Procedure for elution of DNA extracts from FTA™ Elute

Extracted DNA is routinely stored frozen for sample archiving. Whatman™ FTA™ Elute Cards from GE Healthcare can be used to stabilize and protect nucleic acids for long term storage at room temperature. This procedure describes how to apply, store, and elute extracted DNA on FTA Elute Cards.

Precautions

Handling: Always wear gloves to avoid contamination of FTA Elute Cards. Follow universal precautions when handling biological specimens.

Storage: Samples can be stored in a multi-barrier pouch with desiccant for long term storage.

Materials required

- Indicating FTA Elute Micro Card (WB120411, and WB120412)
- TE^{-4} buffer (10 mM Tris-HCl, 0.1 mM EDTA)
- DNA IQ™ Spin Baskets (V1225 Promega)
- Uni-Core™ Punch 3.0 mm (WB100078 and WB100039)
- Cutting Mat (WB100020 and WB100088)
- Heated mixer/shaker
- 1.5 mL microcentrifuge tubes

Procedure

Applying DNA extract to FTA Elute Cards

1. Label the Indicating FTA Elute Card with the appropriate sample identification.
2. Pipette up to 75 µL of DNA extract onto the card within the printed circle area.
3. Allow the sample to air dry at least 3 h at room temperature until dry.
4. Once completely dried, store the samples in a cool and dry environment until ready to use.

Elution of DNA from FTA Elute Cards

1. Place the FTA Elute Card on a cutting mat.
2. Remove four, 3 mm punches from the FTA Elute Card and place the punches into a single 1.5 mL microcentrifuge tube.

   Note: One to four punches can be used based on known sample concentration and DNA input required for amplification.
3. Pipette 500 µL of TE^{-4} buffer into the microcentrifuge tube containing the 3 mm punches.
4. Close the tube and vortex the microcentrifuge tube for 5 s.
5. Pipette off excess TE^{-4} buffer and discard.

6. Repeat steps 3–5 (for a total of three washes with TE^{-4} buffer).
7. Pipette an appropriate amount of of TE^{-4} buffer into the microcentrifuge tube containing the sample punches based on the number of punches and suggested volumes in Table 1.
8. Place the microcentrifuge tube on a heated mixer/shaker at 95°C for 30 min at 1,000 rpm.
9. After incubation, briefly centrifuge the microcentrifuge tube to remove any excess liquid from the cap.
10. Place a clean spin basket into a new microcentrifuge tube. Transfer the punches and eluate to the spin basket and spin at maximum speed for 2 min.
11. Remove the spin basket, discard the punches, and proceed with quantification and/or amplification.

    NOTE: If the sample is too dilute to meet the DNA input needed for PCR amplification, the sample can be concentrated.
12. Store extracts according to your laboratory protocols.

Elution volume	Min No. of punch
≥50 µL	1
75 µL	2
100 µL	3
125 µL–150L (Sample concentration req)	4
Increase the elution volume by 25µL for every additional 3mm punch	

Concentration may be required for any combination of punches and elution volumes dependent on starting concentration of the sample

Ordering information

Product	Quantity	Product code
Indicating FTA Elute Micro Card	100	WB120411
Indicating FTA Elute Micro Card	25	WB120412
Uni-Core Punch 3.0 mm	4	WB100039
Uni-Core Punch 3.0 mm	25	WB100078
Cutting Mat 2.5 × 3 in	1	WB100088
Cutting Mat 6 × 8 in	1	WB100020
Multi-Barrier Pouch, small	100	WB100036
Desiccant Pack	100	10548234

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