www.precellys.com
NEW GENERATION Tissue homogenizer
SAMPLE PREPARATION & CELL LYSIS

Precellys
The Science of Lysing

DNA extraction from plant leaves with Minilys

CONTEXT

Minilys is a small and compact homogenizer for fast and hand-free disruption of a wide range of biological samples prior extraction of DNA, RNA, proteins or drugs. Based on 3D motion bead-beating, Minilys homogenizes, grinds, dissociates samples into 0.5mL, 2mL or 7mL tubes. The mechanical sample prep is compatible with any analysis DNA-RNA electrophoresis, Real time PCR, Western-blot, GC/MS, LC/MS.

In this application, the homogenization of plant leaves to extract DNA is illustrated.

MATERIAL

- Minilys homogenizer
- Precellys kit: 03961-1-010 (1.4 & 2.8 ceramic beads mix).
- peqGOLD Plant DNA mini Kit
- Samples: 100 mg of plant leaves
- Buffer: 100 µl TE buffer

PROTOCOL

- Minilys: 5000 rpm, 30 sec
- Analysis: total genomic DNA was extracted directly from the homogenized samples using peqGOLD Plant DNA mini Kit before being checked for quality and quantity using NanoDrop analysis.

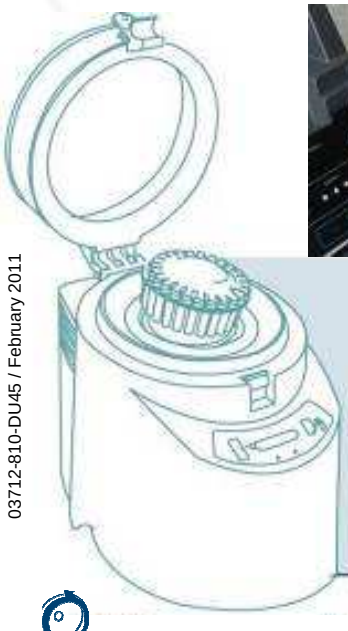
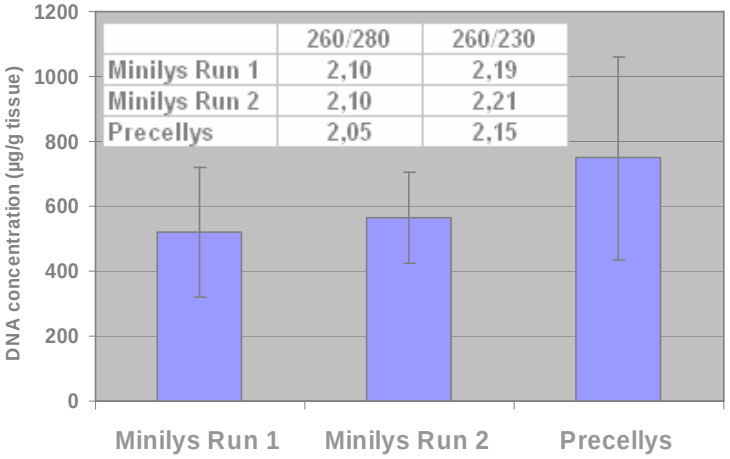


Figure 3: sample preparation

RESULTS

Concentration of DNA obtained from plant leaves after homogenization with Minilys and absorption ratios were determined and shown in the figure 1.

Equivalent total genomic DNA is obtained with Minilys homogenizer. High quality DNA is obtained from all extracted samples.



	260/280	260/230
Minilys Run 1	2,10	2,19
Minilys Run 2	2,10	2,21
Precellys	2,05	2,15

Figure 1: mean concentration of total genomic DNA from 3 extracted samples of leaves with Minilys (run 1 and 2) in comparison with Precellys. The corresponding mean absorption ratios (260/280; 260/230) are also plotted.

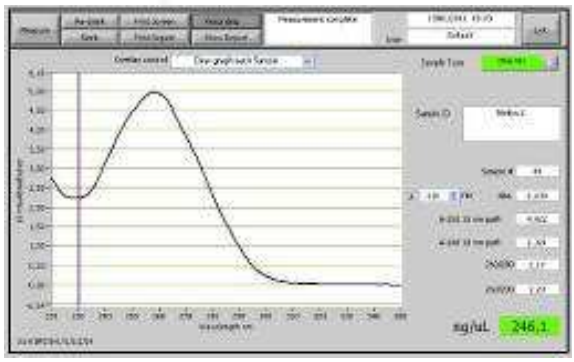


Figure 2: illustration of NanoDrop analysis

CONCLUSION

Equivalent total genomic DNA concentration is obtained with Minilys and Precellys homogenizers.

The Minilys provides the optimal balance of efficiency, speed, ease of use with a low throughput. Minilys enables cross-contamination free homogenization as opposed grinding with a mortar.

For more details, please contact precellys@bertin.fr

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03712-810-DU45 / February 2011