



SPEX® SamplePrep®

HOW DO YOU PREPARE  
YOUR TOUGH SAMPLES  
FOR ANALYSIS?



## SAMPLE PREPARATION FOR:

XRF, XRD or ICP Analysis  
Environmental Testing  
Pharmaceutical Testing  
Food Testing  
Mechanical Alloying  
Materials Research  
Mechanochemistry

 **MIXER/MILL®**  
HIGH ENERGY BALL MILL

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

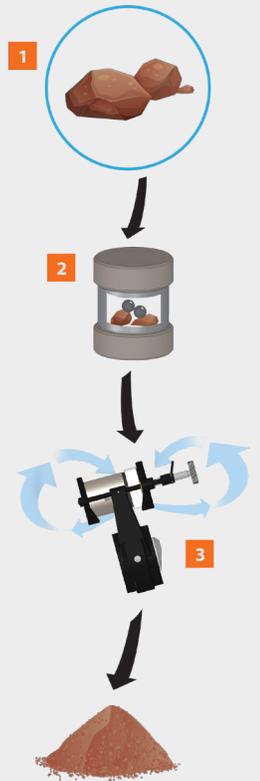
# 8000D MIXER/MILL®



## RUGGED & RELIABLE

The 8000D Mixer/Mills is a powerful, high-energy ball mill that pulverizes hard or brittle samples to analytical fineness.

The sample is placed in a grinding vial with one or more balls, then shaken vigorously. The motion of the clamp produces strong G-forces on the vial which pulverize the toughest Rocks, Slag and Ceramics.



### CLAMP CAPACITY

Two standard vials or two multiple vial adapters for small vials.

### SAMPLE SIZE PER VIAL

Up to 10 mL (approx. 10g) for grinding tough samples and up to 50 mL for blending powders or mixing emulsions.

### CLAMP SPEED

1060 cycles per minute (cpm) @ 60Hz, 115V or 875 cpm @ 50Hz, 230V. Alternate pulley supplied with 230V model for 1060 cpm operation.

### DIMENSIONS

25 in (64 cm) x 21 in (54 cm) x 14 in (36 cm)

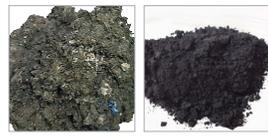
**WEIGHT:** 92 LBS. (42 KG)

## PHARMACEUTICALS



BEFORE AFTER

## SUPER ALLOY



BEFORE AFTER

## GRANITE



BEFORE AFTER

## GLASS



BEFORE AFTER



Steel housing and rugged construction ensure a long life of heavy work.



Shock-mounted electric motor for table top operation.



Safety interlock system for operator protection



Vibration detection switch shuts down the mill in the event of mechanical failure.



Clamp swings 2 1/3 in (5.9 cm) back-and-forth with a short lateral "figure-8" movement.



Timer range to 100 minutes. Optional chip\* is available to extend timer range to 175 hours (10,500 minutes).

\*Limited warranty applies

# MIXER/MILL® ACCESSORIES

SPEX SamplePrep provides Grinding Vials, Grinding Media, Mixing Vials and Multi-Vial Adapters to aid in the preparation of your sample.

[www.spexsampleprep.com/mixermill-accessories](http://www.spexsampleprep.com/mixermill-accessories)



## GRINDING VIALS

Vials are available in different materials to effectively grind all sample types and to avoid contamination from specific elements. Vials are available in different sizes to accommodate grinding loads from approximately 0.5g to 10g and for blending up to 50 mL of sample. Many vials are also suitable for slurry grinding.

 <p><b>AGATE VIAL</b> Major Elements: Si Sizes Available: 3.5mL, 45mL</p>	 <p><b>HARDENED STEEL VIAL</b> Major Elements: Fe Sizes Available: 2.5 mL, 5mL, 35mL, 65mL</p>	 <p><b>TUNGSTEN CARBIDE VIAL</b> Major Elements: W,C,Co Sizes Available: 3.5mL, 45 mL</p>
 <p><b>ALUMINA CERAMIC VIAL</b> Major Elements: Si Sizes Available: 45 mL</p>	 <p><b>ZIRCONIA VIAL</b> Major Elements: Zr Sizes Available: 45 mL</p>	 <p><b>POLYPROPYLENE VIAL</b> Major Elements: C Sizes Available: 35mL, 75mL</p>
 <p><b>POLYSTYRENE VIAL</b> Major Elements: C Sizes Available: 3.5mL, 45mL</p>	 <p><b>POLYCARBONATE VIAL</b> Major Elements: C Sizes Available: 75 mL</p>	 <p><b>SILICON NITRIDE VIAL</b> Major Elements: Si,N Sizes Available: 45 mL</p>

## VIAL ADAPTERS



A range of vial adapters are available to run multiple smaller vials in the Mixer/Mill clamp. Up to seven small vials may be run simultaneously in each clamp.

## GRINDING MEDIA

Most grinding vials are supplied with grinding balls of the same material and replacement balls can be purchased separately.

**Material Available:** Methacrylate, Stainless Steel, Hardened Steel, Agate and Tungsten Carbide.



### GRIND MORE SAMPLES WITH OUR POWERFUL RING & PUCK MILL

The **8530 ShatterBox®** is a powerful mill that grinds up to 100 grams of dry, brittle material. It is ideal for rapid dry or wet grinding applications. The mill swings a grinding container with a puck and ring, in a tight, high-speed rotation for fast effective grinding.

[www.spexsampleprep.com/shatterbox](http://www.spexsampleprep.com/shatterbox)

### PRESS SAMPLES FOR XRF WITH OUR LABORATORY PRESS

The **3636 X-Press®** is a programmable, hydraulic laboratory press that applies up to 35-tons (31.8 metric tons) of pressure to press powdered samples into pellets for XRF analysis. We also provide Die Sets, Binders and Spec-Caps® for use with the X-Press.

[www.spexsampleprep.com/3636xpress](http://www.spexsampleprep.com/3636xpress)



## 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 submit 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. To read our application notes online or download a copy, visit [www.spexsampleprep.com/appnotes](http://www.spexsampleprep.com/appnotes)

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