



**2010**  
**GENO/GRINDER**<sup>®</sup>  
CELL LYSER & HOMOGENIZER



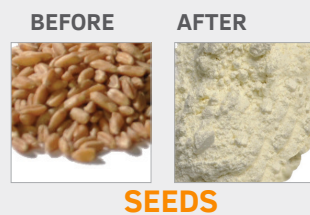
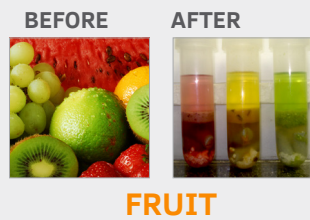
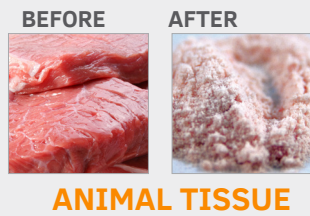
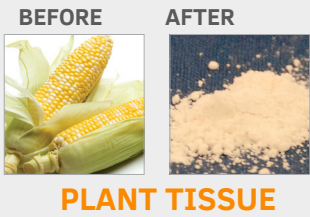
**SAMPLE PREPARATION FOR:**

DNA/RNA/Protein Extraction  
Pesticide Residue Extraction  
QuEChERS  
Food Safety  
Crop Research  
BioMedical Research

**SPEX**<sup>®</sup> **SamplePrep** 

[WWW.SPEXSAMPLEPREP.COM](http://WWW.SPEXSAMPLEPREP.COM)

# THE NEXT GENERATION GENO/GRINDER®



## ADDITIONAL SAMPLE TYPES:

- CELL CULTURES
- CANNABIS
- YEAST
- BACTERIA
- LEAVES
- VEGETABLES
- BEANS
- BIOFUELS

Large Window to view samples during processing

Fully Adjustable Clamp allows simple front loading of vials or plates

Sound Insulation ensures quiet operation

Programmable Touch Screen Control Panel



The Geno/Grinder® is an automated high-throughput homogenizer and cell lyser.

It is specifically designed for rapid cell disruption of plant and animal tissue through bead beating. This enables fast and efficient impact assisted extraction of nucleic acids, proteins and other molecules of interest.

The sample clamp has a unique, vigorous, vertical motion enabling increased reproducibility over traditional sample preparation methods. The clamp is adjustable to accommodate a wide range of sample vials from 2 mL to 50 mL or up to six deep well titer plates.

With speed settings from 500 to 1750 RPM, the Geno/Grinder is able to pulverize the toughest samples and it can also be used as a low speed mixer.



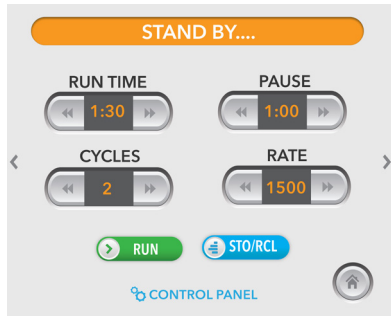
Rugged construction ensures durability and minimum maintenance.



Suspension system minimizes vibration.



Lid locks during operation for added user protection



## TOUCH SCREEN CONTROL PANEL

The fully programmable control panel can be tilted to give the user an optimal viewing angle. Programmable parameters include run time, rate, cycles, and pause time. Administrative lockout features (password protected) allows lab manager to restrict user access to specific protocols. Run history is recorded and can be exported via USB. The Geno/Grinder is self-diagnostic and records information for service.



