

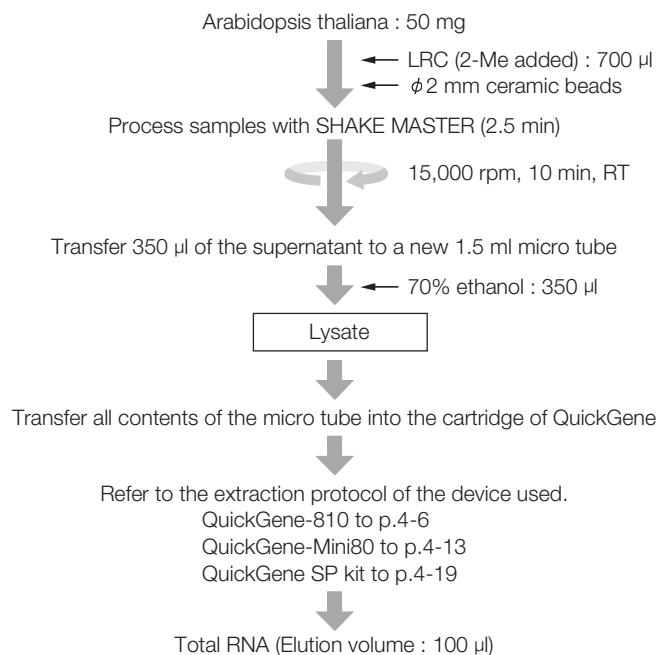
## Chapter 3-XII

### Total RNA Extraction from Tissue of Plant

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## Total RNA Extraction from Arabidopsis Thaliana

