

Extraction of Genomic DNA from Rice Leaf by using a 5-ml Tube

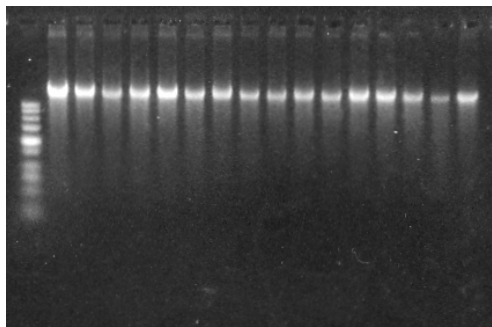
High-speed micro centrifuge CF15RXII /CF16RXII / T15A45 fixed angle rotor

**It can extract about 3.5 times as much genomic DNA
[in small-scale equipment (using a 1.5-ml micro-tube)].**

[Operation procedure]

- (1) Dispense 0.8 ml of 1.5 x CTAB extraction buffer into a 5-ml tube.
- (2) Crush 0.3 g of rice leaf, put it into the 5-ml tube, turn it upside down, and then mix it by shaking the tube.
- (3) Incubate (10 minutes, room temperature).
- (4) Add 0.8 ml of chloroform and mix well.
- (5) Incubate (30 minutes, room temperature).
- (6) Centrifuge (10,000 x g, 10 minutes, 20 °C).
- (7) Pour the top layer into a new 5-ml tube.
- (8) Add 0.8 ml of precipitated buffer and mix by pipetting.
- (9) Incubate (30 minutes, 55 °C).
- (10) Centrifuge (10,000 x g, 10 minutes, 20 °C).
- (11) Precipitate (remove the supernatant).
- (12) Add 0.8 ml of 1M NaCl-TE and re-suspend.
- (13) Incubate (2 hours, 55 °C).
- (14) Centrifuge (10,000 x g, 10 minutes, 20 °C).
- (15) Pour about 0.8 ml of supernatant into a new 5-ml tube.
- (16) Add 0.8 ml of isopropanol and mix well.
- (17) Centrifuge (10,000 x g, 10 minutes, 20 °C).
- (18) Precipitate (remove the supernatant).
- (19) Add 1.5 ml of 70% EtOH.
- (20) Centrifuge (10,000 x g, 5 minutes, 20 °C).
- (21) Precipitate (remove the supernatant).
- (22) Centrifuge (10,000 x g, 2 minutes, 20 °C).
- (23) Remove all supernatant by using a pipetman and dry it.
- (24) Dispense 100 µl of TE buffer and completely dissolve it by using a vortex.
- (25) Pour the mixture into a 1.5-ml tube and store it in a freezer.

[Results]



About 20 μg of genomic DNA on average was extracted from 0.3 g of rice leaf.

Photo of extracted genomic DNA in electrophoresis
(0.7% Agarose in 1 x TAE buffer)

[Equipment]

Centrifuge : High-speed micro centrifuge CF16RXII

Rotor : T15A45 fixed angle rotor (12-place type)

Applicable tube : 5-ml sampling tube (BIO-BIK, product No. ST-500)

Extraction method : CTAB method

Reference : M.G.Murray and W.F.Thompson (1980) Rapid isolation of high molecular weight plant DNA, Nucleic Acids Res. **8**:4321-4325.



T15A45-type angle rotor



5-ml tube

1.5-ml tube

Bio-safety ensured by using a rotor cover (optional)

If you have any inquiry of this application or products, please contact us through our web site.

<http://www.hitachi-koki.com/himac/>

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