TANBead® Nucleic Acid Extraction Kit

Fungi DNA Auto Plate

(For use with the SLA-16/32/E132 series)

RUO

61FA46

(For Research Use Only) V5

1. Intended Use

TANBead® Nucleic Acid Extraction Kit (61FA46) is suitable for isolating nucleic acid from fungal samples. Automated nucleic acids extraction can be performed by using a magnetic bead-based technology of TANBead® Nucleic Acid Extractor (SLA-16/ 32 and SLA-E132 series). Purified nucleic acids can be analyzed by downstream applications depends on customers' requests.

2. Purpose

TANBead® Nucleic Acid Extraction Kit (61FA46) is suitable for extracting nucleic acids from wide ranges of fungal samples such as the yeast and filamentous fungi. Fungal samples are pre-treated with glass beads first them processed through a series of automatic extraction steps and the high-quality nucleic acids can be applied directly to the following qualitative and quantitative assays. With high sensitivity, the purified nucleic acids can be used in numbers of downstream applications such as qPCR, sequencing, next-generation- sequencing etc.

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	Cultured fungal samples
Elution Volume	90-130 µL
Typical DNA yield	≒1 µg for 1 O.D. samples

5. Component Supplied with the Kit

▽96

Auto Plate	6	Auto Plate with reagent buffers
Lysis Buffer	90 mL	Guanidine salt, Tris buffer, surfactants
Elution Buffer	20 mL	Nuclease-Free Water
Strips	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	130

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) It can only be used 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 mount the spin tips 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 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) 1 – 2 mm glass beads

10. Sample Collection, Transportation, and Storage

■ **Sample collection and storage**

1) Fungal samples can be stored at
   a. RT for 12 hours
   b. 2 - 8°C up to 7 days
   c. - 80°C long-term preservation.

■ **Specimen transportation**

Transportation of fungal samples should follow specific transportation related law and should be kept between 2 - 25°C during transportation.

11. Nucleic Acids Extraction Protocol

Before operation, turn on the warm-up system of TANBead® Nucleic Acid Extractor, if it is equipped with temperature controller, please set at **45°C.**

1) Harvest sample by centrifugation at 5000 rpm for 5 minutes, then discard the culture medium.
2) Add appropriate amount of **100 µL glass beads (1-2 mm)** and **800 µL Lysis Buffer** the microcentrifuge tube.
3) Grind the sample by bead homogenizer equipment for 5 min.
4) Incubation at **room temperature for 5 - 10 min** to precipitate beads and lysate.
5) Carefully remove the aluminum foil on the Auto Plates.
6) Use micropipette to load **800 µL lysate** into column **#1/ #7** of Auto Plate.
7) Push Auto Plates completely to the bottom of the plate rack. Make sure that the chamfer of the Auto Plate is at the lower left.
8) Push strips completely to the bottom of strip rack frame.
9) Close the door panel.
10) Select the program "**L-BNA-PK-AUTO**". The parameters are given in following section.
11) Carefully remove the Auto Plate when the program is finished.
12) Use micropipette to transfer the purified nucleic acids from well **#6 / #12** to a clean tube.
13) Discard used Auto Plate and strips into the waste recycling bin.

12. Program

■ **SLA-16/32 series**

Program Name: L-BNA-PK-AUTO					Model: SLA-16/ 32 series			
Step	Well	Mixing (M)	Collect (S)	Rod	Mixing speed	Volume (μL)	Pause	Vapor (M)
1	3	1	90	ON	Medium	800	OFF	0
2	2	1	0	OFF	Medium	800	OFF	0
3	1	10	0	OFF	Low	900	OFF	0
4	2	0	90	ON	Medium	800	OFF	0
5	1	10	90	ON	Medium	800	OFF	0
6	2	5	90	ON	Medium	800	OFF	0
7	3	5	90	ON	Medium	800	OFF	0
8	4	5	90	ON	Medium	800	OFF	0
9	5	5	90	ON	Medium	800	OFF	10
10	6	10	120	ON	Medium	200	OFF	0
11	5	1	0	OFF	Medium	800	OFF	0
12	0	0	0	OFF	Medium	0	OFF	0

■ **SLA-E13200 series**

Program Name: L-BNA-PK-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	90	ON	Medium	800	OFF	0
2	2	45	1	0	OFF	Medium	800	OFF	0
3	1	45	10	0	OFF	Low	900	OFF	0
4	2	45	0	90	ON	Medium	800	OFF	0
5	1	45	10	90	ON	Medium	800	OFF	0
6	2	45	5	90	ON	Medium	800	OFF	0
7	3	45	5	90	ON	Medium	800	OFF	0
8	4	45	5	90	ON	Medium	800	OFF	0
9	5	45	5	90	ON	Medium	800	OFF	10
10	6	45	10	120	ON	Medium	200	OFF	0
11	5	N/A	1	0	OFF	Medium	800	OFF	0
12	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 acid 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 acid extraction concentration is less than 5%.

■ **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

14. Explanation of Symbols

	Manufacturer		Consult instructions for use
15°C 35°C	Temperature limit	Σ	Contains sufficient for test
REF	Catalogue number		Caution
LOT	Batch code	NON STERILE	Non-sterile
	Do not re-use		Protect from heat and radioactive sources
	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: 2021-12-28 V5