### Protocol



### Results

■ Electropherogram

No Data

■ The yield of total RNA

No Data

■ Protein contamination : A260/280

No Data

■ Chaotropic salt contamination : A260/230

No Data

■ Other

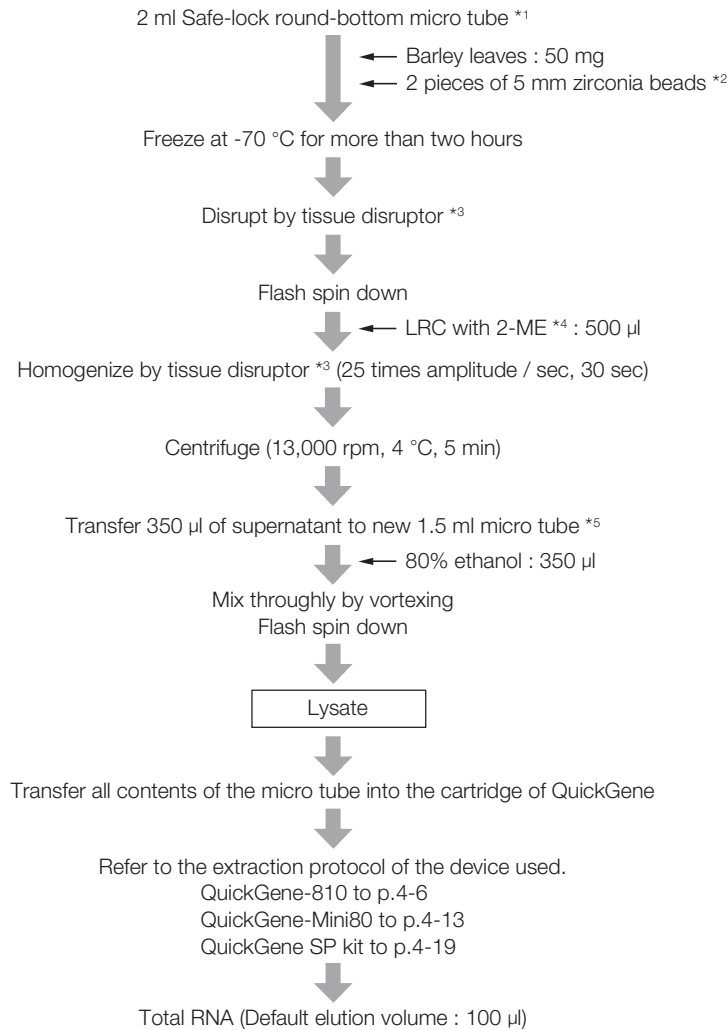
No Data

### Common protocol is usable for the following

No Data

# Total RNA Extraction from Barley Leaves

## Protocol



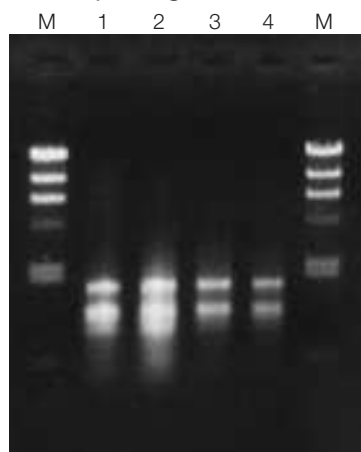
\*1 Eppendorf Co., Ltd

\*2 NIKKATO Co., Ltd

\*3 TissueLyser (Mixer Mill 300) :  
QIAGEN Co., Ltd.  
Please cool the holder of the  
tissue disruptor beforehand at  
-20 °C.  
Please follow the manual of  
the tissue disruptor about the  
disruption methods.\*4 Add 10 µl of 2-ME per 1 ml of  
LRC.\*5 Even if the fiber mixes  
somewhat, it doesn't influence  
the result.

## Results

### Electropherogram



Electrophoresis condition

0.8% Agarose gel

TAE Buffer

2  $\mu$ l of sample / well

M :  $\lambda$  -Hind III (100 ng)

1 : Wheat leaves (gramineae)

2 : Barley leaves (gramineae)

3 : *Chenopodium quinoa* leaves (*Chenopodiaceae*)

4 : *Nicotiana benthamiana* leaves (*solanaceae*)

### The yield of total RNA

Barley leaves	12.2 $\mu$ g
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### Protein contamination : A260/280

Barley leaves	2.12
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### Chaotropic salt contamination : A260/230

