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Cryogenic Homogenizing System

- Handheld homogenizer with mortars and pestles
- Increases sample throughput
- System helps preserve sample integrity

The Talboys Cryogenic Homogenizing System combines the ease and speed of a handheld homogenizer and a liquid nitrogen cooled sample to homogenize your sample faster and more efficiently. The cordless, motorized 3.6 volt unit's speed is slower than a typical homogenizer to prevent sample splattering and generation of airborne particles. Compact and versatile design allows homogenizer to be held with a pistol grip.

The mortar and pestle are constructed of a durable porcelain/zirconium composite. The rugged pestle has a stainless steel shaft with a hex bit for quick connection to the motor. Mortar and pestle can be decontaminated between samples by autoclaving, dry heat, or by exposing to a commercial decontaminating solution. The Cryogenic Cooler is a valuable tool for chilling, processing, and transporting samples.

Applications:

Suspensions, high throughput testing in clinical, environmental, molecular biology, and chemistry labs.

Ordering Information:

Units include motor unit, tray with six mortar and pestles, Cryogenic Cooler with mesh covered sample reservoir and adsorbent material. **5 year limited warranty on parts and labor.**



Specifications

Speed Range	200rpm
Sample Size	< 500 mg (100mg optimal)
Dimensions, Overall (W x L x H)	
Homogenizer	6 x 2 x 5.5" (15.2 x 5 x 14cm)
Cryo Cooler	11 x 9 x 11.5" (27.9 x 22.9 x 29.2cm)
Tray	5.5 x 5 x 1.2" (13.9 x 12.7 x 3.0cm)
Ship Weight	11lbs (5.0kg)

Description	Electrical (50/60 Hz)	Part Number
Cryogenic Homogenizing System	120V 1.0 amps 4 watts	930260

Replacement Accessories

Description	Part Number
Tray with six replacement mortar and pestles	930262
Pestles, set of 6 (replacement)	930263
Mortars, set of 6 (replacement)	930264
Cryogenic Cooler	930259

High Throughput Homogenizer



- Ability to process small quantities
- Eliminates cross contamination
- Rapid sample processing

The Talboys High Throughput Homogenizer is specifically designed for high throughput sample processing in a microplate, vial set format or any 4 x 5 x 2.5" matrix to produce effective homogenization of tissue samples. Homogenizer produces a reciprocal motion that is optimized for grinding difficult samples. Easy-to-load tray securely locks microplate or sample holder in place. The high speed linear motion of the homogenizer allows for rapid sample processing; in most cases two minutes or less. Analog controls.

Homogenized samples can be subsequently handled manually or in an automated system. The High Throughput Homogenizer is suitable for the isolation of protein, DNA, RNA, viruses, and other biological components released during homogenization.

Animal tissue, seeds, tubers, leaf punches, soil and sediment samples, insects, and microbial cultures can all be effectively homogenized in a 96-well or vial set format. The unit is also useful for pulverizing dry samples for chemical analysis and solubility studies.

Operating Conditions:

Units can be run in conditions from 5 to 40°C (41 to 104°F), 20% to 85% relative humidity, non-condensing.

Ordering information:

Unit includes a 92" (234cm), 3-wire cord and plug (230 volt units are supplied with Euro type plug). **5 year limited warranty on parts and labor.**

Grinding Accessories

Grinding Vial Sets combine the benefits of the microplate format and the size of vials to provide a tool for higher throughput sample grinding. Vials are available in either polycarbonate or polyethylene materials. The polyethylene vial set is offered in a 24 vial, 4mL size. The polycarbonate vial set is offered in two sizes; 24 vial, 4mL size and 5 vial, 15mL size. The 4mL vial size is conveniently packaged as a set or in bulk.

Grinding balls are used with deep well plates and vial sets to bead beat plant tissues, seeds, and animal tissues. These grinding balls are made of 440C stainless steel which allows them to be retrieved with a magnet while making them resistant to tarnishing. Grinding balls are treated to remove residual oils and contaminants prior to packaging.

Recommended Applications:

- 3/8" Good for homogenizing seeds and larger samples of animal tissue in 4mL vials.
- 7/16" Suitable for larger grinding jobs, such as pooled seeds, in 15 mL vials.
- 5/32" Use with deep well plates for leaf punches or animal tissue of 50mg or less.

