

2010

Geno/Grinder®

Tissue
Homogenization
Cell Lysis



APPLICATION NOTE

Quick DNA Extraction from Rice Seed (Wet)

With kind permission of RiceTec Inc, Alvin TX

ABSTRACT

DNA extractions can be a very time consuming and tedious process. Finding a quick method in which DNA could be extracted and used for PCR is essential. Described below is a quick "dirty" method that produces a high enough concentration of DNA that can be used for PCR.

Sample Extraction

Samples are prepared using a 96 well 1ml assay block. Dispense one 5/32" stainless steel bead (4mm) into each well using the Grinding ball dispenser (SPEX SamplePrep cat. # 2100). Next, add one seed to each well. Dispense extraction buffer into each well and securely cap each well. After the samples have been capped, grind them in the Geno/Grinder2000 (SPEX Sample Prep 2000-115) at 500 strokes/minute for two minutes. Centrifuge for 1 min to bring all liquid to the bottom of the assay block. Incubate the samples in about 1" of water at 95°C for 20 minutes then place them on ice for approximately 10 minutes or until samples are cool to the touch. Centrifuge again for 1 minute. Add neutralizing extraction buffer and seal the assay block with sealing film. Centrifuge the samples for 10 minutes at 3000rpm. Transfer 300µL of the supernatant to a clean 96 well plate. DNA can be further purified with clean-up kits available on the market.

Yields

The total concentrations yielded from the samples range from 3-7ng/µL in a final volume of 200µL with purities of 1.5-1.8.

Conclusion

The method described above is sufficient for PCR and it takes less time than the standard chloroform extraction. Total time ranges from one to two hours.

∴ APPLICATION NOTE SP025:
Lysing / Homogenization

∴ APPARATUS:
Geno/Grinder®

∴ APPLICATION:
DNA Extraction from Rice
Seeds



SPEX SamplePrep
15 Liberty St
Metuchen, NJ 08840 USA
Tel: 732-623-0465
Fax: 732-906-2492
E-mail: Sampleprep@spexcsp.com
www.spexsampleprep.com

European Headquarters

SPEX CertiPrep Ltd
2 Dalston Gardens
Stanmore, HA7 1BQ, UK
Tel: +44 (0)20 8204 6656
Fax: +44 (0)20 8204 6654
E-mail: sales@spexcertiprep.co.uk
Web: www.spexcertiprep.co.uk