No Data

### Other

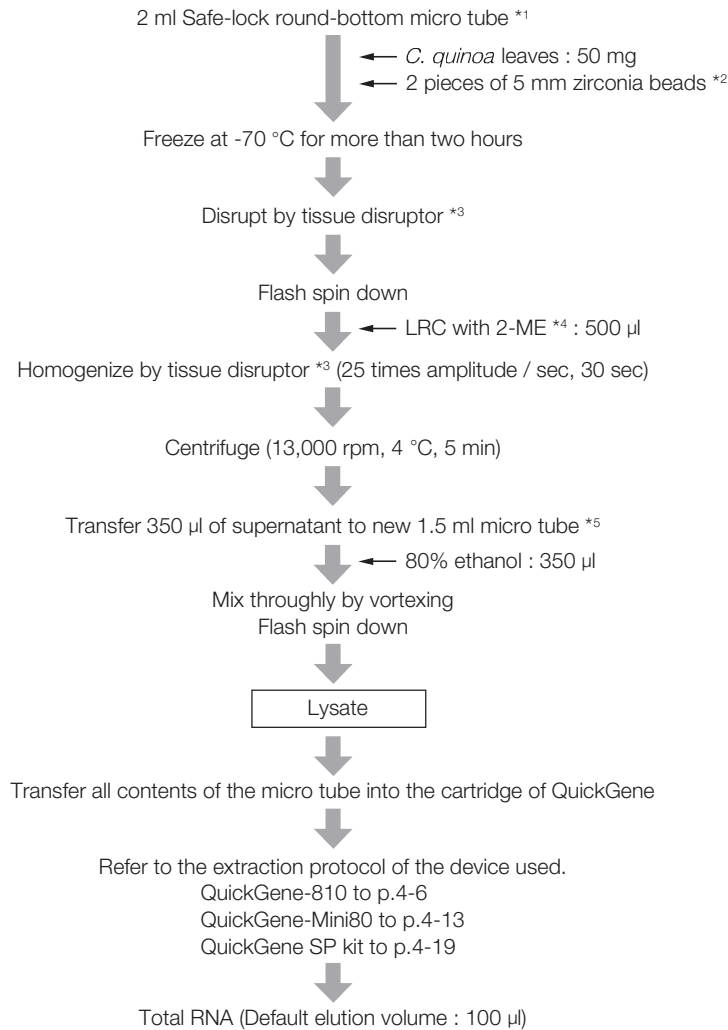
No Data

## Common protocol is usable for the following

N.benthamiana leaves, C. quinoa leaves, Wheat leaves

## Total RNA Extraction from *C. quinoa* Leaves

### Protocol



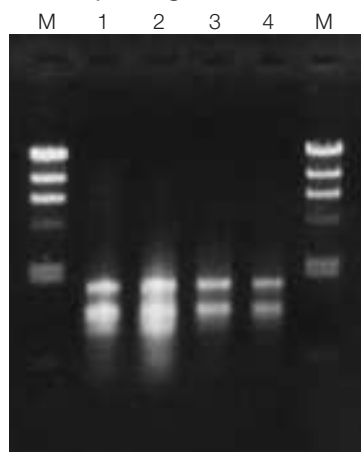
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\*2 NIKKATO Co., Ltd

\*3 TissueLyser (Mixer Mill 300) :  
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the result.

## Results

### Electropherogram



Electrophoresis condition

0.8% Agarose gel

TAE Buffer

2  $\mu$ l of sample / well

M :  $\lambda$  -Hind III (100 ng)

1 : Wheat leaves (gramineae)

2 : Barley leaves (gramineae)

3 : *Chenopodium quinoa* leaves (*Chenopodiaceae*)

4 : *Nicotiana benthamiana* leaves (*solanaceae*)

### The yield of total RNA

<i>C. quinoa</i> leaves	3.88 $\mu$ g
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### Protein contamination : A260/280

<i>C. quinoa</i> leaves	2.02
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### Chaotropic salt contamination : A260/230

No Data

### Other

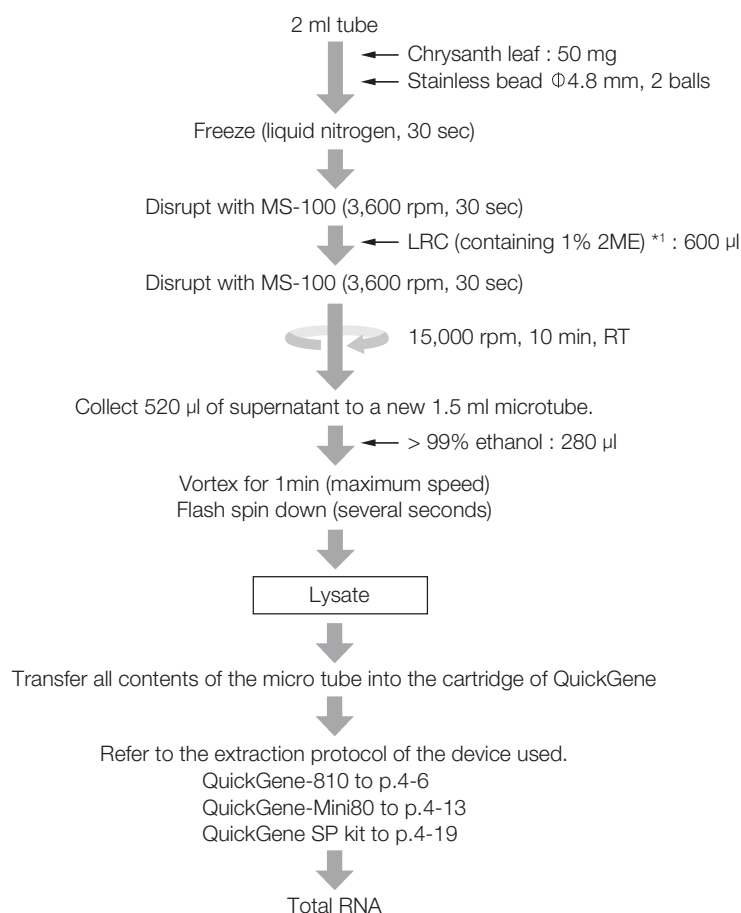
No Data

## Common protocol is usable for the following

N.benthamiana leaves, Barley leaves, Wheat leaves

## Total RNA Extraction from Chrysanth Leaf

### Protocol



\*1 Add 10  $\mu$ l of 2-ME per 1 ml of LRC.

