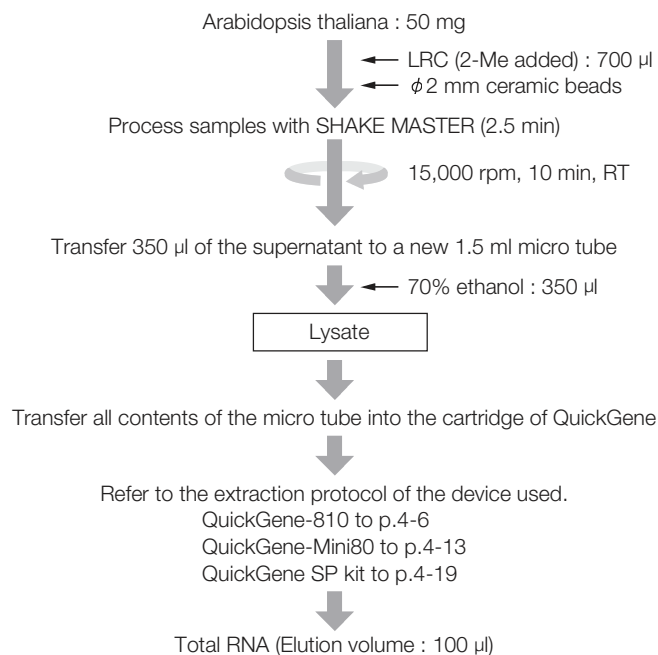


Chapter 3-XII

Total RNA Extraction from Tissue of Plant

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

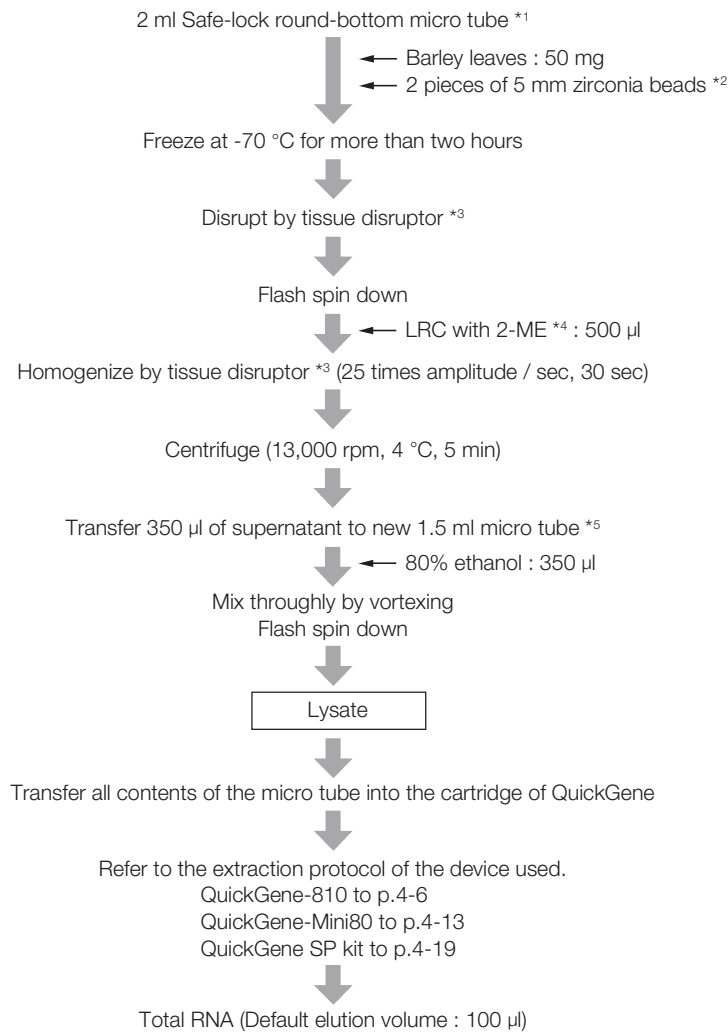
No Data

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 μ l 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

