TANBead® DNA Extraction Kit

REF 613A46 (for use with the SLA-16/32 and SLA-E132 Series)

CE IVD

1. Purpose

TANBead® DNA Extraction Kit (REF 613A46) is suitable for a variety of samples, including plants, mushrooms, etc. This kit, with TANBead® Smart LabAssist, simplifies nucleic acid extraction. With simple treatment of samples, it does not need repetitive centrifugations, reducing time for manual processing, and lowering the risk of cross-contamination. Moreover, this protocol can take up to 32 samples, enhancing the consistency and reproductivity.

Principle: The silicon dioxide layer coated on the magnetic beads can absorb negative charged molecular in order to purify nucleic acid from samples.
Sample Types: 50~100 mg plant tissues
Suitable Instrument: SLA-16/32, SLA-E132 Series

2. Kit Components and Storage Conditions

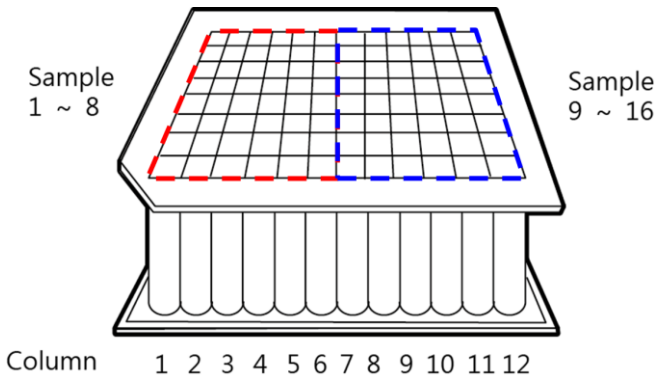
REF 613A46		Σ 96 Assays
Reagent Plate	6	96 well plate with reagent buffers
Lysis Buffer	45 ml x 2	Guanidine salt, Tris buffer, surfactants
Elution Buffer	20 ml	Nuclease-Free Water
Strip	12	8-channel strip
Protocol	1	Instruction guide for user

Storage Conditions:

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

Reagent 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	130 µl



3. Product Use Information

1) Do not use expired kits.
2) When room temperature is below 20 ℃. Please warm the reagent 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 replace another plate to continue following procedure.
6) Before use, inspect the completeness of the reagent 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 may not be changed.
11) Because the reagent buffers contain guanidine salts, it is prohibited from washing with any detergents that contain bleach.
12) All reagents are to avoid contact with the eyes, skin, and clothes. If any contact or splashing has occurred, rinse with abundant amount of water.

4. Nucleic acid extraction protocol

Before operating, turn on the warm-up system of TANBead® Nucleic Acid Extractor, if it is equipped with temp. controller, please setting at 45℃

a. Preparing samples

a-1) Grind the plant tissue and 800 µl lysis buffer with grinder or disposable pestle.
a-2) If samples are difficult to grind can be ground with liquid nitrogen, then add 800 µl lysis buffer and mix well.
a-3) Incubate at room temperature for 10 min.
a-4) Centrifuge at 5000~8000 RPM for 5 min.

b. Preparation of plants with high silicon content, such as rice leaf and palm oil leaf

b-1) Grind the plant tissue, add CTAB buffer and mix well. The optimal amount of CTAB buffer will change with sample. (1g plant tissue for 4ml CTAB buffer)
b-2) After incubation at 65 ℃ for 30min~1h, centrifuged at 4000~6000 RPM for 5min and transfer supernatant to a new tube.
b-3) Add cold IPA (0.6~1X lysate volume), invert 5~10 times and check that DNA pellet in the bottom of tube.
b-4) Centrifuged at 6000~10000RPM for 5min.
b-5) Remove supernatant, add 800 µl lysis buffer and mix well.

Preparing Reagent Plate

1) Carefully remove the aluminum foil from reagent plate.
2) Use micropipette to load **800 µl lysate** into column #1/#7 of reagent plate.
3) Push reagent plate completely to the bottom of plate rack. Make sure that the missing corner of reagent plate faces toward the door panel.
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) Once the program has ended, buzzer shall alarm. Take out reagent plate carefully.
8) Use micropipette to transfer the purified nucleic acid from column #6/ #12 to a clean tube.
9) Put the used reagent plate and strips into the waste recovery can.

5. Program

Programe Name: B10-W4-AUTO					Model: SLA-16/32, SLA-E132 Series				
Step	**Well**	**Temp (℃)**	**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	NA	1	0	OFF	Medium	800	OFF	0
10	0	NA	0	0	OFF	Medium	0	OFF	0

6. Explanation of Symbols