### Results

#### ■ Electropherogram

No Data

#### ■ The yield of total RNA

No Data

#### ■ Protein contamination : A260/280

No Data

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

No Data

#### ■ Other

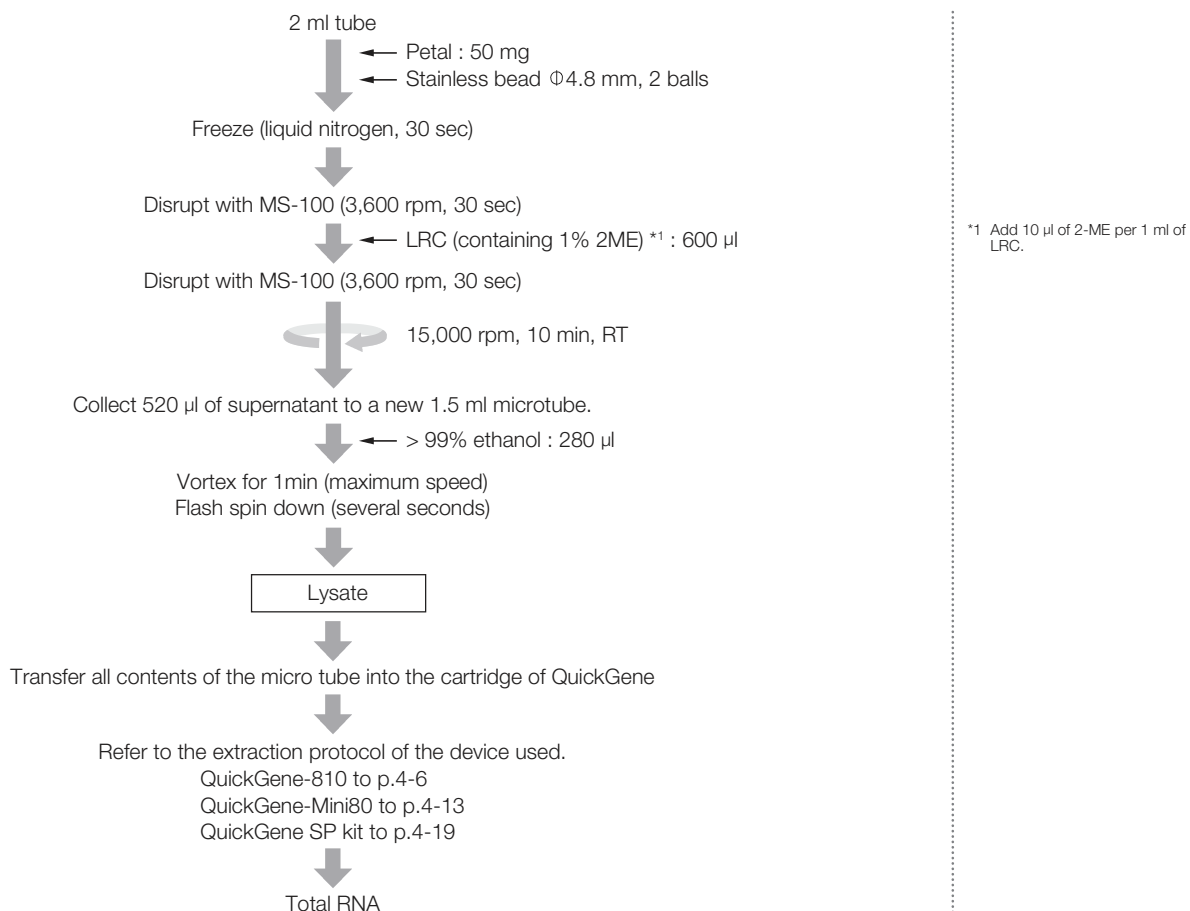
No Data

### Common protocol is usable for the following

No Data

## Total RNA Extraction from Petal

### Protocol



### Results

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

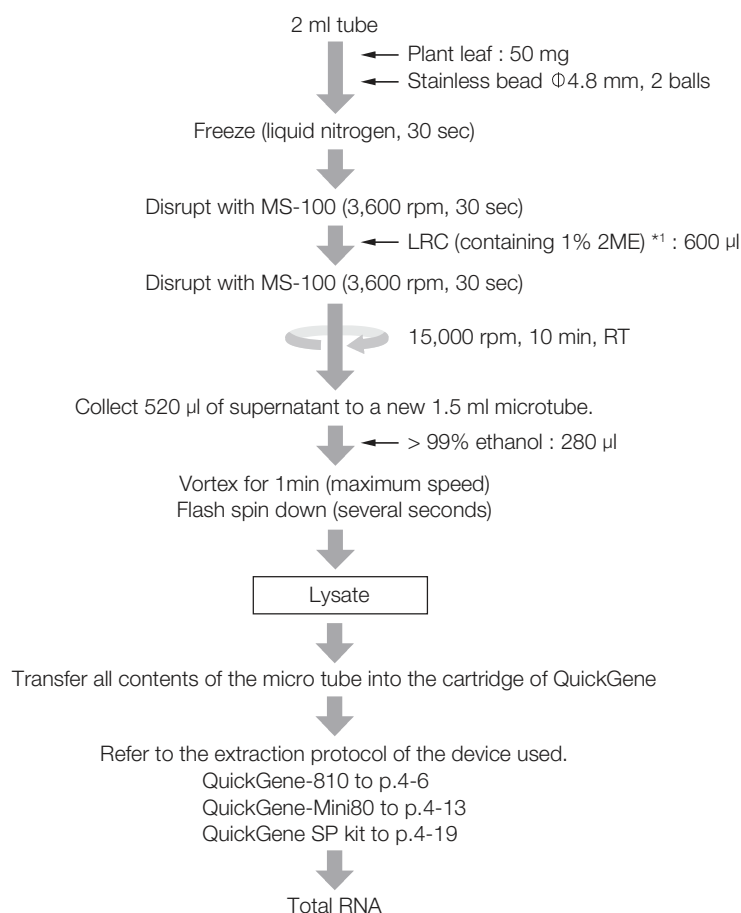
### Common protocol is usable for the following

No Data



## Total RNA Extraction from Plants

### Protocol



\*1 Add 10  $\mu$ l of 2-ME per 1 ml of LRC.

