



# FREEZER/MILL®

Grinding and  
Pulverizing



Tissue  
Homogenization  
Cell Lysis



SPEX® SamplePrep®

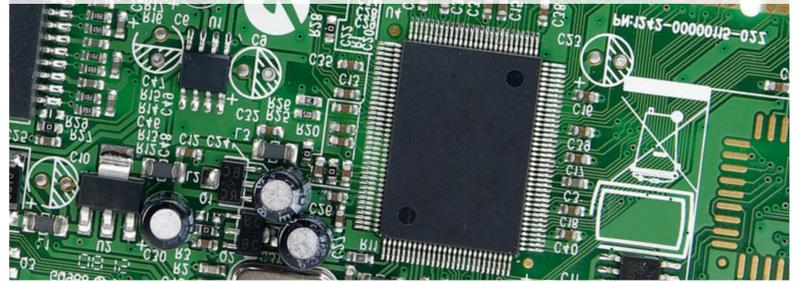
## FORENSICS & BIOTECHNOLOGY



## PLANT RESEARCH & CROP SCIENCE



## ROHS/WEEE



## PLASTIC & POLYMERS



## MEDICINE & PHARMACEUTICALS



The Freezer/Mill® is a programmable cryogenic mill specifically designed for grinding and pulverizing tough or temperature sensitive samples. Samples are placed in a sealed grinding vial then immersed in liquid nitrogen (LN). The samples are cooled to cryogenic temperatures then pulverized by magnetically shuttling a steel impactor back and forth against two stationary end plugs. Each Freezer/Mill® has an insulated nitrogen tub equipped with an LN sensor. A touch screen control panel controls the grinding cycles, grinding time, impact rate as well as pre-cooling and cooling times.

**APPLICATIONS INCLUDE: DNA/RNA EXTRACTIONS • YEAST ANALYSIS • DRUG TESTING • FORENSIC ANALYSIS PHARMACEUTICAL ANALYSIS • ROHS/WEEE • POLYMERS • FOOD TESTING**



### 6775 FREEZER/MILL®

Compact cryogenic mill that accommodates samples from 0.1 - 5 grams. It has one dual purpose chamber that pre-cools and grinds samples. Its grinding chamber can hold one small grinding vial, or one microvial set.

- :: Separate pre-cooling chamber to increase throughput.
- :: Insulated liquid nitrogen tub equipped with LN level sensor.
- :: Dimensions: 19 in (48 cm) x 10.5 in (27 cm) x 12.75 in (32 cm).
- :: Weight: 26 lbs (11.8 kg).



### 6875 FREEZER/MILL®

High capacity cryogenic mill that accommodates up to 100 grams of samples. It has one dual purpose chamber that pre-cools and grinds samples. Its grinding chamber holds one large grinding vial, one mid-sized vial, four small grinding vials, or four microvial sets.

- :: Separate pre-cooling chamber to increase throughput.
- :: Available with manual Liquid Nitrogen (LN) fill or with LN auto-fill 6875A.
- :: Dimensions: 20.5 in (52 cm) x 21.5 in (55 cm) x 18 in (46 cm).
- :: Weight: 44 lbs (20 kg).



### 6875D FREEZER/MILL®

Large, cryogenic mill with dual grinding and cooling chambers. It can grind and cool up to 200 grams of samples (0.5 -100 g per chamber). Each grinding chamber holds one large grinding vial, one mid-sized vial, four small grinding vials, or four microvial sets each. Comes equipped with LN auto-fill.

- :: Dual pre-cooling chambers keeps samples at the appropriate temperature while other samples are grinding.
- :: Dimensions: 20 in (50.8 cm) x 21 in (53.34 cm) x 25.5 in (64.77 cm).
- :: Weight: 78 lbs (35 kg).



Scan the QR code to watch the video or visit [youtube.com/sampleprep](https://www.youtube.com/sampleprep)

To learn more about our Freezer/Mills, please call 1-855-GET-SPEX or visit [www.spexsampleprep.com/freezermill](http://www.spexsampleprep.com/freezermill)

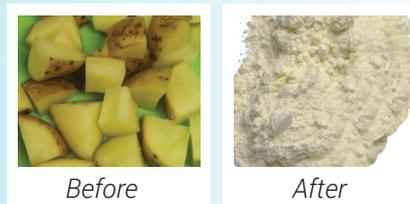
**PLASTIC TOYS**



Before

After

**POTATOES**



Before

After

**BEEF LUNG**



Before

After

**DOG TREATS**



Before

After

**HAIR**



Before

After

**TOUCH SCREEN**

Touch screen stores up to 20 user-defined grinding programs for easy quick recall. The new high resolution display is user-friendly and includes the following features:



- Run history which is uploadable to a thumb drive via USB
- Training videos and manuals that can be viewed on the screen.
- A complete listing of accessories



**FREEZER/MILL ACCESSORIES**

**GRINDING VIALS**



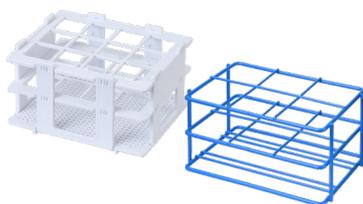
Vials consist of a center cylinder, two end plugs and an impactor. Sample capacity for vials depends the sample type. Available in different materials to eliminate contamination.

