Homemade Protocol Instead of DNA-Extraction Kit

It's not always necessary to order the latest kit when planning the extraction of DNA. Eduardao Daniel Souza-Canada has developed a simple protocol for the isolation of genomic DNA from leaves.

**Lab Hint**

Eduardao Daniel Souza-Canada has developed a simple protocol for the isolation of genomic DNA from leaves.

**Reagents and solutions** (final concentrations):

- 100 mM Tris-HCl
- 700 mM NaCl
- 50 mM EDTA pH 8.0
- RNAse 10μg/μl
- pH value of extraction buffer: 8.0

**Protocol** (You can conduct the single steps of the DNA-extraction in 2 ml tubes)

1. Mince 60 to 100 mg of leaves in liquid nitrogen (We use a ball mill for grinding the leaves. This preserves them from being in direct contact to the nitrogen).
2. Mix the crushed leaves with 1330 μl of prewarmed (65°C) extraction buffer and incubate for 15 minutes at 65°C. Invert the reaction tube from time to time.
3. Add 650 μl Chloroform/Isoamylalcohol after cooling the sample to room temperature for one minute and gently shake for 5 minutes.
4. Centrifuge 2 minutes (14000 rpm) at room temperature. Transfer the upper layer containing the DNA into a fresh tube. (Option: add 10 μl RNase at this step and incu- bate 10 minutes at 37 °C).
5. Mix with 700 μl isopropanol and incubate 2 minutes at room temperature to allow the DNA to precipitate. Centrifuge for 5 to 10 minutes (14000 rpm) at room temperature.
6. Wash the pellet 5 minutes in 1 ml ethanol (70%)
7. Air-dry the pellet before dissolving it in 100 μl distilled water at room temperature (or at 65°C) for 10 minutes.

**Uses his one protocol for DNA-extraction:**

Eduardo Daniel Souza-Canada, Institute of Plant Physiology, University Bayreuth, Germany

**Do you have any useful tips?**

Contact us at:

editors@lab-times.org

---

**Lab Times** is free of charge for non-profit institutions all over Europe. The life science journal is distributed to scientists and lab staff wherever they work: in universities, research units, private and public research institutes, etc. For companies and personal subscriptions (when you want us to send **Lab Times** to your home address) the subscription fee is 27,- Euro per year (5 issues). Please subscribe to Lj-Verlag, Lab Times, Alte Strasse 1, 79249 Merzhausen, Germany (post), +49-(0)761/35738 (fax), subscription@labtimes.org (email). For online subscription see [www.labtimes.eu](http://www.labtimes.eu).