

## AutoGenprep 965

# Application Guide

## Mouse Tail (Animal Tissue)



- I. **Purpose:** To extract genomic DNA from mouse tail and other types of animal tissues.
- II. **Chemical Principal:** Proteinase K/organic extraction method.
- III. **Pretreatment of Tissue Samples:**
  - A. **Mouse Tail and Ear**
    1. Place 0.5-1.0cm mouse-tail (10-20mg) or 1/3 to a whole of mouse ear (5-20mg) into 96 deep well plate(s).
    2. Load the sample plates on the AutoGenprep 965/960
    3. Run [Digest] Protocol\*. The AutoGenprep 965/960 adds 0.15ml of Reagent M2 (Tissue Digestion 2) and 0.15ml of Reagent M1 (Tissue Digestion 1), containing the pre-dissolved Proteinase K at the concentration of 0.4 - 1.0mg/ml into the plates and mixes them.
    4. Remove the sample plate from the 965/960, seal the plate and incubate overnight at 60-65°C.
  - B. **Mouse Liver and Kidney**
    1. Place mouse liver or kidney into appropriate tubes, and add equal amount of Reagent M2 (Tissue Digestion 2) and Reagent M1 (Tissue Digestion 1), containing the pre-dissolved ProK at the concentration of 0.4 - 1.0mg/ml\*\* for a final concentration of 15 - 60mg tissue/ml.
    2. Incubate the samples overnight at 60-65°C.
    3. Transfer 0.3ml (equivalent to 5-20mg tissue) of Proteinase K digests to 96 well deep well plates.
- IV. **Protocol Parameters:**
  - A. **Samples Volume:** 0.3ml of Proteinase K digest (equivalent to 5-20mg of tissues)
  - B. **Maximum Number of Samples:** 384 samples (4 plates) per run.
  - C. **Processing Time:** 2.5 hours for 192 samples (2 plates); 4.0 hours for 384 samples (4 plates)  
This includes a 20 minutes drying period
  - D. **Yield:** 10 - 40 ug§ of genomic DNA (10-30mg of mouse tail / 1/3 to a whole mouse ear)  
10 - 30 ug§ of genomic DNA (5 -20mg of mouse liver or kidney)  
§ *The actual yield may vary depending on condition and volume of starting samples.*
  - E. **Quality:** OD260/280 values are 1.65 - 1.85, OD230/260 values are <0.5  
The DNA can be used directly in downstream applications such as fluorescent DNA sequencing, PCR, restriction enzyme digestions and more.

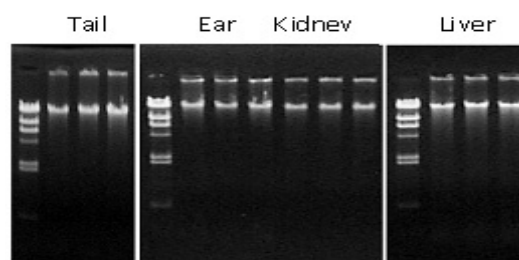
## V. Running the Protocol:

- A. Load Reagents and Sample Plates
- B. Select [Extraction] Protocol
- C. Enter Number of Samples
- D. Start the Run

## VI. Example of the extracted genomic DNA on the AutoGenprep 965:

Gel electrophoresis of the extracted genomic DNA

Gel: 0.7% agarose, TBE  
 Condition: 50V x 45 min.  
 Sample: 0.5 $\mu$ l  
 M:  $\lambda$ /Hind III marker



## VI. Extraction and Purification Process

Process Site	Purpose	System Process
1. Automated or Manual	Digest Tissues	Dissolve ProK with Reagent TD-M1, and add this combined solution with Reagent TD-M2 to samples. Incubate overnight at 60-65°C
2. Automated	Remove RNA	Add Reagents TD-R8 and mix.
3. Automated	Remove Protein & Cellular Debris	Add Reagent TD-R3, mix, centrifuge to pellet debris and transfer supernatant to new (DNA) plate.
4. Automated	Precipitate DNA	Add Reagent TD-R4, mix, precipitate DNA, centrifuge and discard supernatant.
5. Automated	Wash DNA	Add Reagent TD-R5/6/7, mix, centrifuge, and discard supernatant, repeat.
6. Automated	Dry DNA	Dry DNA by heating.
7. Automated	Resuspend DNA	Add Reagent TD-R9 and mix.

### AutoGen

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