Barley leaves	12.2 μ g
---------------	--------------

Protein contamination : A260/280

Barley leaves	2.12
---------------	------

Chaotropic salt contamination : A260/230

No Data

Other

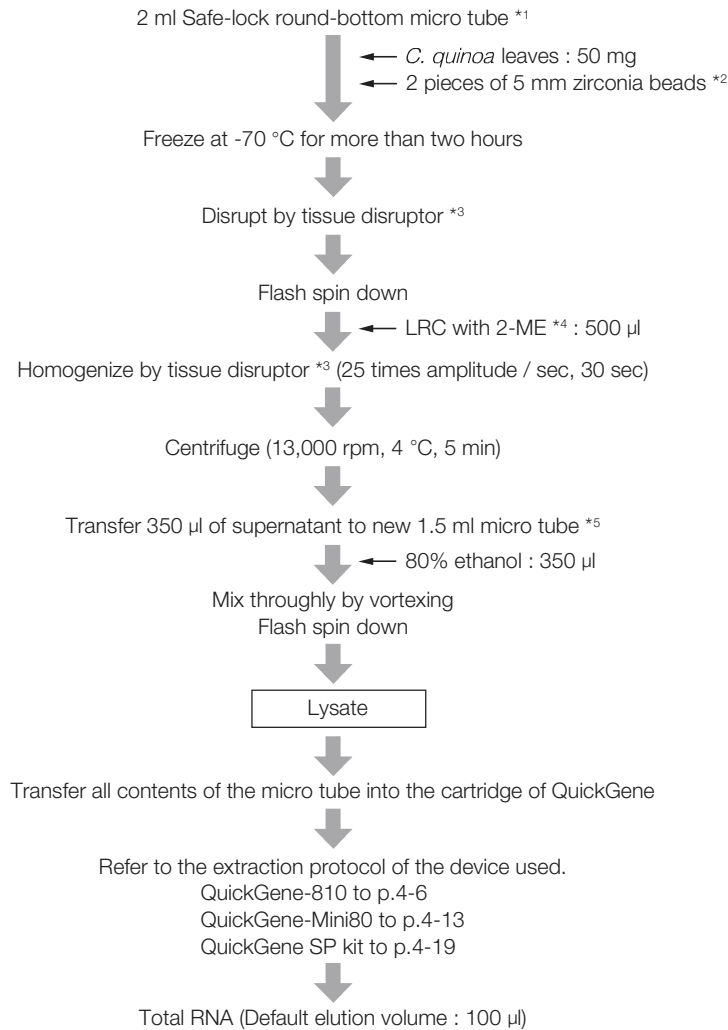
No Data

Common protocol is usable for the following

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

Total RNA Extraction from *C. quinoa* Leaves

Protocol



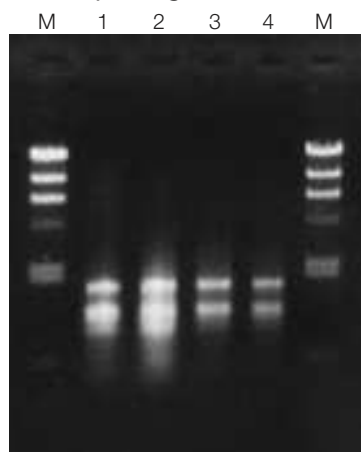
*1 Eppendorf Co., Ltd

*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 μ l 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>C. quinoa</i> leaves	3.88 μ g
-------------------------	--------------

