

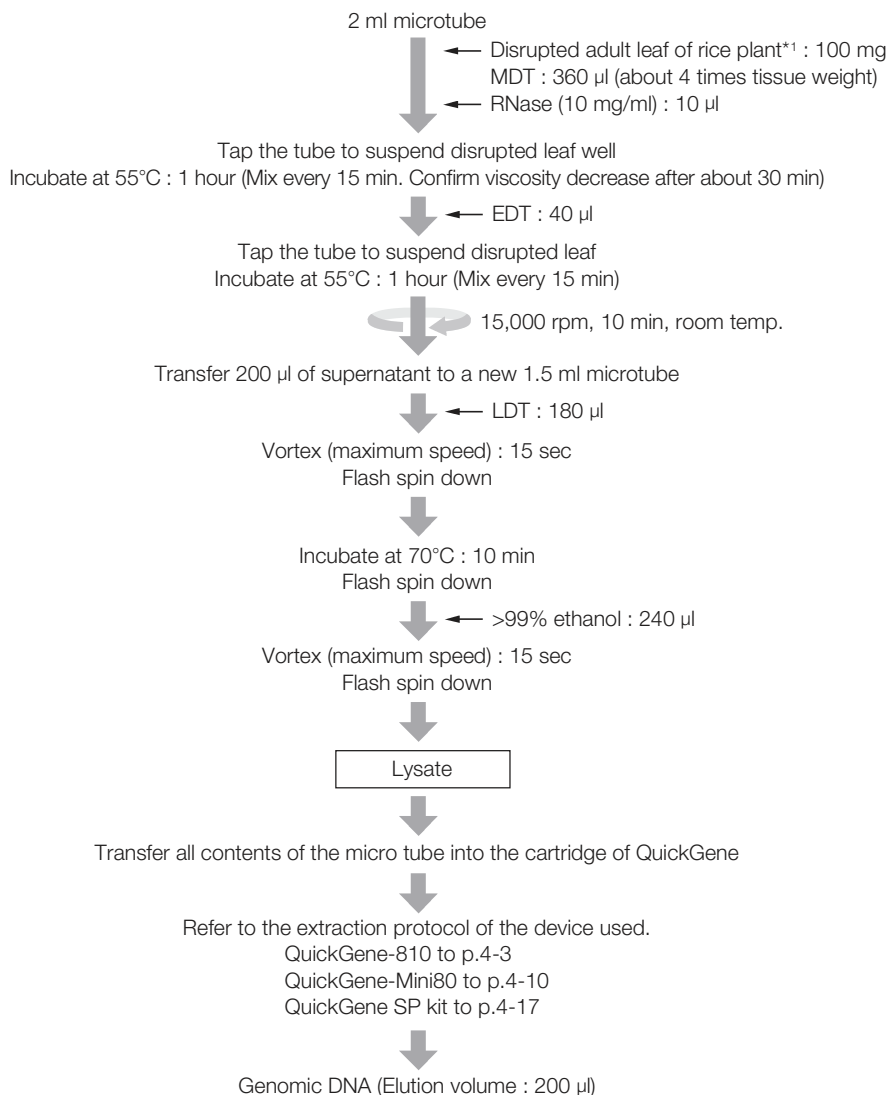
## Chapter 3-III

### Genomic DNA Extraction from Tissue of Plant

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## Genomic DNA Extraction from Adult Leaf of Rice Plant

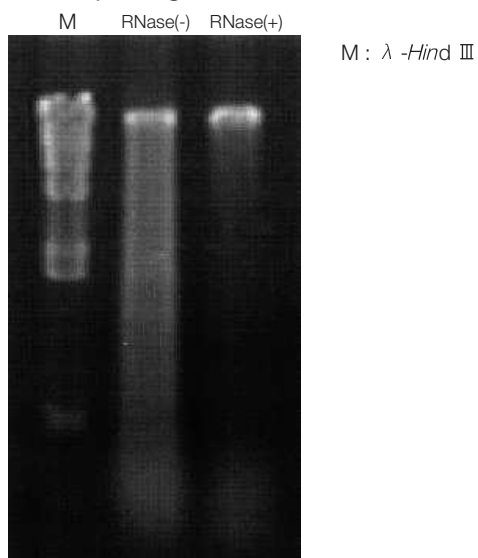
### Protocol



\*1 Multibeadshocker (Yasui Kikai Corporation) was used for disruption.

