Tissue
Homogenization Cell
Lysis

2010 GENO/GRINDER®

APPLICATION NOTE

Quick DNA Extraction from Rice Seed (Wet)

With kind permission of RiceTec Inc, Alvin TX

: : **APPLICATION NOTE SP025:**
Cell Disruption

: :APPARATUS:

Geno/Grinder®

: : APPLICATION:
DNA Extraction from Rice Seeds

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" (4mm) stainless steel bead 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/Grinder 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 1inch (25 mm) of water at 95ºC 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 ng/µL.

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.

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