Protein contamination : A260/280

<i>C. quinoa</i> leaves	2.02
-------------------------	------

Chaotropic salt contamination : A260/230

No Data

Other

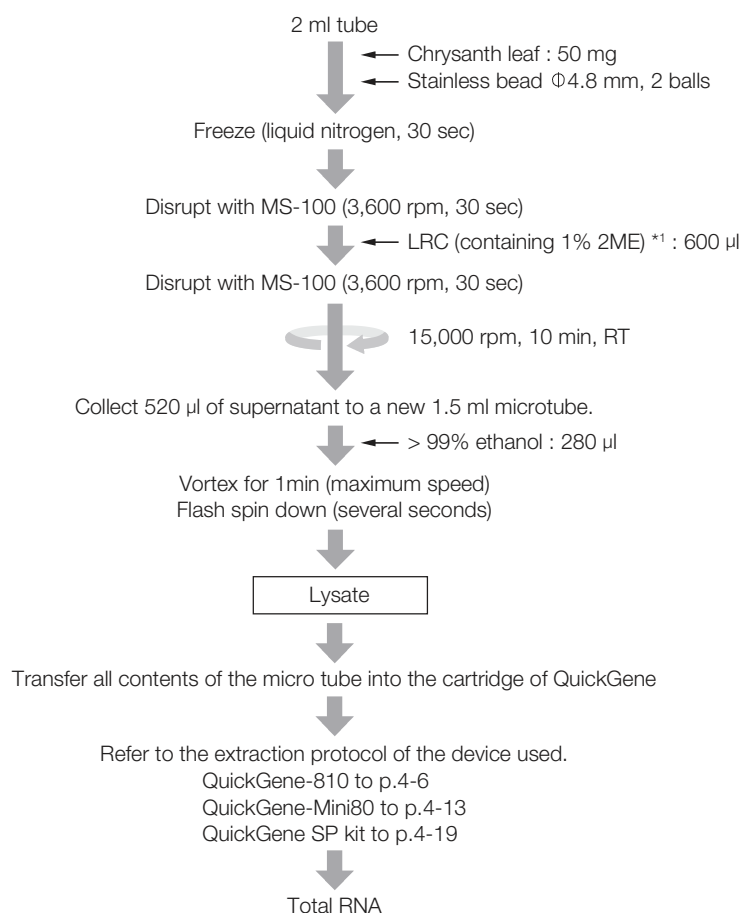
No Data

Common protocol is usable for the following

N.benthamiana leaves, Barley leaves, Wheat leaves

Total RNA Extraction from Chrysanth Leaf

Protocol



*1 Add 10 μ l of 2-ME per 1 ml of LRC.

Results

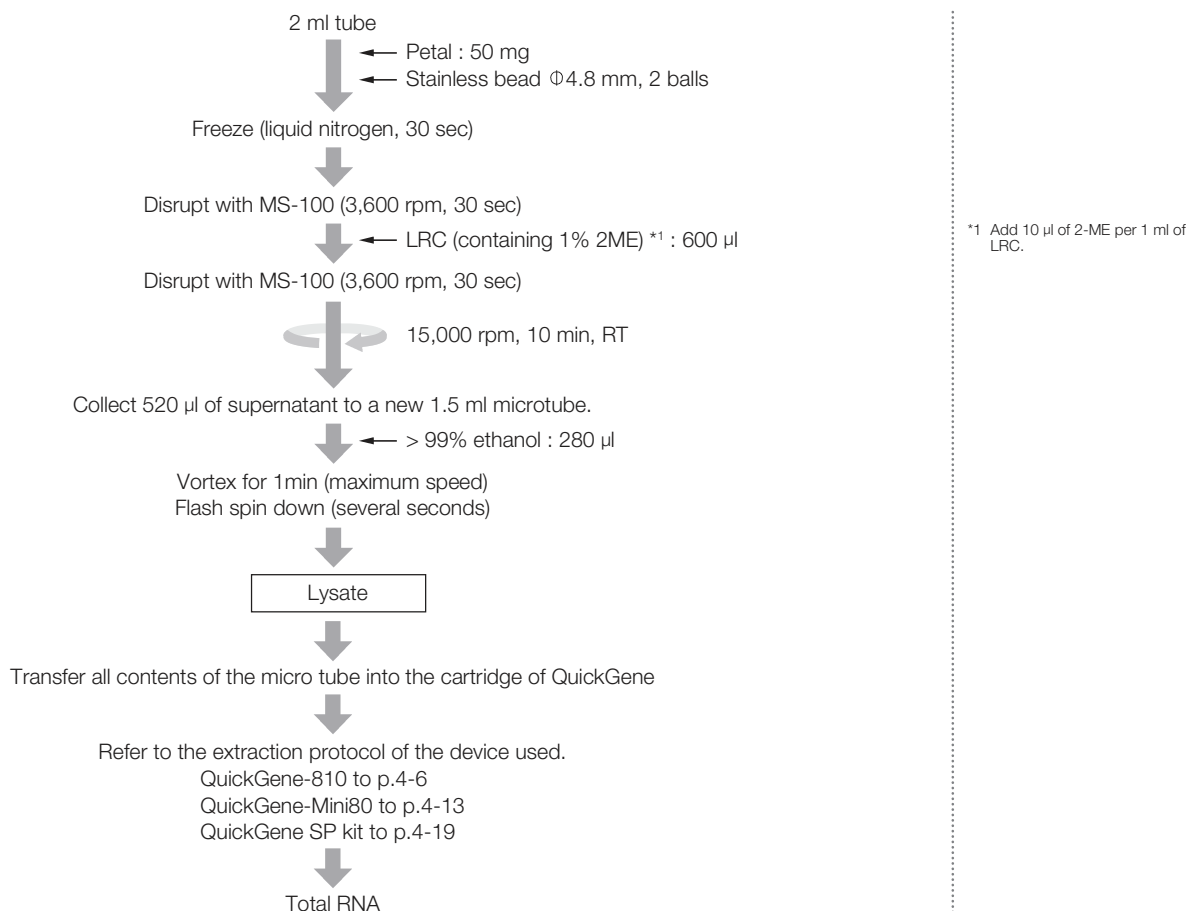
- Electropherogram
No Data
- The yield of total RNA
No Data
- Protein contamination : A260/280
No Data
- Chaotropic salt contamination : A260/230
No Data
- Other
No Data

