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

Precellys
The Science of Lysing

RNA extraction from *Arabidopsis* with Minilys

Institute of Plant Molecular Biology - CNRS, Univ. of Strasbourg, France

CONTEXT

This institute is presently the largest CNRS centre devoted to integrative plant biology. IBMP focus on the molecular and cellular mechanisms of plant growth, differentiation, development and defense reactions against pathogens and environmental stresses. The research programs use functional genomics, genetics, molecular and cell biology and molecular enzymology.

MATERIAL

- Minilys homogenizer.
- Precellys kit: 03961-1-009 (1.4&2.8 ceramic beads mix).
- Samples: 5 *Arabidopsis* seedlings (two weeks old).
- Buffer: 1mL TRI Reagent (MRC TR118).

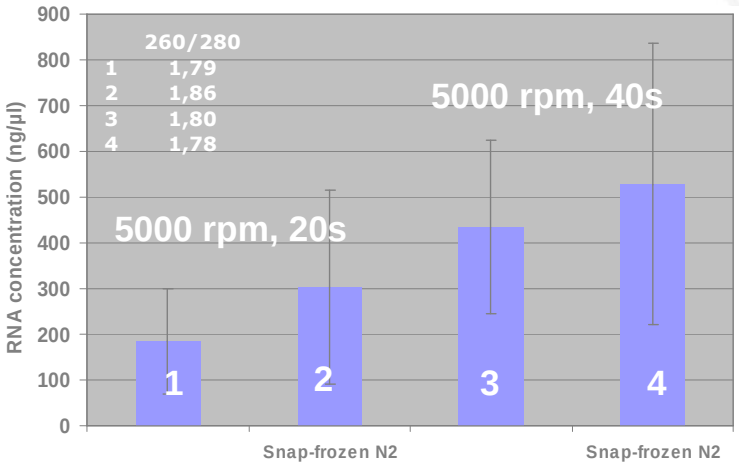
PROTOCOL

- Minilys: 5000 rpm, 20 sec or 5000 rpm, 40s.
- Snap-frozen in N2 or not.
- Triplicate by condition.
- Analysis: total RNA was extracted directly from the homogenized samples using the TRI Reagent protocol before being checked for quality and quantity.

RESULTS

Concentration of RNA obtained from samples after homogenization with Minilys and absorption ratio were determined and shown in the graph 1.

An increasing time homogenization and snap-frozen allow higher RNA yield. High RNA quality is obtained from all extracted samples.



Graph 1: mean concentration of total RNA from 4 extracted pool samples snap frozen before TRI Reagent addition or not and homogenization with Minilys at 5000 rpm 20s or 40s. The corresponding mean absorption ratio (260/280) are also plotted.

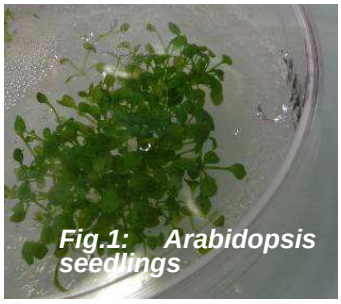


Fig.1: Arabidopsis seedlings

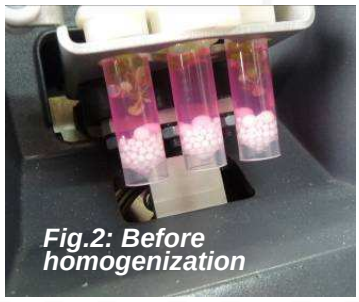


Fig.2: Before homogenization

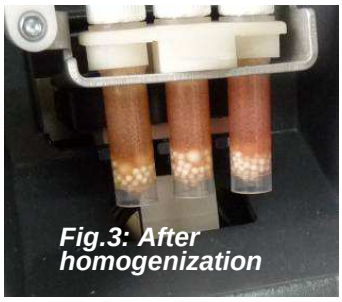


Fig.3: After homogenization

CONCLUSION

An increasing time homogenization (40s) allows higher RNA yield. High RNA quality is obtained from all extracted samples.

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

bertin TECHNOLOGIES

03712-810-DU49 / April 2011