### Results

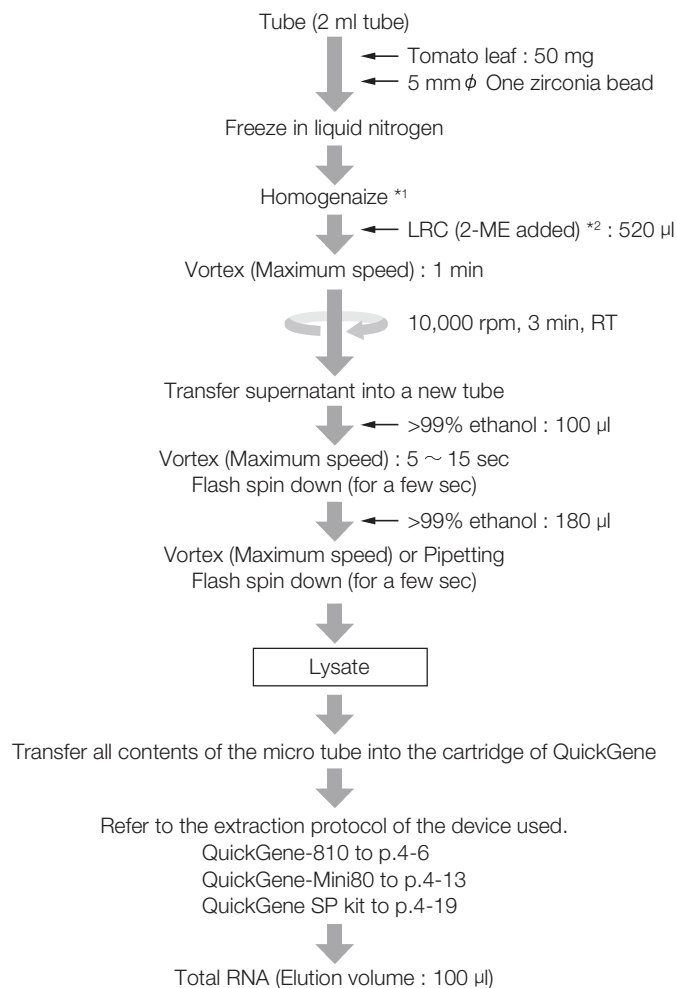
- Electropherogram  
No Data
- The yield of total RNA  
No Data
- Protein contamination : A260/280  
No Data
- Chaotropic salt contamination : A260/230  
No Data
- Other  
No Data

### Common protocol is usable for the following

No Data

## Total RNA Extraction from Tomato Leaf

### Protocol



\*1 Homogenizer (MS-100) :  
TOMY SEICO CO, LTD  
products  
Bead :  
Zirconia/5mmφ,  
1 piece (Cat. No. ZB-50)  
Tube :  
2ml Tube (Cat. No. 72693)  
Homogenize Condition :  
2,500 rpm, 10 sec or  
3,000 rpm, 10 sec

\*2 Add 10 µl of 2-ME per 1 ml of  
LRC.