Common protocol is usable for the following

No Data

Total RNA Extraction from Petal

Protocol



Results

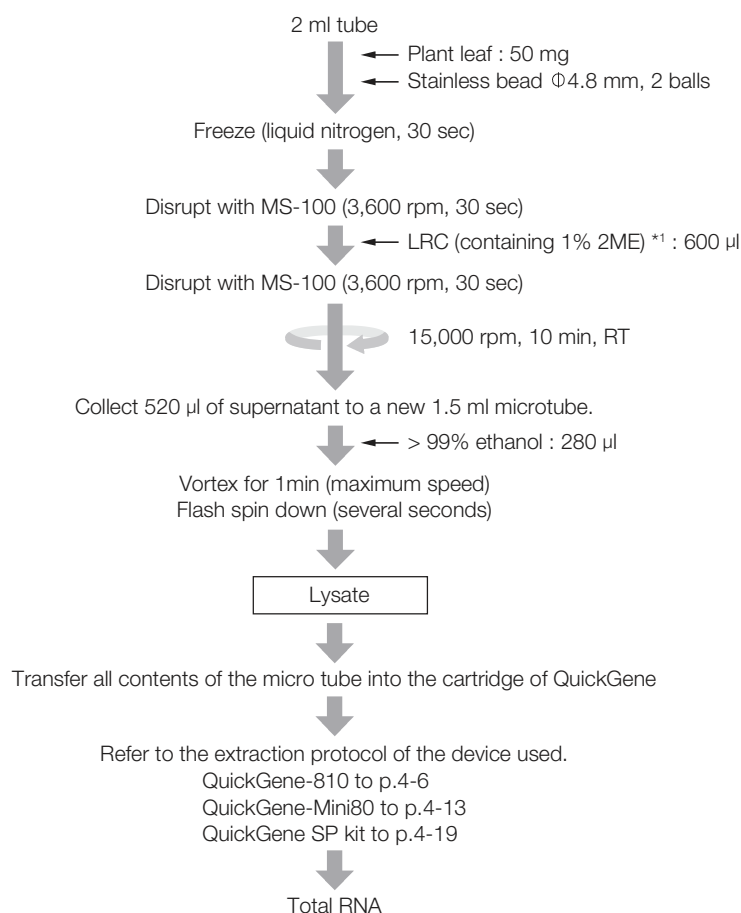
- Electropherogram
No Data
- The yield of total RNA
No Data
- Protein contamination : A260/280
No Data
- Chaotropic salt contamination : A260/230
No Data
- Other
No Data

Common protocol is usable for the following

No Data

Total RNA Extraction from Plants

Protocol



*1 Add 10 μ l of 2-ME per 1 ml of LRC.

