vapor (M)
1	3	1	60	On	Medium	800	Off	0
2	2	1	60	On	Medium	800	Off	0
3	1	10	60	On	Medium	800	Off	0
4	2	2	60	On	Medium	800	Off	0
5	3	2	60	On	Medium	800	Off	0
6	4	2	60	On	Medium	800	Off	0
7	5	2	60	On	Medium	800	Off	10
8	6	10	120	On	Medium	150	Off	0
9	5	1	0	Off	Medium	800	Off	0
10	0	0	0	Off	Medium	0	Off	0

■ **SLA-E13200 series**

Program Name: B10-W4-AUTO						Model: SLA-E13200 series			
Step	Well	Temp (°C)	Mixing (M)	Collect (S)	Rod	Mixing speed	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	N / A	1	0	Off	Medium	800	Off	0
10	0	N / A	0	0	Off	Medium	0	Off	0

13. 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 RNA**

Storage Conditions	RNA stability
-80°C	Over 90 days
-20°C	28 days
4°C	14 days
25°C	2 days
Freeze-thaw	5 times

14. Explanation of Symbols

	Manufacturer		**Consult instructions for use**
15°C 25°C	**Temperature limit**	Σ	**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**		

Taiwan Advanced Nanotech Inc.
1-4F., No.8, Ln. 10, Sec. 2, Zhongfu Rd., Zhongli Dist., Taoyuan City 320, Taiwan (R.O.C.)
Tel: +886-3-4556599 Revised: 2022-04-01 V1