### Results

#### Electropherogram

No Data

#### The yield of total RNA

Amount of tomato leaf	Yield (µg)	Average of yield (µg)
25 mg	6.3	5.3
	4.2	
50 mg	9.2	7.8
	6.2	
	8.0	

■ Protein contamination : A260/280

Amount of tomato leaf	A260/280	Average of A260/280
25 mg	2.03	2.02
	2.02	
50 mg	2.01	2.00
	2.00	
	1.99	

■ Chaotropic salt contamination : A260/230

Amount of tomato leaf	A260/230	Average of A260/230
25 mg	1.55	1.54
	1.62	
50 mg	1.62	1.65
	1.66	
	1.66	

■ Other

No Data

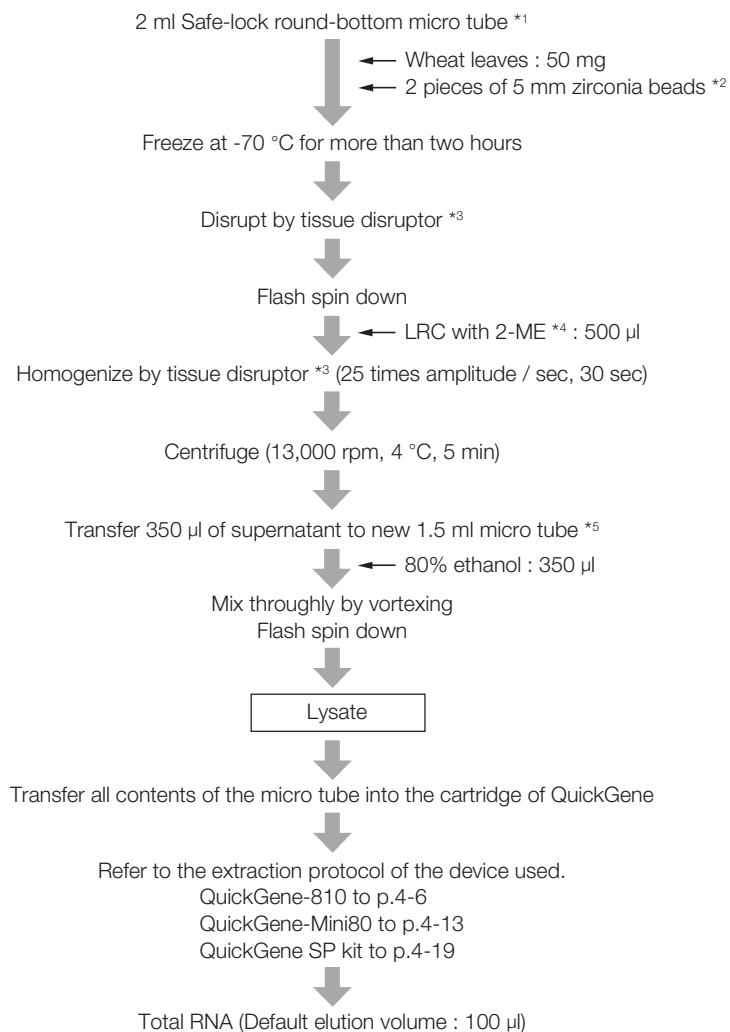
■ Common protocol is usable for the following

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No Data

## Total RNA Extraction from Wheat Leaves

### Protocol



\*1 Eppendorf Co., Ltd

\*2 NIKKATO Co., Ltd

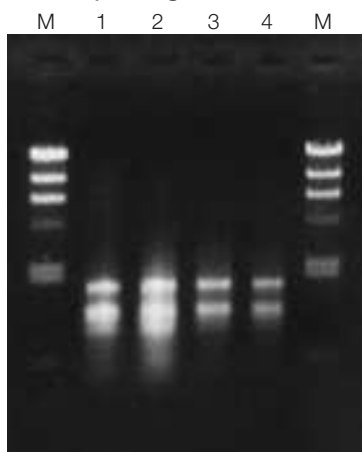
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Please follow the manual of  
the tissue disruptor about the  
disruption methods.