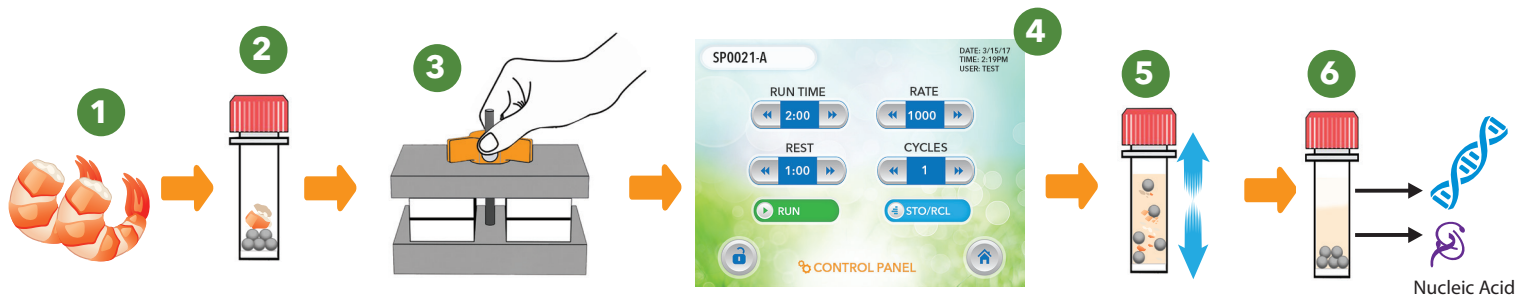
Up to 500 protocols can be saved for simple and fast recall, increasing productivity and reducing operator error.



A resources screen includes training videos and instructions, operating manual, a catalog of accessories and tech support information.



## PREPARING SAMPLES FOR DNA/RNA EXTRACTION IS EASY WITH THE GENO/GRINDER®



1. Place 50 to 100 mg of fresh tissue in a 2 mL tube pre-loaded with grinding media.
2. Add 500 microliters of lysis buffer to tube (or as instructed by method).
3. Place capped tube into the foam holder and insert it into the Geno/Grinder clamp and tighten.

4. On the control panel, set speed to 1000 RPM and run time for 2 minutes.
5. The Geno/Grinder shakes the sample in a controlled vertical motion. The grinding media inside the tube disrupts the sample.
6. Samples are ready for the next step in the extraction method.



LED lights illuminate the Geno/Grinder interior for improved sample visibility.



Vertical motion ensures consistent processing conditions for every sample.

# GENO/GRINDER® ACCESSORIES

A full range of accessories is available for the Geno/Grinder from titer plates, vials and vial sets to grinding media. Visit [www.spexsampleprep.com/2010genogrinder](http://www.spexsampleprep.com/2010genogrinder) for further information.



## GRINDING VIALS & TUBES

Larger vials and tubes hold samples larger than those traditionally placed in titer plates. Vial sets come pre-loaded with steel balls.



## TITER PLATES & CAP-MATS

Available in 24, 48 and 96-well formats. Used for many applications such as large sample dilutions, cell suspension and RNA extractions.



## GRINDING MEDIA

Grinding media are available in a variety of sizes and materials such as steel, zirconia and ceramic. Silica beads are available in 3 grades: Molecular biology, low binding and acid washed. Ceramic cylinders aid the QuEChERS method.



## PRE-FILLED TUBES

These pre-filled tubes can be used in a wide range of applications. They are ideal for grinding complex samples like bacteria, small yeast and soil. These 2 mL vials hold up to 1.0 mL of sample.

## KRYO-TECH® ACCESSORIES

SPEX Kryo-Tech® accessories are used to maintain tissue samples at subzero temperatures during processing to increase yields of RNA, proteins and pesticides. They can also be used to help grind samples that are difficult to grind at room temperature.



## CRYOGENIC GRINDING FOR YOUR TEMPERATURE SENSITIVE SAMPLES

SPEX Freezer/Mills are programmable cryogenic laboratory mills that grind the toughest or most temperature sensitive samples. Samples are ground in sealed vials using a magnetically driven impactor while the vial is continuously immersed in liquid nitrogen. Three models are available with different sample grinding capacities. To learn more visit [www.spexsampleprep.com/freezermill](http://www.spexsampleprep.com/freezermill)



## DEMO & SAMPLE GRIND PROGRAM

SPEX SamplePrep has a complimentary **Demo Program** allowing you to try our equipment in your laboratory. We also offer in-house Sample Grinding and Testing services. To send in your request visit [www.spexsampleprep.com/demo-request](http://www.spexsampleprep.com/demo-request).



## APPLICATION NOTES ONLINE

Our library of application notes can help you find the most suitable products and methods for your application. Read our application notes online or download a copy. Visit [www.spexsampleprep.com/apnotes](http://www.spexsampleprep.com/apnotes)

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