## Results

### Electropherogram



### The yield of genomic DNA

	Yield ( $\mu$ g)
RNase (+)	10
RNase (-)	36

### Protein contamination : A260/280

No Data

### Chaotropic salt contamination : A260/230

No Data

### Other

#### • Restriction Enzyme Digestion



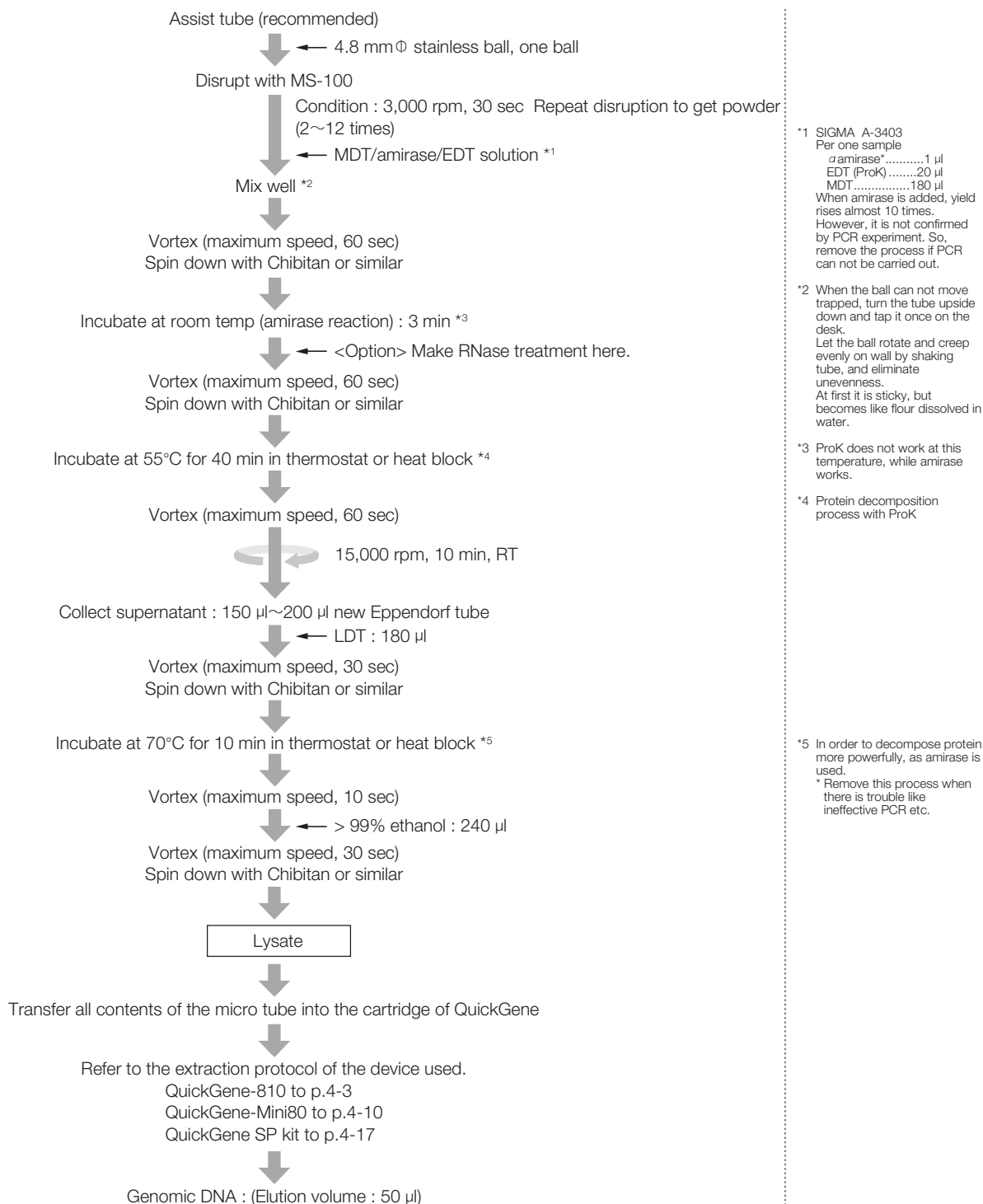
(Contributed by Professor Yukimoto Iwasaki and Yukiko Fujisawa, Faculty of Biotechnology, Fukui Prefectural University)

## Common protocol is usable for the following

No Data

# Genomic DNA Extraction from Amaranth Seed

## Protocol



## Results

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- Electropherogram  
No Data
- The yield of genomic DNA  
No Data
- Protein contamination : A260/280  
No Data
- Chaotropic salt contamination : A260/230  
No Data
- Other  
No Data

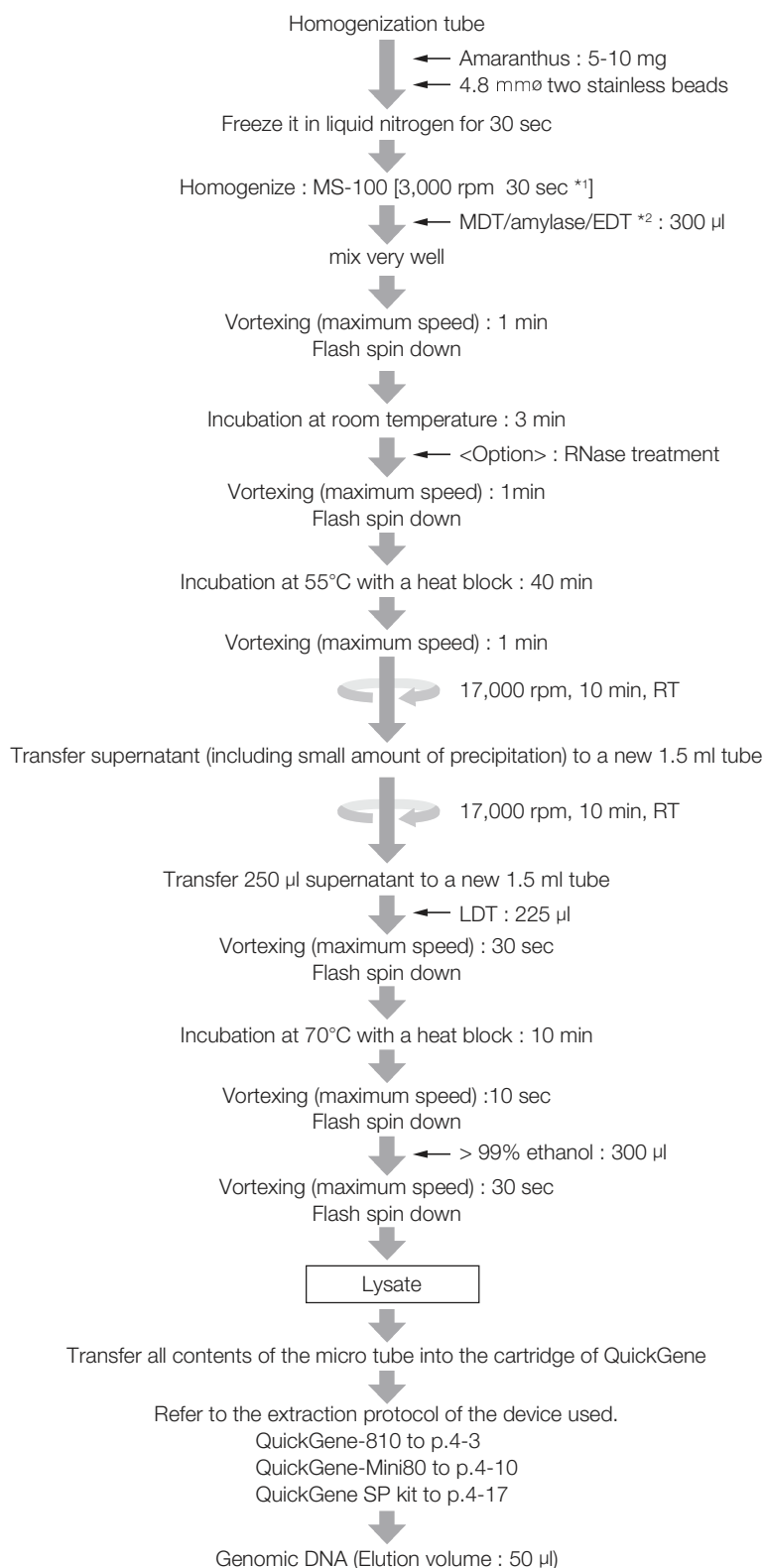
## Common protocol is usable for the following

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No Data

# Genomic DNA Extraction from Amaranthus

## Protocol



\*1 become powder by homogenization

\*2 1 sample  
α amylase\* ..... 1.5 µl  
EDT (ProK) ..... 30 µl  
MDT ..... 270 µl

\*SIGMA A-3403

amylase reactive, but ProK don't reactive in this process

ProK reactive in this process

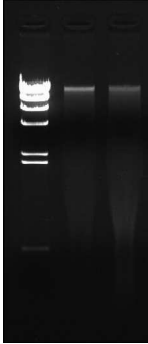
in the case of trouble (PCR reaction is bad.), this process cut off.