**VIAL HOLDERS & ADAPTERS**



Vial holders and adapters position one or more small or medium grinding vials for insertion into the grinding chamber of large Freezer/Mills.

**VIAL RACKS**



Vial racks hold several grinding vials for storage and handling before and after grinding samples in the Freezer/Mill.

**CRYOGENIC GLOVES**



Keep hands protected from ultra-cold materials, vials and liquid nitrogen exposure. Available in small, medium, large and extra large.

**EXTRACTORS / VIAL OPENERS**

When vials are chilled to cryogenic temperatures, the polycarbonate cylinder shrinks around the end plugs making a tight seal. Our range of vial openers and extractors are easy to operate and remove end plugs quickly with no loss of sample.



- A. 6808 Large Vial Extractor** - Removes the end-plugs from large grinding. 6808M Adapter Kit is available to open midsized vials.
- B. 6758 Microvial Extractor** - removes end plugs from microvials.
- C. 6756 small vial Extractor** - removes end plugs from small vials.
- D. 6754 Small Vial Opener** - Used to remove the end plugs from the center cylinders of small grinding vials. (Supplied free with mill purchase).
- E. 6804 Vial Opener** - Used to remove the end plugs from the center cylinders of large grinding vials. Adapter Kit is available to open midsized vials (Supplied free with mill purchase).

*Cryogenic gloves must be worn to protect hands at all times.*

# THE ULTIMATE PLANT & ANIMAL TISSUE HOMOGENIZER

## 2010 GENO/GRINDER®

This high-throughput plant & animal tissue homogenizer has an adjustable clamp that accommodates up to six titer plates or 16 centrifuge tubes. Specifically designed for rapid cell disruption, lysis and tissue homogenization. Kryotech® accessories are available to preserve temperature sensitive samples during the grinding process.

**SAMPLE TYPES:** Animal tissue • Plant tissue • Vegetables • Fruit  
Bacteria • Seeds • Yeast • Cereal • Beans • Cell Cultures

**APPLICATIONS:** Tissue Homogenization • DNA/RNA extraction  
Cell lysis • QuEChERS • Protein extraction • Biofuels



Scan this QR code to see videos for the Geno/Grinder or visit [youtube.com/sampleprep](http://youtube.com/sampleprep)

## APPLICATION NOTES FOR THE FREEZER/MILL® ARE AVAILABLE FOR DOWNLOAD

Visit [www.spexsampleprep.com/apnotes](http://www.spexsampleprep.com/apnotes) to download the full application note.

- :: RNA Extraction from Cartilage Tissue Using Cryogenic Grinding (#SP005)
- :: Preparation of Rice Husks for the Analysis of their Contents (#SP006)
- :: Grinding Polymers for Qualitative and Quantitative Analyses(#SP007)
- :: Molecular Effects of Pollution in Cetacean Samples (RNA Extraction from Whale Skin and Blubber) (#SP015)



Your Science is Our Passion.®

# SPEX® SamplePrep®

**SPEX SamplePrep, LLC**  
65 Liberty Street  
Metuchen, NJ 08840  
Tel: (732) 623-0465  
Fax: (732) 906-2492  
(855) 438-7739 (855-GET-SPEX)  
[sampleprep@spex.com](mailto:sampleprep@spex.com)  
[www.spexsampleprep.com](http://www.spexsampleprep.com)

**SPEX Europe**  
Trinity Court, Church Street  
Rickmansworth WD3 1RT, UK  
Tel: +44 (0) 208 204 6656  
Fax: +44 (0) 208 204 6654  
[pexeurope@spex.com](mailto:pexeurope@spex.com)  
[www.spexeurope.com](http://www.spexeurope.com)

## DEMO PROGRAM: TRY IT BEFORE YOU BUY IT!

SPEX SamplePrep gives you the opportunity to try out our sample preparation equipment in your laboratory for one week. Best of all, our demo program is COMPLIMENTARY! Once you try our quality products you'll ask yourself how you ever lived without them.

For more information please call 1-855-GET-SPEX or visit [www.spexsampleprep.com/freezermill](http://www.spexsampleprep.com/freezermill)