5. Genomic DNA Extraction from Food

QuickGene

QuickGene DNA tissue kit S (DT-S)
QuickGene SP kit DNA tissue (SP-DT)

DC-1

Genomic DNA Extraction from Flour

Protocol

1.5 ml micro tubes

↓ ← Flour：60 mg

↓ ← MDT：540 µl + EDT：60 µl

Incubate at 55°C：vortex occasionally for 60 min *1

↻ 8,000 xg, 3 min, RT

Transfer 200 µl supernatant to new micro tubes *2

↓ ← LDT：180 µl + >99% ethanol：240 µl

Vortex (maximum speed)：15 sec & Flash spin down

↓

Lysate

↓

Transfer all contents of the micro tube into the cartridge of QuickGene

↓

Refer to the extraction protocol for each device written in the kit handbook.
(from the step after transferring the lysate into the cartridge)

↓

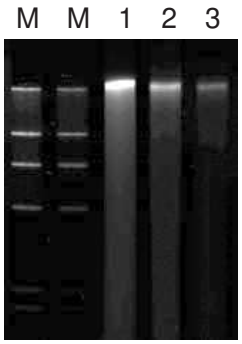
Genomic DNA
(Elution volume : 50 µl)

*1 At least for 40 min

*2 Do not transfer with the precipitate

Results

Electropherogram



M：λ-*Hin* d III
1：Genomic DNA
2：Twofold dilution of Genomic DNA
3：Fourfold dilution of Genomic DNA

The yield of genomic DNA

Sample	No.1
Yield (µg)	0.3

Common protocol is usable for the following

No Data

Depending on sample and storage conditions, nucleic acid may not be extractable.
Therefore, we cannot guarantee accurate data.
The extracted nucleic acid contains unintended acid (ex: when extracting DNA, RNA is also extracted).

KURABO

QuickGene

QuickGene DNA tissue kit S (DT-S)
QuickGene SP kit DNA tissue (SP-DT)

DC-2

Genomic DNA Extraction from Rice

Protocol

2 ml micro tubes

← Single grain of rice *1 : about 19-22 mg
← A stainless ball (φ4.8 mm)

Homogenize : MS-100 [3,000 rpm, 30 sec x 2 times *2]

← MDT : 360 µl
← EDT : 40 µl

Incubate at 55°C for 40 min and sometimes vortexing

8,000xg, 3 min, RT

Transfer supernatant 200 µl into new 1.5 ml micro tubes

← LDT : 180 µl
← >99% ethanol : 240 µl

Vortex (maximum speed) : 15 sec & Flash spin down

Lysate

Transfer all contents of the micro tube into the cartridge of QuickGene

Refer to the extraction protocol for each device written in the kit handbook.
(from the step after transferring the lysate into the cartridge)

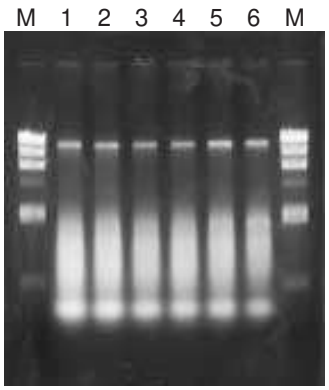
Genomic DNA
(Elution volume : 50 µl)

*1 A grain of rice was sandwiched between aluminum foil and crush with hammer.

*2 Cool the tube in the refrigerator (1 min) in the interval

Results

Electropherogram



M : λ-*Hin* d III Fragment
1 : musenmai (unwashed rice)
2 : musenmai (unwashed rice)
3 : clean rice
4 : clean rice
5 : brown rice
6 : brown rice
M : λ-*Hin* d III Fragment

Common protocol is usable for the following

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Therefore, we cannot guarantee accurate data.
The extracted nucleic acid contains unintended acid (ex: when extracting DNA, RNA is also extracted).

KURABO

QuickGene

QuickGene DNA tissue kit S (DT-S)
QuickGene SP kit DNA tissue (SP-DT)

DC-3

Genomic DNA Extraction from Tofu

Protocol

2 ml micro tubes

↓ ← Slice of tofu [*1] : ~80 mg
↓ ← MDT : 180 µl
↓ ← EDT : 20 µl

Incubate for overnight on Rotary Shaker at 55°C, and dissolve the tofu completely

↓ 10,000 rpm, 3 min, RT

Transfer the supernatant to new micro tubes [*2]

↓ ← LDT : 180 µl

Vortex (maximum speed) : 15 sec

Flash spin down

↓

Incubation at 70°C : 10 min

Flash spin down

↓ ← >99% ethanol : 240 µl

Vortex (maximum speed) : 15 sec

Flash spin down

↓

Lysate

↓

Transfer all contents of the micro tube into the cartridge of QuickGene

↓

Refer to the extraction protocol for each device written in the kit handbook.
(from the step after transferring the lysate into the cartridge)

↓

Genomic DNA (Elution volume : 200 µl)

*1 Tofu, pinched with paper towel overnight, is then drained.

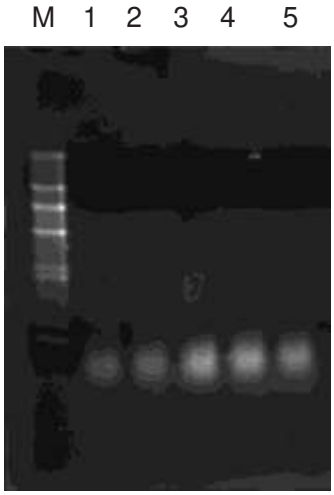
*2 Oil content floating on supernatant is not.

Depending on sample and storage conditions, nucleic acid may not be extractable.
Therefore, we cannot guarantee accurate data.
The extracted nucleic acid contains unintended acid (ex: when extracting DNA, RNA is also extracted).

KURABO

Results

Electropherogram



M : marker
1 : Tofu 5 mg
2 : Tofu 10 mg
3 : Tofu 30 mg
4 : Tofu 50 mg
5 : Tofu 80 mg

The yield of genomic DNA

Sample amount (mg)	5	10	30	50	80
Yield (ng/µl)	42.81	104.85	254.18	498.0	394.3

Protein contamination：A260/280

Sample amount (mg)	5	10	30	50	80
A260/A280	1.92	1.87	1.93	2.07	2.02

Chaotropic salt contamination：A260/230

Sample amount (mg)	5	10	30	50	80
A260/A230	1.29	1.35	1.98	2.05	1.93

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QuickGene

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