## Results

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### Electropherogram

M 1 2



1 : 5mg amaranthus  
2 : 10mg amaranthus  
M :  $\lambda$ -Hind III Marker

1% Agarose  
EtBr  
100V  
30 min  
RNase treatment

### The yield of genomic DNA

samples are below detection limit

### Protein contamination : A260/280

No Data

### Chaotropic salt contamination : A260/230

No Data

### Other

No Data

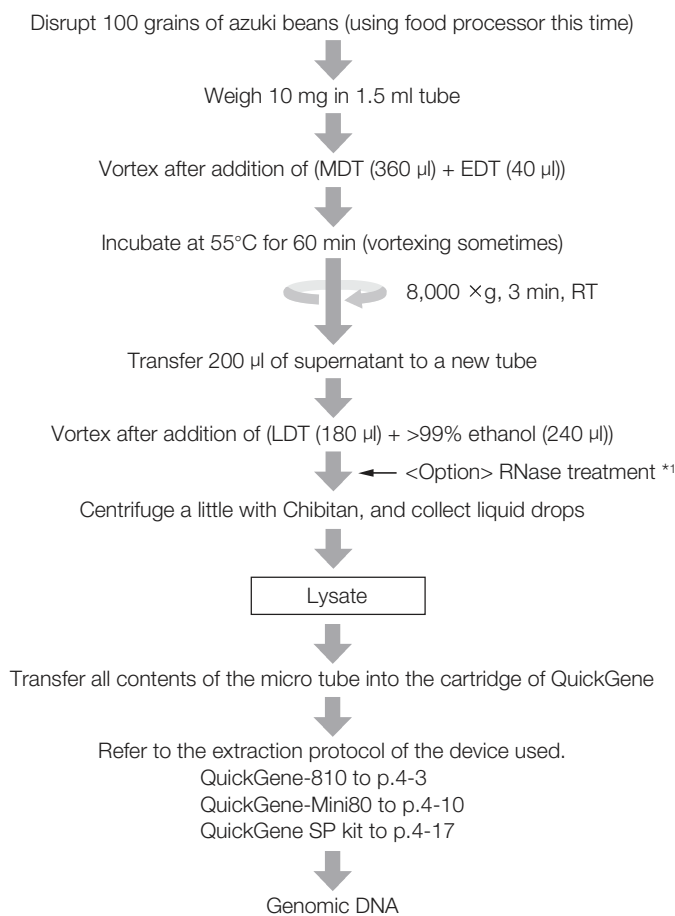
## Common protocol is usable for the following

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Lettuce

# Genomic DNA Extraction from Azuki Beans

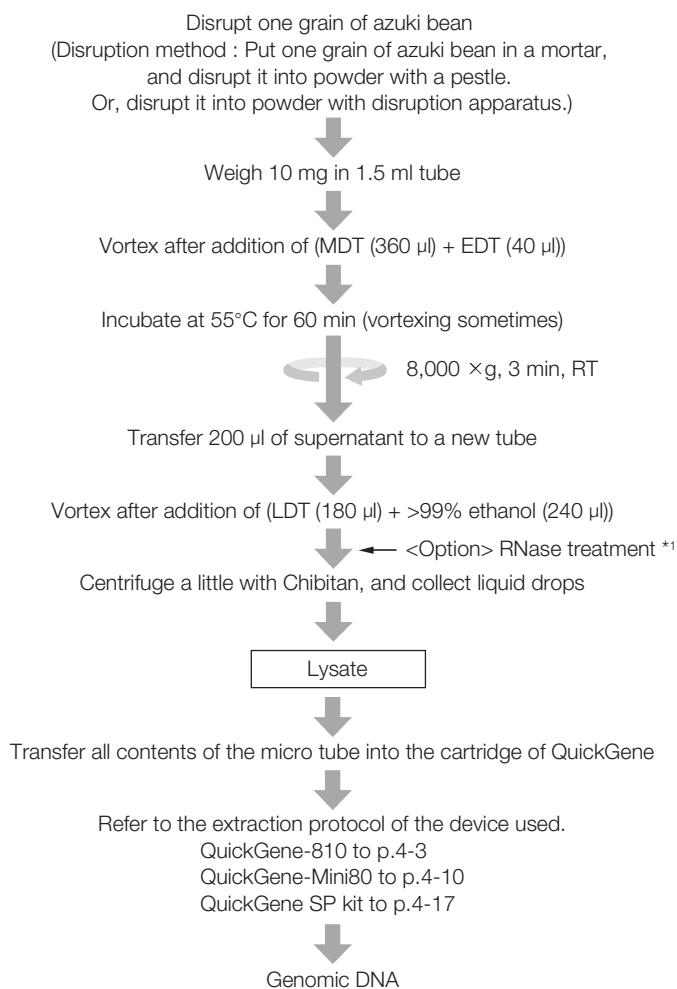
## Protocol 1



\*1 Add 20 µl of 100 mg/ml RNase A. Tapping and flash spin down. Reaction at room temp for 2 min



## Protocol 2



\*1 Add 20 μl of 100 mg/ml RNase A.  
Tapping and flash spin down.  
Reaction at room temp for 2 min