Results

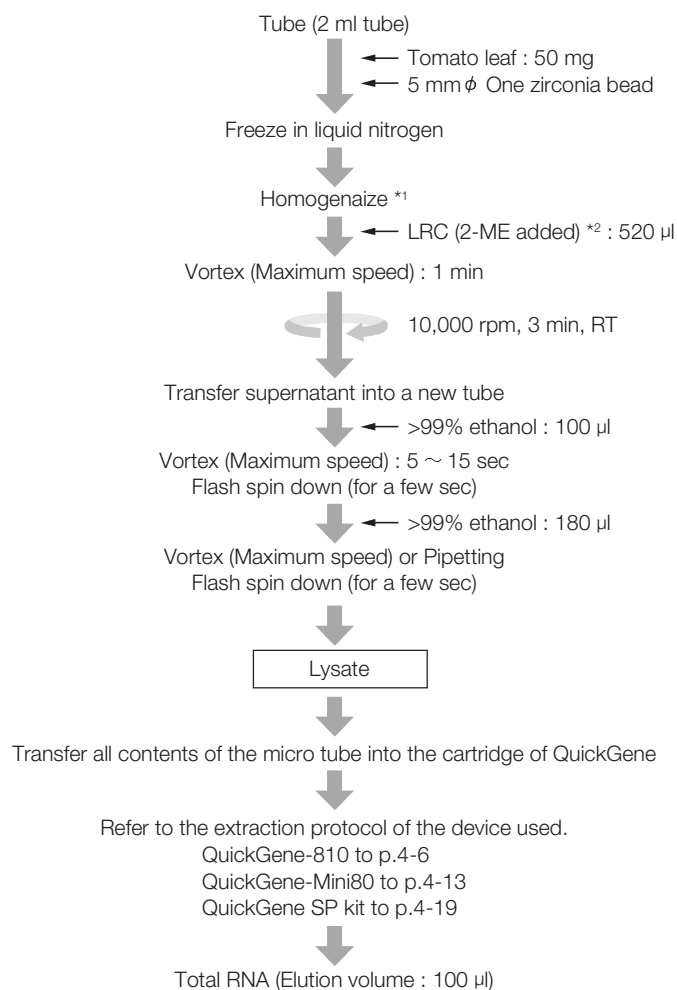
- Electropherogram
No Data
- The yield of total RNA
No Data
- Protein contamination : A260/280
No Data
- Chaotropic salt contamination : A260/230
No Data
- Other
No Data

