Dipstick DNA Extraction Kit

Technical Data Sheet

Catalogue	Pack Size*
DS-KIT	100 dipsticks, 50 mL and 100 mL (100 extractions)

**Assuming 500 µL extractions.*

For research and educational use only.

Description

The Dipstick DNA Extraction Kit is a really quick way to extract DNA and clean away contaminants. The resulting sample can be used for PCR assays, sequencing, and DNA barcoding. The method was developed and published by Zou et al. (2017).

With low costs per sample, this method provides an affordable, reliable alternative to column-based extraction methods for very low DNA samples that require clean-up of inhibitors. This method is not suitable for protocols requiring total DNA extraction for genomic DNA.

Reagent Composition

Extraction Buffer: 20 mM Tris-HCl, 25 mM NaCl, 2.5 mM EDTA, 0.05% SDS, 2% PVP-40, pH 8.

Wash Buffer: 10 mM Tris-HCl, pH 8

Dipsticks: cellulose-based filter, wax

Storage & Stability

Unopened: Store at room temperature (18–25 °C) for up to 1 year.

Opened: Store at room temperature (18–25 °C) for up to 1 year. The Extraction Buffer and Wash Buffer can also be refrigerated (~4 ºC) or frozen (–20 ºC) to reduce the chance of microbial contamination or for longer-term storage. If the Extraction Buffer is chilled or frozen it should be warmed in a container of very hot water to re-dissolve any precipitated detergent.

Shipping conditions

Shipped at room temperature.

Quick Start Protocol

Wear gloves, use sterile equipment and sterile working practices.

1. Pipette 100 to 200 µL Extraction Buffer into a 1.5 mL tube.
2. Add a 1-2 mm^3 sample of tissue to the tube using sterile instruments.

3. Grind the sample with a sterile pestle for 10 seconds or more, until the tissue is mostly pulverised.
4. Add 300 to 400 µL Extraction Buffer for a total volume of 500 µL, and close the tube.
5. Pipette 1 mL of Wash Buffer into an empty 1.5 mL tube and close the lid.
6. If you are using the sample straight away, prepare the PCR mix in 0.2 mL tubes.
7. Dip the uncovered end – the binding zone – of the dipstick into the Extraction Buffer three times to capture the DNA. Check the binding zone is thoroughly soaked.
8. Gently dip the binding zone of the dipstick into the Wash Buffer tube five times.
9. Remove the dipstick from the liquid, and gently wipe the dipstick on the edge of the tube to remove any drops of Wash Buffer. Discard the Wash Buffer tube. The binding zone on the dipstick will contain the washed DNA.
10. Dip the dipstick into the PCR mix up to 15 times to release the DNA.
    Tip: Push the dipstick into the bottom of the tube until the dipstick bends. This helps the liquid move through the paper, and increases the amount of DNA released.
11. Wipe the dipstick on the edge of the 0.2 mL tube to remove any drops of PCR mix. The PCR reaction is now ready to start.
12. Alternatively store the DNA in TE buffer to use the sample later. Release the DNA by dipping the dipstick into a 1.5 mL tube of TE buffer, and store at 4 °C for the short term, or freeze at –20 °C for longer term storage.