## Results

### ■ Electropherogram

No Data

### ■ The yield of genomic DNA

No Data

### ■ Protein contamination : A260/280

No Data

### ■ Chaotropic salt contamination : A260/230

No Data

### ■ Other

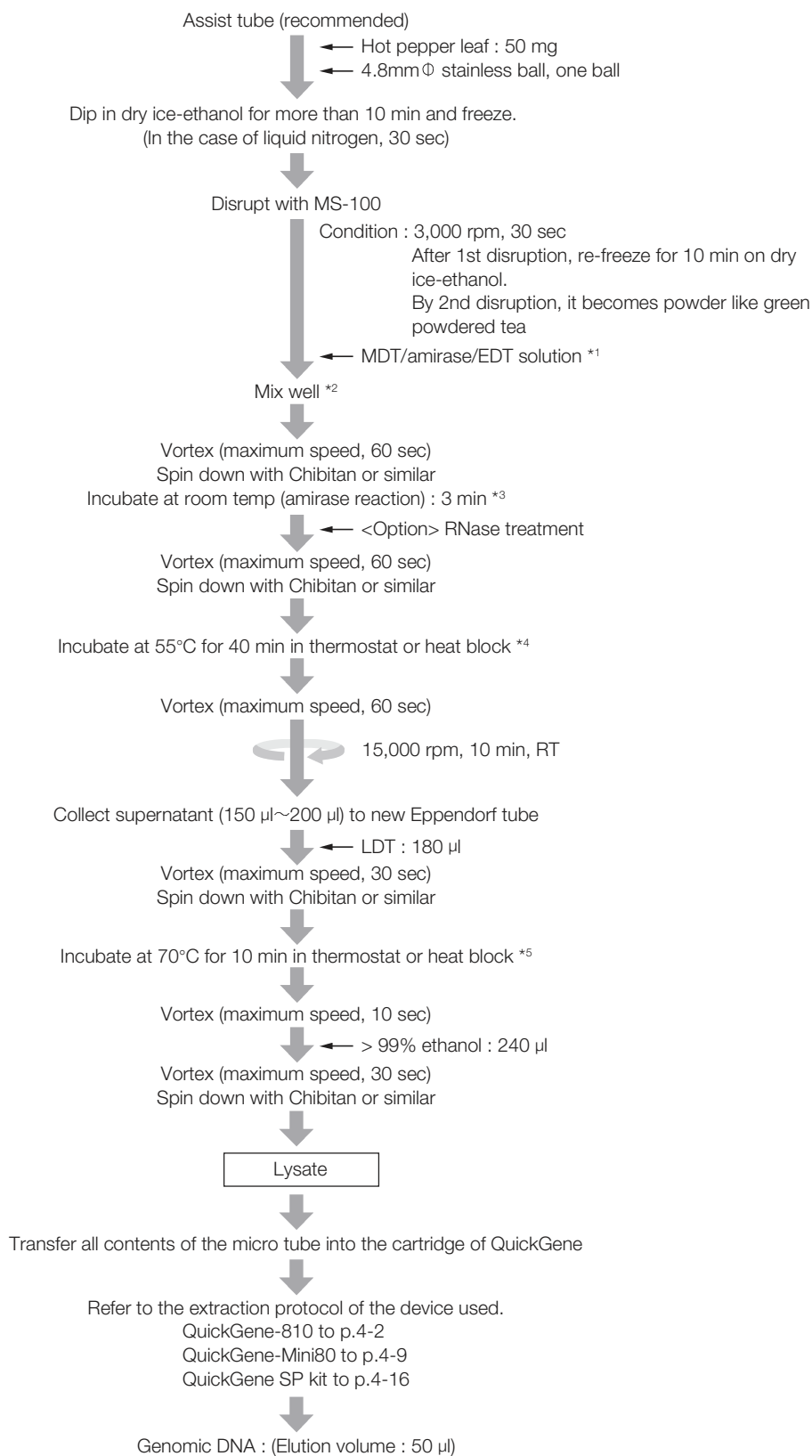
No Data

## Common protocol is usable for the following

No Data

# Genomic DNA Extraction from Hot Pepper Leaf

## Protocol



\*1 SIGMA A-3403  
Per one sample  
 $\alpha$ amirase\* .....1  $\mu$ l  
 EDT (ProK) .....20  $\mu$ l  
 MDT .....180  $\mu$ l  
 When amirase is added, yield rises almost 10 times. However, it is not confirmed by PCR experiment. So, remove the process if PCR can not be carried out.

\*2 When the ball can not move trapped, turn the tube upside down and tap it once on the desk.  
Let the ball rotate and creep evenly on wall by shaking tube, and eliminate unevenness.  
Color becomes grave dark green.

\*3 ProK does not work at this temperature, while amirase works.

\*4 Protein decomposition process with ProK

\*5 In order to decompose protein more powerfully, as amirase is used.  
Remove this process when there is trouble like ineffective PCR etc.

## Results

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- Electropherogram  
No Data
- The yield of genomic DNA  
No Data
- Protein contamination : A260/280  
No Data
- Chaotropic salt contamination : A260/230  
No Data
- Other  
No Data