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

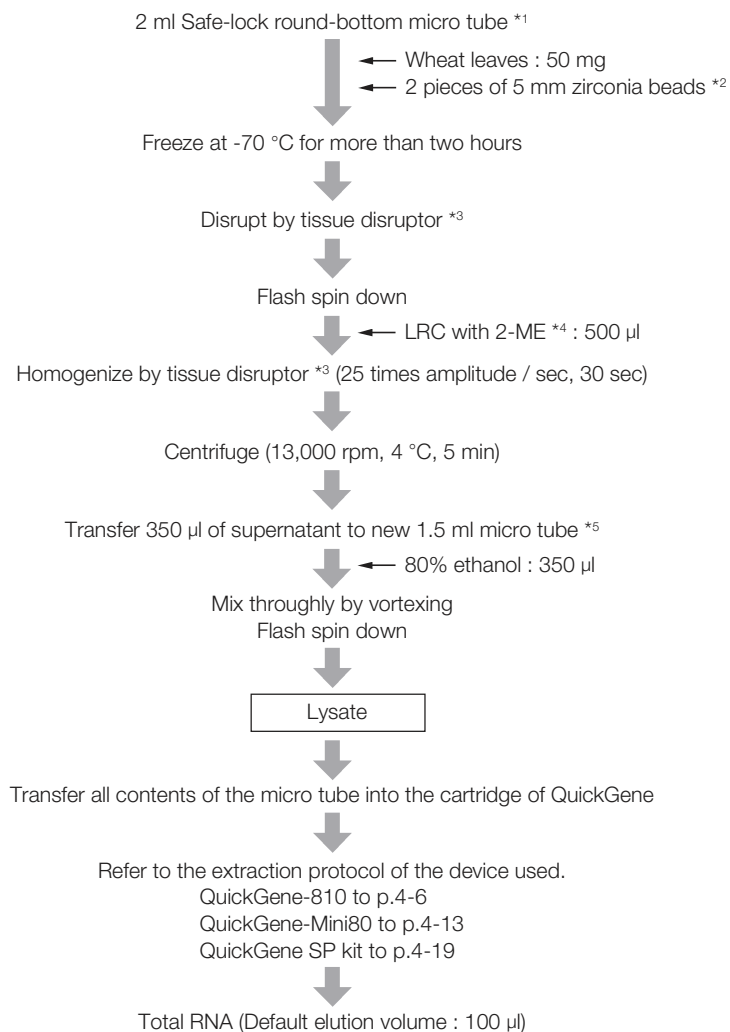
No Data

■ Common protocol is usable for the following

No Data

Total RNA Extraction from Wheat Leaves

Protocol



*1 Eppendorf Co., Ltd

*2 NIKKATO Co., Ltd

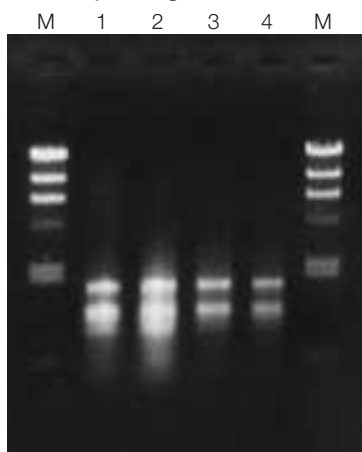
*3 TissueLyser (Mixer Mill 300) :
QIAGEN Co., Ltd.
Please cool the holder of the
tissue disruptor beforehand at
-20 °C.
Please follow the manual of
the tissue disruptor about the
disruption methods.

*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 μ l 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