\*4 Add 10 µl of 2-ME per 1 ml of  
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\*5 Even if the fiber mixes  
somewhat, it doesn't influence  
the result.

## Results

### Electropherogram



Electrophoresis condition

0.8% Agarose gel

TAE Buffer

2  $\mu$ l of sample / well

M :  $\lambda$ -Hind III (100 ng)

1 : Wheat leaves (gramineae)

2 : Barley leaves (gramineae)

3 : *Chenopodium quinoa* leaves (*Chenopodiaceae*)

4 : *Nicotiana benthamiana* leaves (*solanaceae*)

### The yield of total RNA

Wheat leaves	6.12 $\mu$ g
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### Protein contamination : A260/280

Wheat leaves	2.11
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### Chaotropic salt contamination : A260/230

No Data

### Other

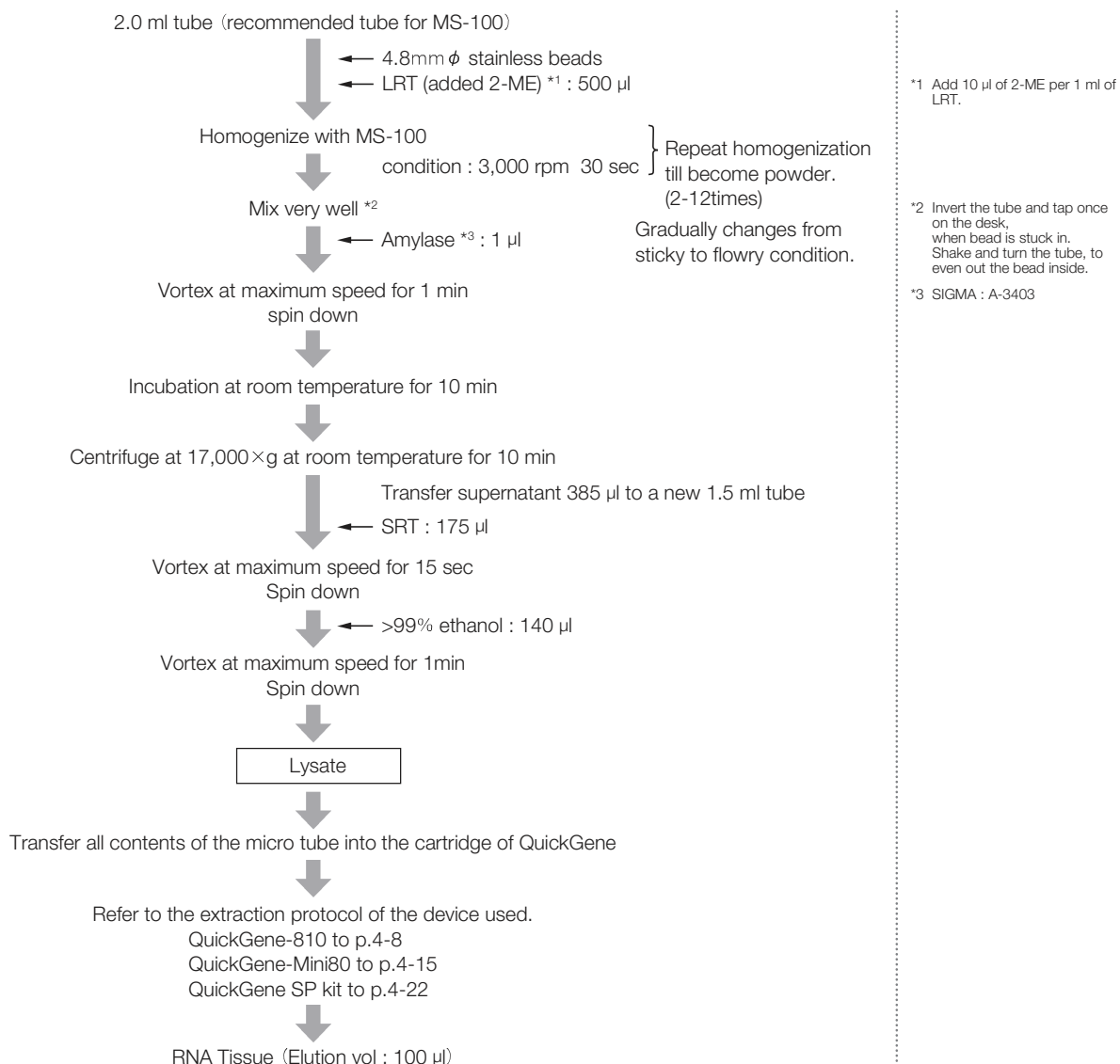
No Data

## Common protocol is usable for the following

N.benthamiana leaves, Barley leaves, C. quinoa leaves

## Total RNA Isolation from Amaranthus seeds

### Protocol



### Results

■ Electropherogram

No Data

■ The yield of total RNA

No Data

■ Protein contamination : A260/280

No Data

■ Chaotropic salt contamination : A260/230