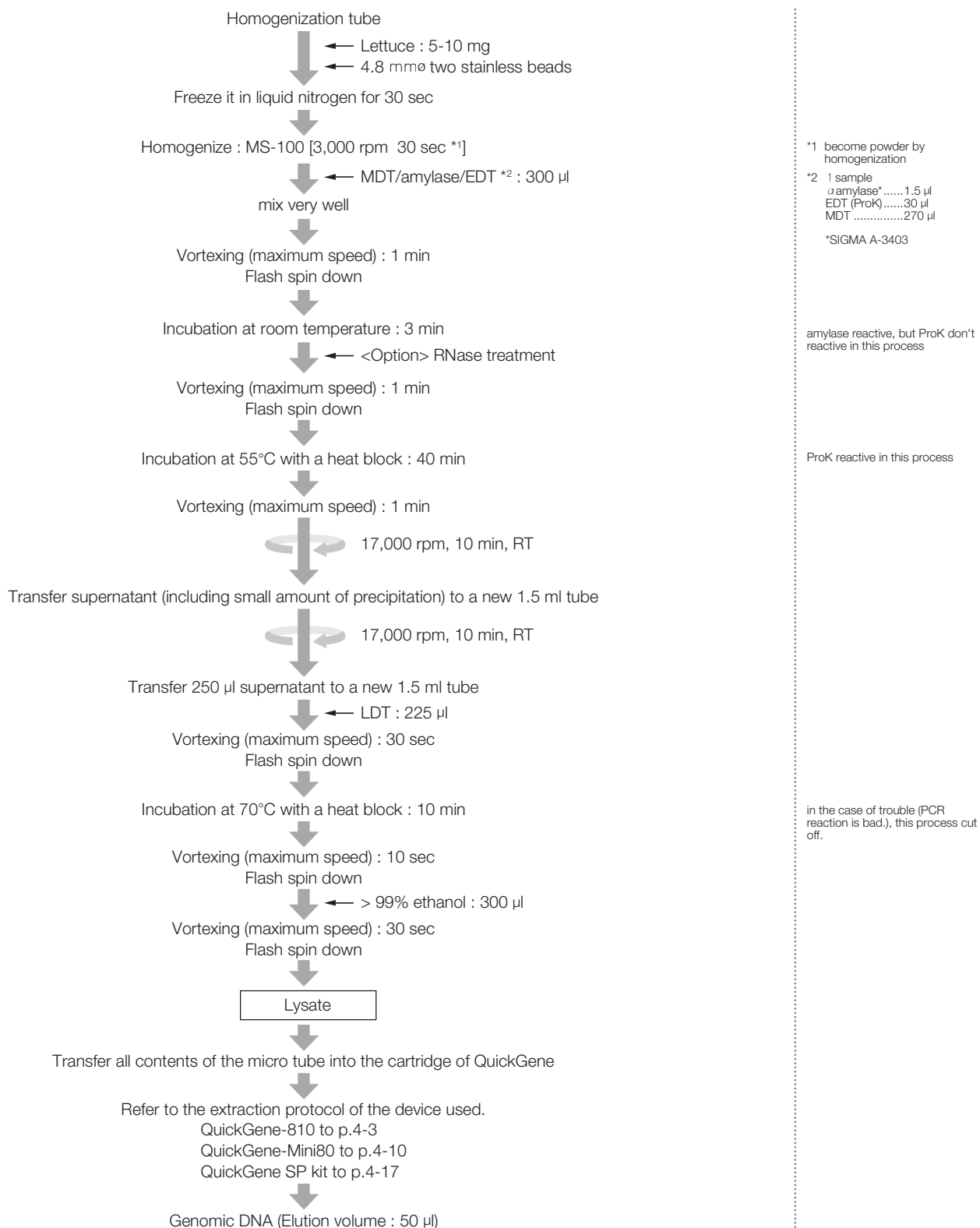
## Common protocol is usable for the following