Wheat leaves	6.12 μ g
--------------	--------------

Protein contamination : A260/280

Wheat leaves	2.11
--------------	------

Chaotropic salt contamination : A260/230

No Data

Other

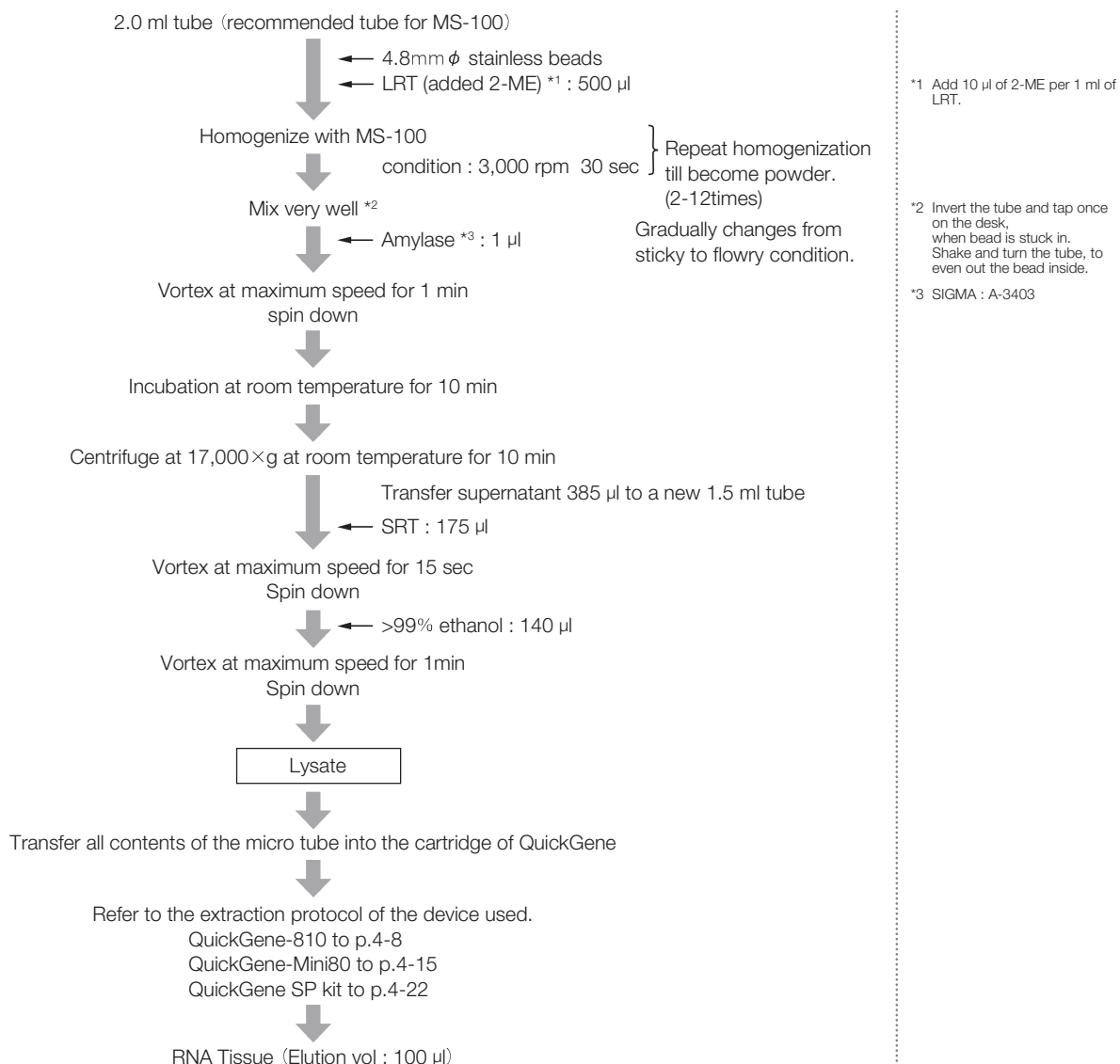
No Data

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

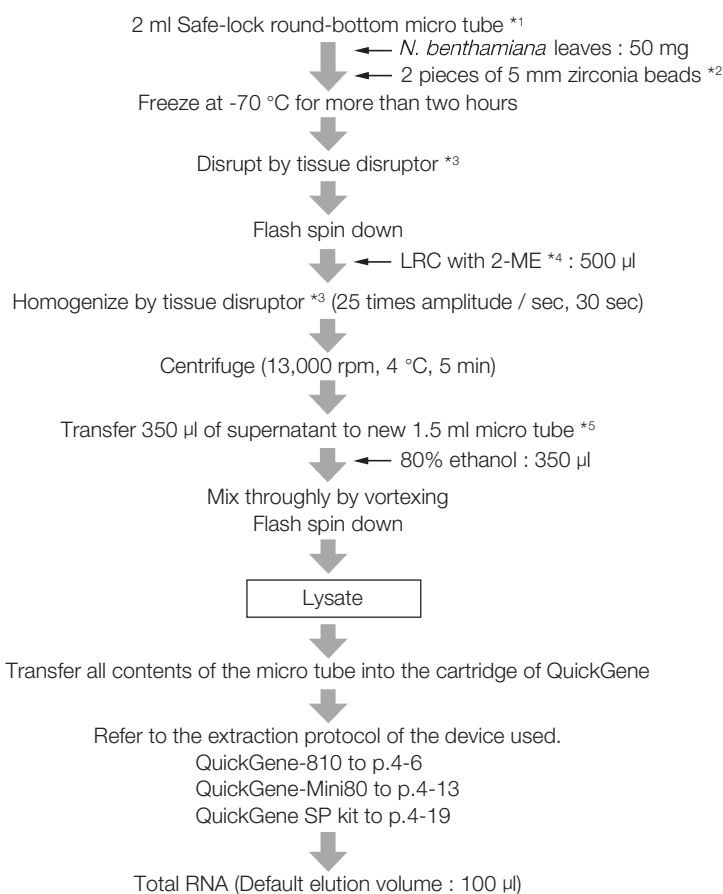
No Data

Common protocol is usable for the following

No Data

Total RNA Isolation from *N.benthamiana* Leaves

Protocol



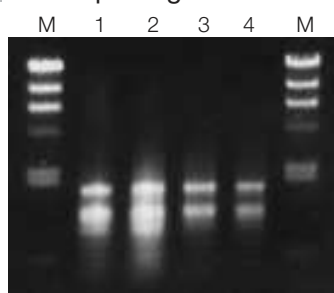
*1 Eppendorf Co., Ltd

*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 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
------------------------------	---------

Protein contamination : A260/280

<i>N. benthamiana</i> leaves	1.95
------------------------------	------

Chaotropic salt contamination : A260/230

No Data

Other

No Data

Common protocol is usable for the following

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

