TANBead® Nucleic Acid Extraction Kit

OptiPure FFPE DNA Auto Plate

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

RUO

61PA46

(for research use only) V3

1. Purpose

TANBead® Nucleic Acid Extraction Kit (61PA46) provides an efficient and automated method for DNA extraction from formalin-fixed paraffin-embedded (FFPE) tissue sections. Without using hazardous organic solvents, such as xylene, supplant as mineral oil to deparaffinization of FFPE. Then, pretreating sample with Proteinase K and reverse formaldehyde modification of nucleic acids. Finally, nucleic acid can be extracted by TANBead Nucleic Acid Extractor with fully automated process and the nucleic acid product can be applied directly to following analysis. Simple and easy extraction process is suitable for high-throughput research and inspection units.

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

Sample Types: 50-60 μm FFPE tissue sections

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

2. Kit Components and Storage Conditions

61PA46		Σ 96 Assays
Auto Plate	6	96 well plate with reagent buffers
Incubation Buffer	35 ml	Tris buffer, surfactants, pH 8.0
Elution Buffer	1.5 ml	Nuclease-Free Water
Mineral Oil	35 ml	Nuclease-Free mineral oil
Proteinase K	1 ml x 2	Store at 4℃
Strip	12	8-channel strip
Protocol	1	Instruction guide for user

Storage Conditions:

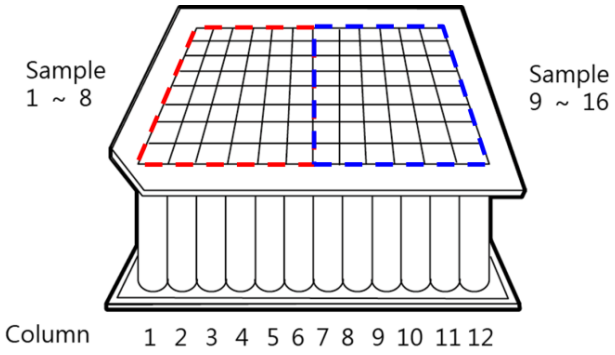
1) Components under room temperature (15-35℃) can be stored until the expiration date labeled on the box.
2) The Proteinase K can be transported at room temperature. When received, please store proteinase K at 4℃.

Required reagents for extraction but not included:

1) IPA: Isopropanol for molecular biology

Auto Plate Content

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



3. Product Use Information

1) Do not use expired kits.
2) When room temperature is below 20℃. Please warm the Auto Plate/Tube at 42-60 ℃ for 5-10 min.
3) Do not shake the reagent vigorously in order to avoid the excess foam formation.
4) Do not expose plate/tube and bottle reagent to air for a long time, to avoid evaporation and changing pH then affecting purification efficiency.
5) All reagents should be transparent and colorless. The existence of colors indicates that the reagent is contaminated. Please use another plate for subsequent procedure.
6) Before usage, inspect the completeness of the Auto Plate/Tube and strips.
7) Please wear a mask and disposable gloves when manipulation.
8) Remove the aluminum foil carefully to avoid splashing of the reagent solution.
9) Please use sterile consumables, and make sure that they are all nuclease free.
10) The procedures should not be changed.
11) Because the reagent buffers contain guanidine salts, washing reagent buffer with bleach-containing detergents is prohibited.
12) Do not let your eye, skin, and clothes come in contact with the reagents. If any contact or splashing occurred, rinse with abundant water.

4. Nucleic acid extraction protocol

Before operation, switch on the heating system of TANBead® Nucleic Acid Extractor. if it is equipped with temp. controller, please set a temperature of 45℃.

1) Put **50-60 μm FFPE tissue sections** into a 1.5 ml tube.
2) Add **300 μl Mineral oil** into a 1.5 ml tube and mix vigorously by vortexing.
3) Incubate at **80℃** for **5 minutes.**
4) Add **300 μl Incubation Buffer** and **20 μl Proteinase K** into 1.5 ml tube, then mix vigorously by vortexing.
5) Centrifuge at **6000 rpm** for **1 minute**. If any pellet appears in the aqueous phase, pipette it carefully to resuspend it without disturbing the upper layer.
6) Incubate at **56℃** for **1-2.5 hours** (or until the sample has been completely lysed).
7) Incubate at **90℃** for **1 hour.**
8) Centrifuge at **10000 rpm** for **15 seconds.**
9) Collect **colorless lower aqueous phase** as a sample (approximately 200 μl).
10) Mix the sample with **Isopropanol** as a **1:1 ratio (v/v).**
11) Carefully remove the aluminum foil from Auto Plate.
12) Divide the mixture **equally** into column **#1/#7** and **#2/#8.**
13) Place Auto Plate completely to the bottom of the tube rack. Make sure that the chamfer of Auto Tube rack is at the lower left.
14) Select the program "**LQ-W5-AUTO**". The parameters are given in the following section.
15) Carefully take out Auto Plate when the program is finished.
16) Use micropipette to transfer the purified nucleic acid from column #6/#12 to a clean tube.
17) Discard the used Auto Plate and spin tips into the waste recovery can.

5. Program

Program Name: LQ-W5-AUTO					Model: SLA-16/32, SLA-E132 series				
Step	**Well**	**Temp (℃)**	**Mixing (M)**	**Collect (S)**	**Rod**	**Mixing Speed**	**Volume (μl)**	**Pause**	**Vapor (M)**
1	5	NA	1	60	ON	Medium	800	OFF	0
2	1	NA	5	60	ON	Medium	800	OFF	0
3	2	NA	5	60	ON	Medium	800	OFF	0
4	3	NA	2	60	ON	Medium	800	OFF	0
5	4	NA	2	60	ON	Medium	800	OFF	10
6	6	NA	5	90	ON	Medium	150	OFF	0
7	5	NA	1	0	OFF	Medium	800	OFF	0
8	0	NA	0	0	OFF	Medium	0	OFF	0

6. Explanation of Symbols

	Manufacturer		**Consult instructions for use**
15°C 25°C	**Temperature limitation**	Σ	**Contains sufficient for <N> test**
	Use by date	RUO	**For research used only**
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**