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No Data

# Genomic DNA Extraction from Lettuce

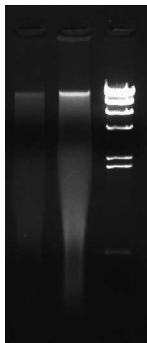
## Protocol



## Results

### Electropherogram

1 2 M



1 : 5 mg lettuce  
2 : 10 mg lettuce  
M :  $\lambda$ -Hind III Marker

1% Agarose  
EtBr  
100V  
30 min  
RNase treatment

### The yield of genomic DNA

Amount of lettuce	
10 mg	1.2 $\mu$ g

other samples are below detection limit

### Protein contamination : A260/280

No Data

### Chaotropic salt contamination : A260/230

No Data

### Other

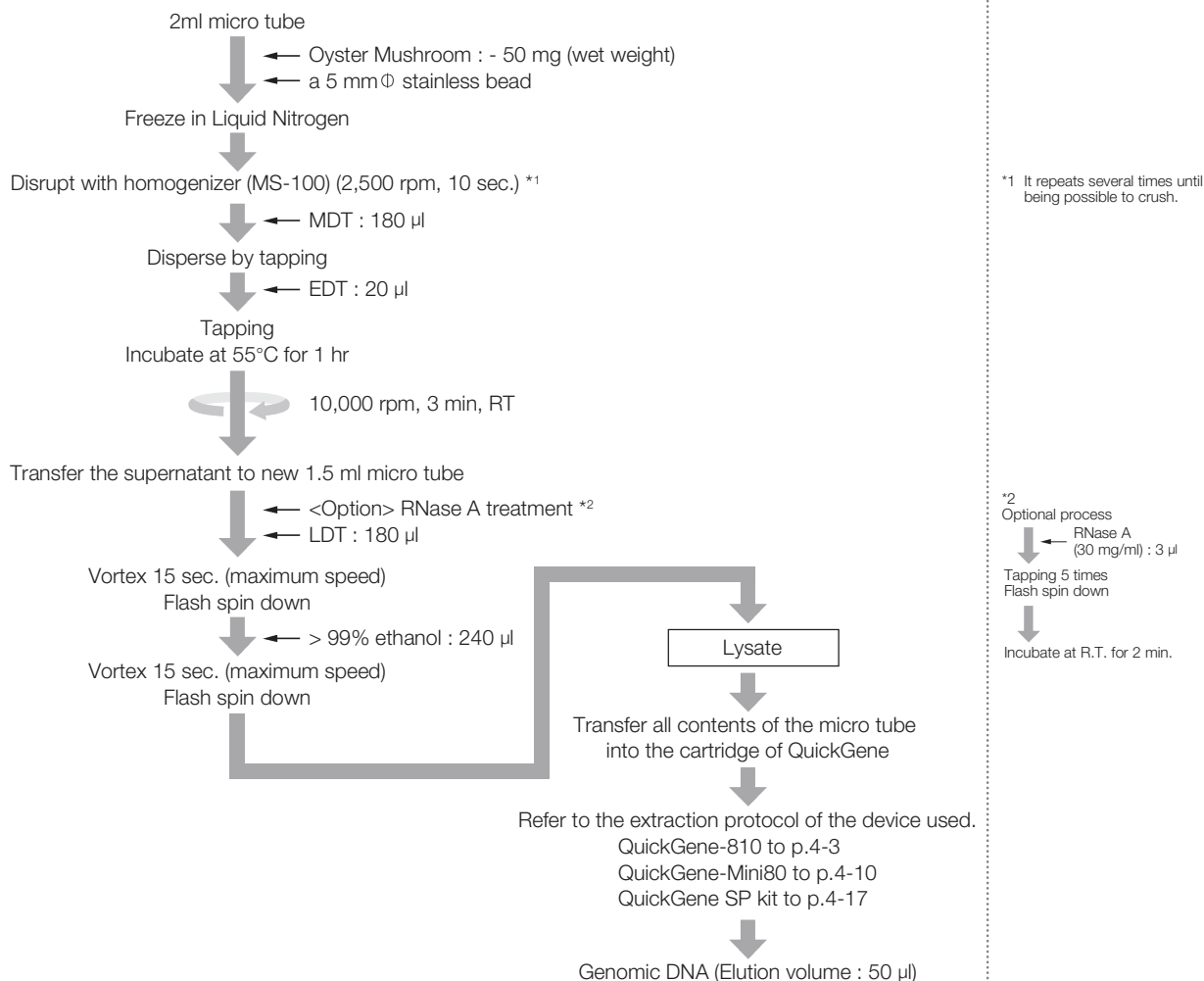
No Data

## Common protocol is usable for the following

Amaranthus

# Genomic DNA Extraction from Oyster Mushroom

## Protocol



## Results

### Electropherogram

No Data

### The yield of genomic DNA

No Data

### Protein contamination : A260/280

No Data

### Chaotropic salt contamination : A260/230

No Data

### Other

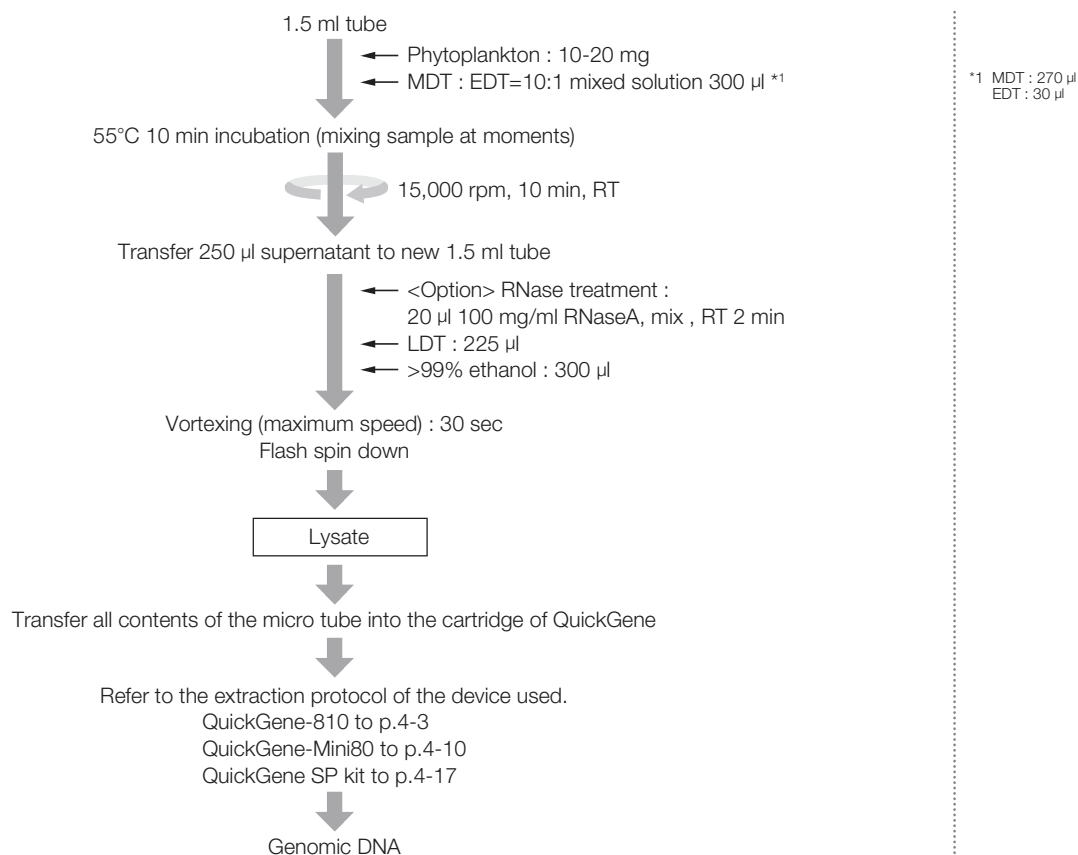
No Data

## Common protocol is usable for the following

No Data

## Genomic DNA Extraction from Phytoplankton

### Protocol



### Results

#### ■ Electropherogram

No Data

#### ■ The yield of genomic DNA

No Data

