

## AutoGen FLEX STAR Application Guide

### Mouse Tail (Tissue)



I. **Purpose:** To extract genomic DNA from mouse tail and other types of animal or human tissues.

II. **Chemical Principal:** Proteinase K/organic extraction method.

III. **Pretreatment of Mouse Tail:**

A. Cut 5-10 mm of tail (about 10-30 mg).

B. Place tail in 500 ml of a buffered Proteinase K solution (250ml of M1 including 0.4mg/ml Proteinase K and 250ml of M2).

C. Incubate at 50-60°C for 6 hours to overnight.

IV. **Protocol Parameters:**

A. **Sample Volume:** 0.5 ml of digest solution.

B. **Maximum Number of Samples:** 30 samples per run.

C. **Processing Time:** 3.4 hours for 30 samples (includes 1 hour drying time).

D. **Yield:** 20-60 µg of purified DNA per 10-30 mg of mouse tail.

E. **Quality:** Typical OD<sub>260/280</sub> values are 1.8.

The DNA can be used directly in downstream processes such as fluorescence DNA sequencing, PCR, Southern blotting and restriction endonuclease digestions.

V. **Running the Protocol:**

A. **Load Reagents and Samples**

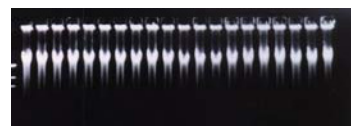
B. **Select a Protocol**

C. **Enter Number of Samples**

D. **Start the Run**

VI. **Example of genomic DNA obtained from mouse tail:**

A 10 mm mouse tail sample (about 30mg) was pre-treated with proteinase K and loaded onto the AutoGen system for purification. Approximately 2mg DNA per mg of tissue was obtained with a purity of OD<sub>260/280</sub>=1.8 to 1.9.



## VI. Extraction and Purification Process

Process Site	Purpose	System Process
1. Manual	Digest Proteins	Mix Proteinase K with Reagents M1 and M2, and then add to sample.
2. Automated	Precipitate Protein	Add Reagent R7, mix and centrifuge. Transfer supernatant to DNA tube.
3. Automated	Precipitate DNA	Add Reagent R4, agitate, centrifuge, discard supernatant.
4. Automated	Wash DNA	Add Reagent R5, mix, centrifuge, discard supernatant. Repeat several times.
5. Automated	Evaporate Alcohol	Transfer DNA tube to incubation rack.
6. Automated	Resuspend DNA	Add Reagent R3, mix and centrifuge.

\* All reagents and consumables are sold as a complete kit for Tissue DNA extraction on the FLEX STAR Catalog #AGKT-FXTD.

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