



PI-480 Tissue DNA protocol

Genomic DNA isolation from mouse tail

KURABO PI-480 is an automated DNA isolation system with throughput of 48 samples at a time. This data sheet shows an example of DNA isolation from mouse tail. The specially designed 8-hole tube makes isolation process easy.

Experiment

Sample	mouse tail																
Sample amount	Tail: 5~20mg																
Isolation system and protocol	PI-480 Tissue DNA protocol																
Reagents kit and consumables	NR-201 Sample tube, PT-8000; DNA tube, NT-8000																
Chemical principle	Lysis of tissue: Protease K digestion (pre-treatment) Purification: Phenol extraction DNA isolation: Precipitation by alcohol																
Process	<p>Pre-treatment: [Inside of PI-480] Digest with 0.4mg/ml of protease K at 55C for 3hr. Reaction component is as follow;</p> <table border="0" style="margin-left: 40px;"> <tr> <td>0.3ml</td> <td>0.8mg/ml protease K in Protease dissolving reagent (No.2, NR-2025)</td> </tr> <tr> <td>0.3ml</td> <td>Suspending reagent (No. 10, NR-10025)</td> </tr> <tr> <td colspan="2"><hr/></td> </tr> <tr> <td colspan="2">Total volume 0.6ml</td> </tr> </table> <p>[Outside of PI-480] Digest with 0.2mg/ml of protease K at 50-55C for 15hr. Reaction component is as follow;</p> <table border="0" style="margin-left: 40px;"> <tr> <td>0.25ml</td> <td>0.4mg/ml protease K in Protease dissolving reagent (No.2, NR-2025)</td> </tr> <tr> <td>0.25ml</td> <td>Suspending reagent (No. 10, NR-10025)</td> </tr> <tr> <td colspan="2"><hr/></td> </tr> <tr> <td colspan="2">Total volume 0.5ml</td> </tr> </table> <p>DNA isolation with PI-480: Step1. Denature protein and remove debris Step2. Precipitate DNA Step3. Wash DNA Step4. Dry up Step5. Dissolve DNA in DNA dissolving reagent (KURABO, NR-7025) Final volume 100ul</p>	0.3ml	0.8mg/ml protease K in Protease dissolving reagent (No.2, NR-2025)	0.3ml	Suspending reagent (No. 10, NR-10025)	<hr/>		Total volume 0.6ml		0.25ml	0.4mg/ml protease K in Protease dissolving reagent (No.2, NR-2025)	0.25ml	Suspending reagent (No. 10, NR-10025)	<hr/>		Total volume 0.5ml	
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Analysis methods

- Yield and purity calculation** Absorbance of 260nm was measured for each DNA solution by spectrometer. DNA yield was calculated as follows:
A260 X 50 X dilution factor X final volume.
DNA purity was evaluated by the ratio of A260/A280.
- Electrophoresis** Each 10µl of DNA solution was loaded on a 1.0% agarose gel.

Results

Yield and purity

[Inside of PI-480]

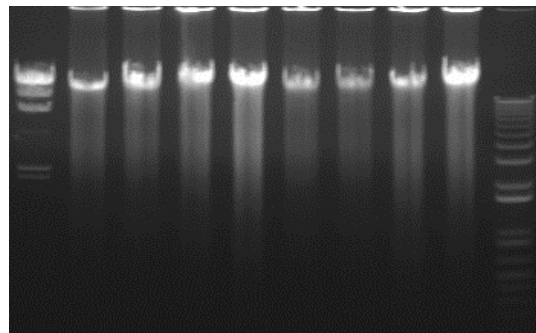
Sample	1	2	3	4
Yield (ug)	19.1/7.5mg	21.3/6.5mg	30.0/11.1mg	42.1/17.4mg
Purity (A260/A280)	1.85	1.89	1.90	1.89

[Outside of PI-480]

Sample	5	6	7	8
Yield (ug)	21.9/8.4mg	19.7/7.8mg	33.9/13.9mg	36.6/19.8mg
Purity (A260/A280)	1.90	1.90	1.90	1.87

Electrophoresis

M1 1 2 3 4 5 6 7 8 M2



Each 10ul of 100ul DNAsolution isolated from mouse tissues. The starting amount is; tail : 5~20mg

M1: λ Hind III
M2:1kb Plus DNA Ladder

Ordering information

DNA isolation system PI-480
Tissue DNA protocol

Reagents kit Tissue DNA isolation reagents kit NR-201 (approx. for 650 preps)

Reagent name	Reagent No. (Code)	Content
Proteinase dissolving reagent	2 (NR-2025)	1
Deproteinization reagent	3 (NR-3025)	1
Precipitating reagent	4 (NR-4050)	1
Washing reagent	5 (NR-5050)	3
DNA dissolving reagent	7 (NR-7025)	1
Suspending reagent	10 (NR-10025)	1

Processing tube Sample tube: PT-8000 (8-hole, blue, 64pieces)
DNA tube: NT-8000 (8-hole, white, 64pieces)

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