#### ■ Protein contamination : A260/280

No Data

#### ■ Chaotropic salt contamination : A260/230

No Data

#### ■ Other

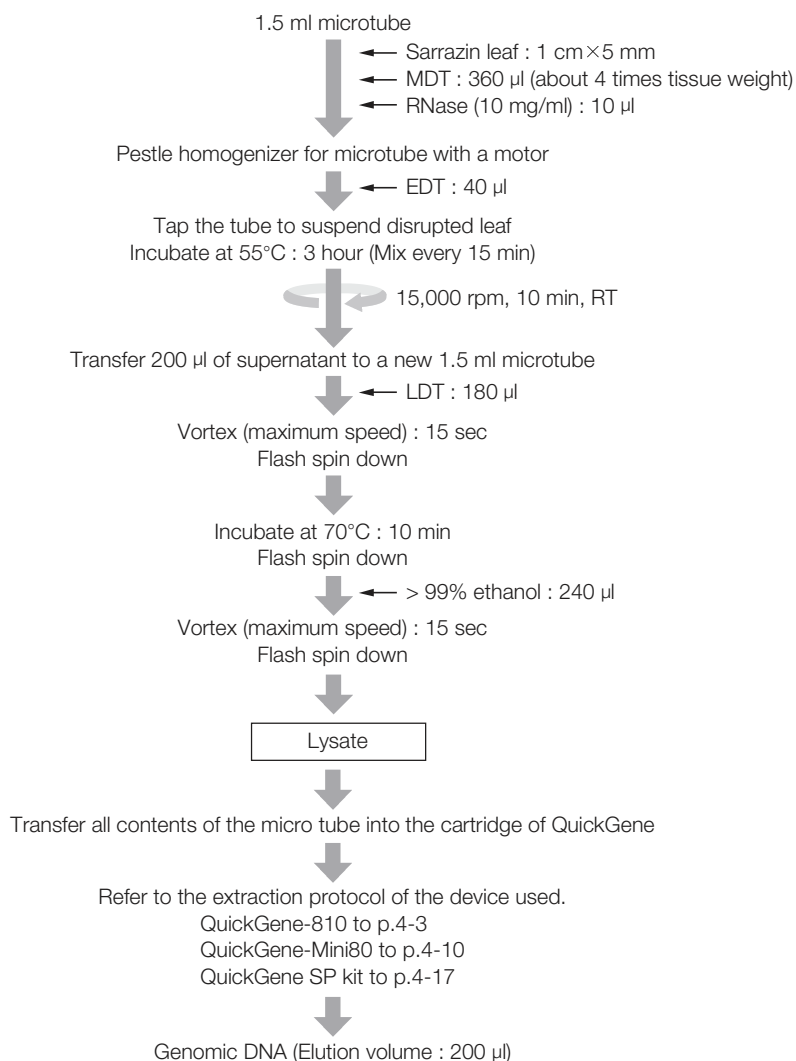
No Data

### Common protocol is usable for the following

No Data

## Genomic DNA Extraction from Sarrazin leaf

### Protocol



### Results

#### ■ Electropherogram

No Data

#### ■ The yield of genomic DNA

No Data

#### ■ Protein contamination : A260/280

No Data

#### ■ Chaotropic salt contamination : A260/230

No Data

#### ■ Other

No Data

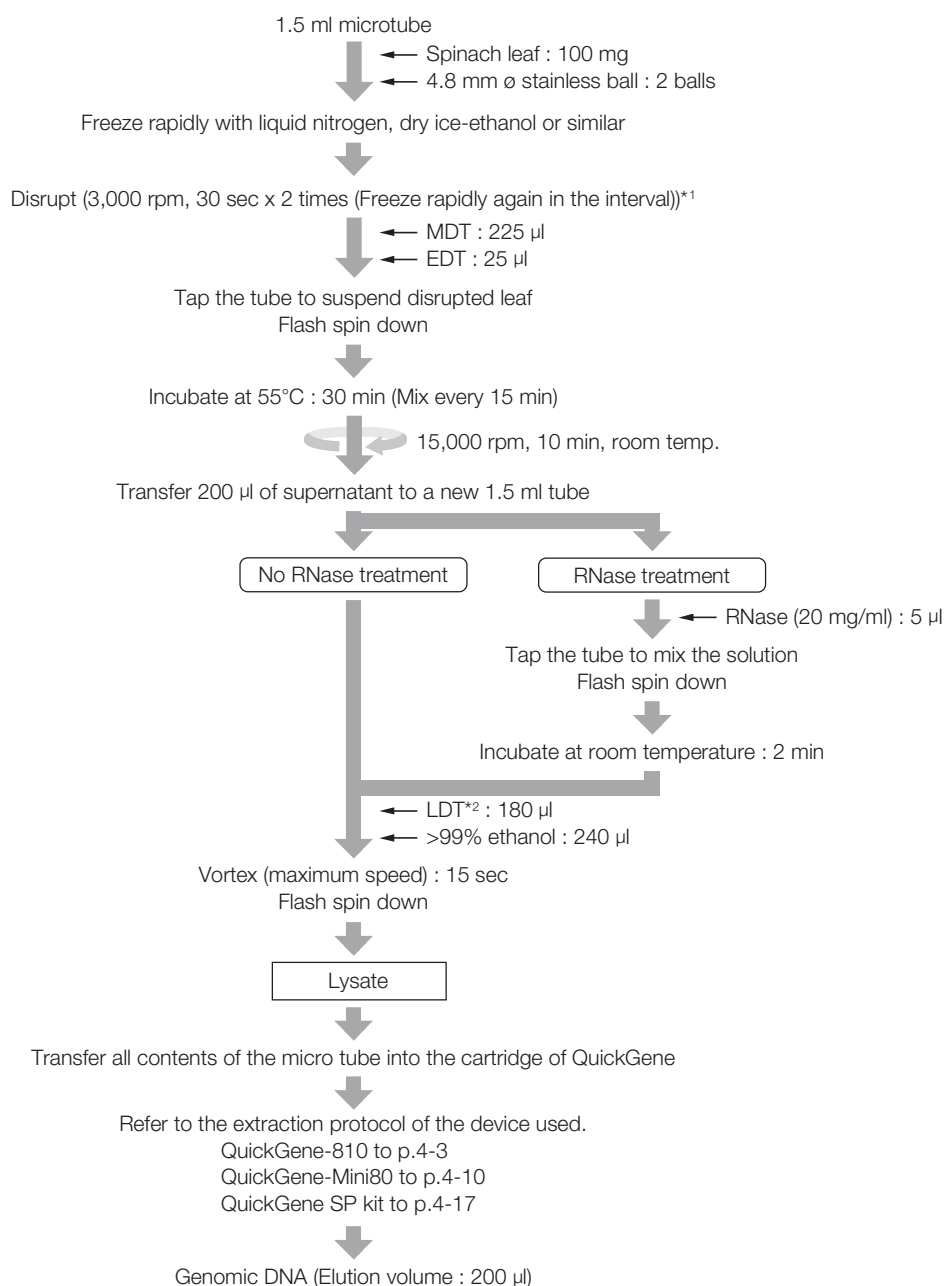
### Common protocol is usable for the following

No Data



# Genomic DNA Extraction from Spinach Leaf

## Protocol

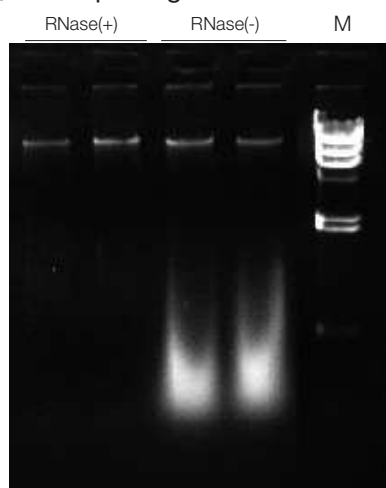


\*1 MS-100 (Tomy Seiko Co.) was used for disruption.

\*2 If precipitate is generated after LDT addition, add >99% ethanol after dissolving precipitate by incubation at 70°C for several minutes.

## Results

### Electropherogram



Electrophoresis condition : 1% agarose / 1 x TAE

M :  $\lambda$  - *Hind* III

### The yield of genomic DNA

RNase (+)	3.6 $\mu$ g	4.0 $\mu$ g	2.8 $\mu$ g	6.9 $\mu$ g
RNase (-)	39.6 $\mu$ g	14.8 $\mu$ g	44.8 $\mu$ g	52.0 $\mu$ g

