User-Developed Protocol

Rapid extraction of DNA from hair using the EZ1® DNA Investigator® Kit

This protocol has been adapted by the North Louisiana Criminalistics Laboratory from the pretreatment for hair and is for the lysis and extraction of DNA from forensic samples of hair in less time than the standard EZ1 DNA Investigator protocol pretreatment.

This protocol has not been thoroughly tested and optimized by QIAGEN.

IMPORTANT: Please read the "Safety Information" and "Important Notes" sections in the *EZ1 DNA Investigator Handbook* before beginning this procedure. For safety information on the additional chemicals mentioned in this protocol, please consult the appropriate safety data sheets (SDSs), available from the product supplier.

Equipment and reagents to be supplied by user

For all users

- 1 M dithiothreitol (DTT)
- Buffer ATL (cat. no. 19076)
- Pipet tips (pipet tips with aerosol barriers to prevent cross-contamination are recommended)
- 10–200 µl pipettor
- Microcentrifuge
- Thermomixer or orbital incubator

For EZ1 Advanced users

- EZ1 Advanced instrument (cat. no. 9001410)
- EZ1 DNA Investigator Kit (cat. no. 952034)
- EZ1 Advanced DNA Investigator Card (cat. no. 9018302)

For EZ1 Advanced XL users

- EZ1 Advanced XL instrument (cat. no. 9001492)
- EZ1 DNA Investigator Kit (cat. no. 952034)
- EZ1 Advanced XL DNA Investigator Card (cat. no. 9018699)

For BioRobot® EZ1 workstation users

- BioRobot EZ1 workstation
- EZ1 DNA Investigator Kit (cat. no. 952034)
- EZ1 DNA Investigator Card (cat. no. 9016387)

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Important points before starting

- If using the EZ1 DNA Investigator Kit for the first time, read “Important Notes” in the *EZ1 DNA Investigator Handbook*.
- Buffer ATL used as a lysis buffer is not included in the EZ1 DNA Investigator Kit. Buffer ATL (cat. no. 19076) should be purchased separately.

Things to do before starting

- Heat a thermomixer or orbital incubator to 56°C for the proteinase K digest in step 3.

Procedure

1. **Cut hairs to 0.5–1 cm lengths and transfer to a 2 ml EZ1 DNA Investigator sample tube.**
2. **Add 160 µl Buffer ATL, 20 µl proteinase K, and 20 µl 1 M DTT. Vortex to mix.**
3. **Incubate at 56°C for 1 hour at 900 rpm in a thermomixer or orbital incubator.**

   In general, samples are lysed in 1 h. If necessary, increase the incubation time to ensure complete lysis.
4. **Continue with the protocol “DNA Purification (Trace Protocol)”.**

For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit handbook or user manual. QIAGEN kit handbooks and user manuals are available at www.qiagen.com or can be requested from QIAGEN Technical Services or your local distributor. Safety data sheets (SDS) for any QIAGEN product can be downloaded from www.qiagen.com/safety.

The EZ1 DNA Investigator Kit is intended for molecular biology applications. This product is not intended for the diagnosis, prevention, or treatment of a disease.

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