No Data

■ Other

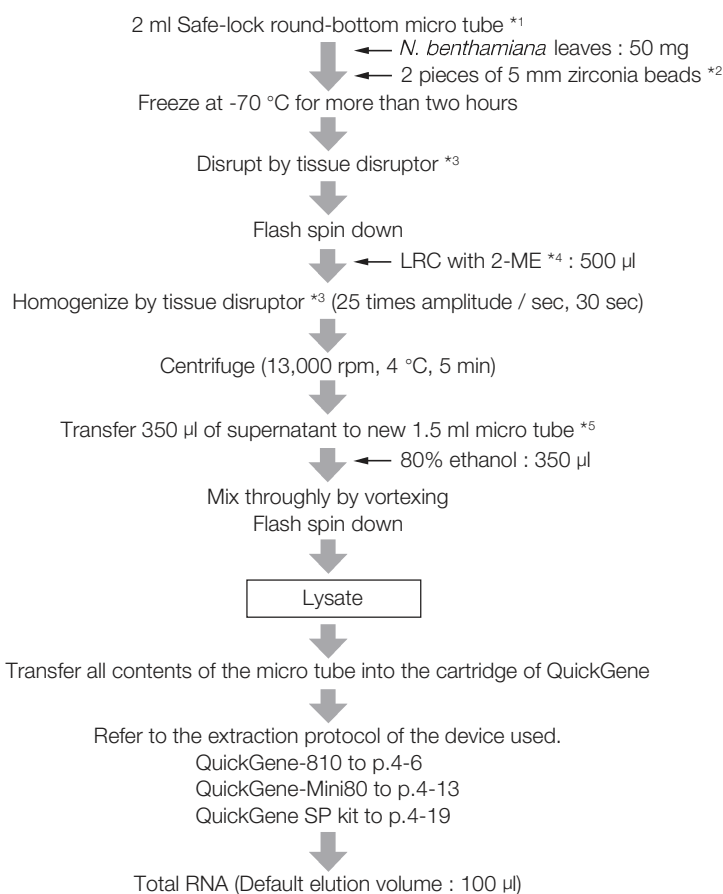
No Data

### Common protocol is usable for the following

No Data

## Total RNA Isolation from *N.benthamiana* Leaves

### Protocol



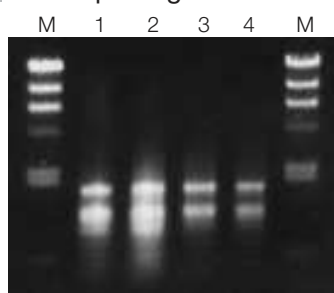
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somewhat, it doesn't influence  
the result.

### Results

#### Electropherogram



Electrophoresis condition  
0.8% Agarose gel  
TAE Buffer  
2 µl of sample / well

M : λ -Hind III (100 ng)  
1 : Wheat leaves (gramineae)  
2 : Barley leaves (gramineae)  
3 : *Chenopodium quinoa* leaves (*Chenopodiaceae*)  
4 : *Nicotiana benthamiana* leaves (*solanaceae*)

#### The yield of total RNA

<i>N. benthamiana</i> leaves	2.64 µg
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#### Protein contamination : A260/280

<i>N. benthamiana</i> leaves	1.95
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#### Chaotropic salt contamination : A260/230

No Data

#### Other

No Data

### Common protocol is usable for the following

Barley leaves, *C. quinoa* leaves, Wheat leaves







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