### Protein contamination : A260/280

RNase (+)	1.94	1.87	1.80	1.97
RNase (-)	2.22	2.16	2.24	2.24

### Chaotropic salt contamination : A260/230

RNase (+)	1.76	1.89	1.77	2.04
RNase (-)	2.24	1.99	2.26	2.29

### Other

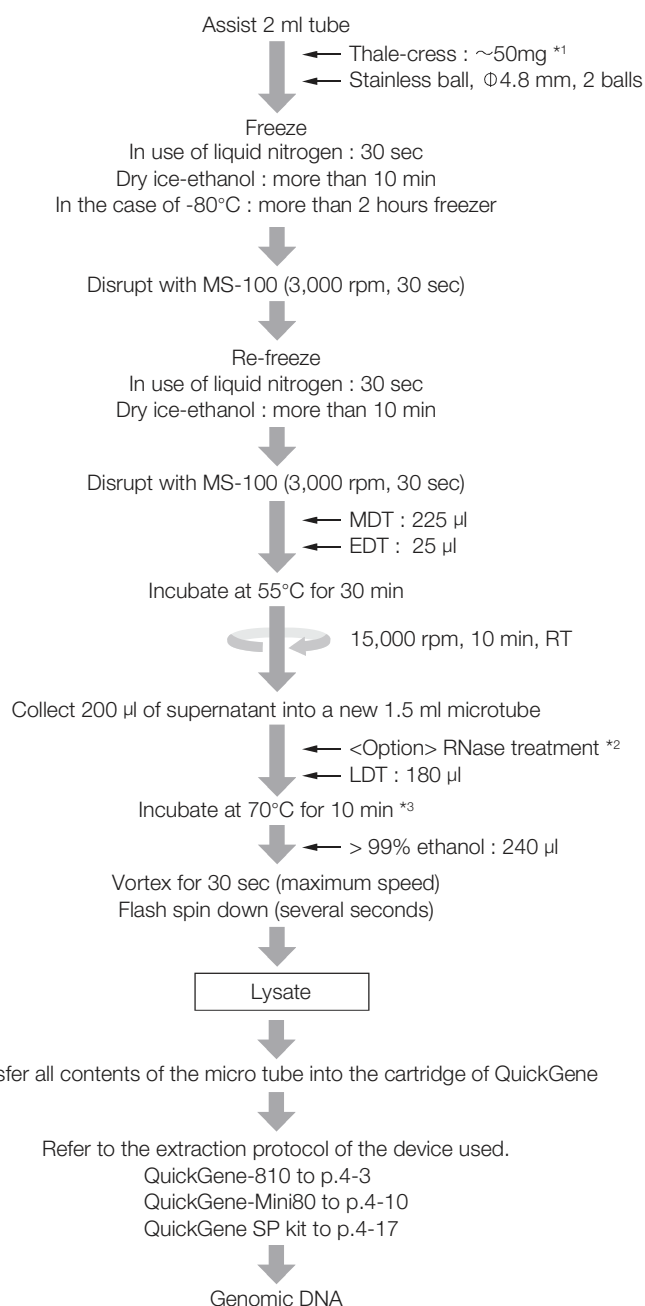
No Data

## Common protocol is usable for the following

No Data

## Genomic DNA Extraction from Thale-cress

### Protocol



\*1 There is case where 50 mg can not be treated depending on growth condition. At first, try with 20~30 mg, and then increase amount.

\*2 Add 20 µl of recommended RNase A 100 mg/ml, and mix at room temp for 2 min

\*3 Conduct this process in case precipitate is generated after addition of LDT. If precipitate is dissolved, it is all right with less than 10 min.

### Results

#### ■ Electropherogram

No Data

#### ■ The yield of genomic DNA

No Data

#### ■ Protein contamination : A260/280

No Data

■ Chaotropic salt contamination : A260/230

No Data

■ Other

No Data

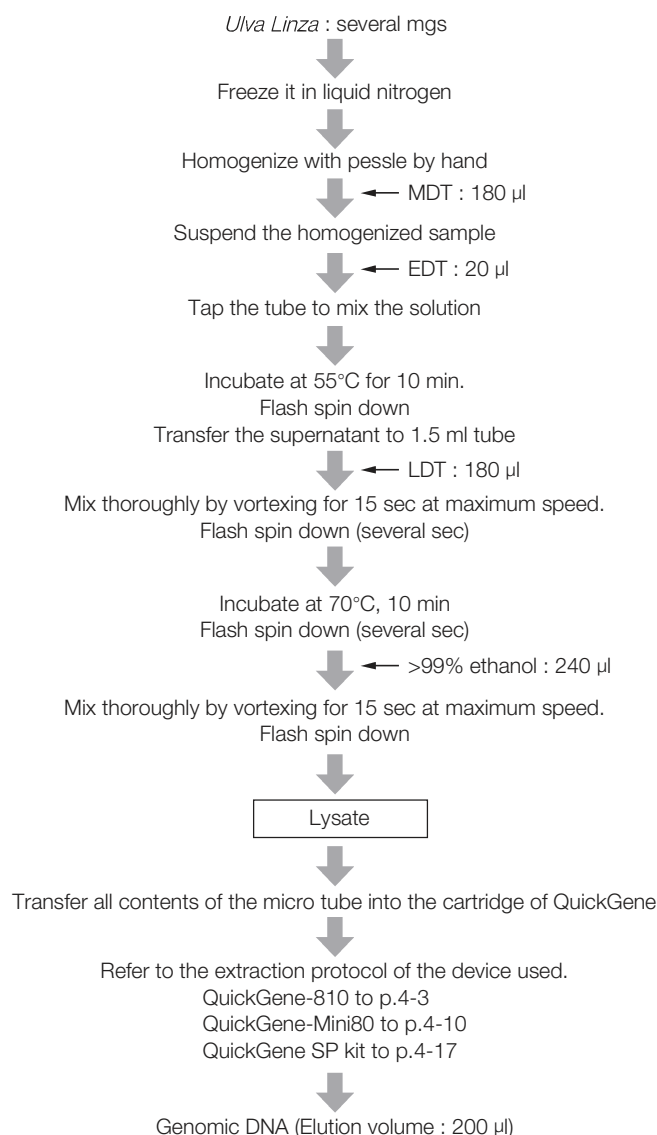
## Common protocol is usable for the following

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No Data

## Genomic DNA Extraction from *Ulva Linza*

### Protocol



### Results

#### ■ Electropherogram

No Data

#### ■ The yield of genomic DNA

No Data

#### ■ Protein contamination : A260/280

No Data

#### ■ Chaotropic salt contamination : A260/230

No Data

#### ■ Other

No Data

### Common protocol is usable for the following

No Data





**North American Distributor**  
AutoGen, Inc.  
84 October Hill Road  
Holliston, MA 01746 USA

**tel:** 508.429.5965  
**fax:** 508.429.9765  
**email:** [info@autogen.com](mailto:info@autogen.com)  
**web:** [autogen.com](http://autogen.com)