When homogenization is complete, grinding balls can be removed with optional 24-Pin Magnet.



corn



rice



soy beans



Specifications

Speed Range	0 to 1600rpm
Timer	1 to 10 minutes
Maximum Capacity	1 deep well plate, 4 stacked standard well plates, or 1 vial set; 300 gram maximum
Reciprocal Stroke	1.2" (3.1cm)
Dimensions, Overall (L x W x H)	17.5 x 15 x 14.2" (44.5 x 38.1 x 36.1cm)
Ship Weight	75lbs (34.1kg)

Description	Electrical (50/60 Hz)	Part Number
High Throughput Homogenizer	120V 6.3 amps 450 watts	930145
High Throughput Homogenizer	230V 3.1 amps 450 watts	930146

Replacement Accessories

Description	Lid	Part Number
Bulk 4mL Polyethylene Vials, case of 240	Unlined	930148
Bulk 4mL Polyethylene Vials, case of 240	Lined	930155
Bulk 4mL Polycarbonate Vials, case of 240	Unlined	930147
Bulk 4mL Polycarbonate Vials, case of 240	Lined	930154
3/8" Stainless Steel Grinding Balls, pack of 1000	N/A	930156
5/16" Stainless Steel Grinding Balls, pack of 1000	N/A	930157
5/32" Stainless Steel Grinding Balls, pack of 5000	N/A	930151
6mm Zirconium Oxide Satellites, pack of 1000	N/A	930158
500 Micron Acid Washed Garnet, 250 gram	N/A	930159

24-Well 4mL Vial Sets, Polyethylene

Plastic case with foam rack holds 24, 4mL polyethylene vials. Each vial includes one, 3/8" (1cm) stainless steel grinding ball and threaded lid. Lid is available unlined or with lining for added secure closure. Sold as a case of 10 vial sets.

Description	Lid	Part Number
24-Well 4mL Vial Set, Polyethylene	Unlined	930136
24-Well 4mL Vial Set, Polyethylene	Lined	930153



930136

24-Well 4mL Vial Sets, Polycarbonate

Plastic case with foam rack holds 24, 4mL polycarbonate vials. Each vial includes one, 3/8" (1cm) stainless steel grinding ball and threaded lid. Lid is available unlined or with lining for added secure closure. Sold as a case of 10 vial sets.

Description	Lid	Part Number
24-Well 4mL Vial Set, Polycarbonate	Unlined	930135
24-Well 4mL Vial Set, Polycarbonate	Lined	930152



930135

5-Well 15mL Vial Set, Polycarbonate

Plastic case with foam rack holds 5, 15mL polycarbonate vials for larger samples. Each vial includes two, 7/16" (1.1cm) stainless steel grinding balls and threaded lid. Sold as a case of 10 vial sets.

Description	Lid	Part Number
5-Well 15mL Vial Set, Polycarbonate	Unlined	930137



930137

High Throughput Homogenizer Accessories

24-Pin Magnet and Magnet Stand/Ball Separator

The 24-Pin Magnet can be used to remove grinding balls before samples are added to the vials and then, with the use of the Magnet Stand/Ball Separator, used to align and drop grinding balls into vials. Each 2" (5.1 cm) pin is capped with a strong neodymium rare earth magnet. The pins of this magnet can also be used to remove smaller grinding balls from 96-well plates.

Description	Part Number
24-Pin Magnet	930138
Magnet Stand/Ball Separator	930139

**Magnet Pipette Tips**

Magnet Pipette Tips are a simple, cost effective solution for removing stainless steel grinding balls from 96-well plates and grinding vials. The tips are made to fit most 0-200µl pipettes and work with steel and 440C stainless steel balls.

Description	Part Number
Magnet Pipette Tips, pack of 12	930149

**Ball Dropper/Bead Dispenser**

Ball Dropper/Bead Dispenser can be used to add 5/32" stainless steel balls to deep well plates, and to dispense small grinding beads into empty microplates. Includes ball dropper, reservoir tray, grinding bead swipe card, and plastic retaining sheet.

Description	Part Number
Ball Dropper/Bead Dispenser	930150

