

# Homogenizers



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D1000 Handheld Homogenizer



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BeadBug™ 3 Microtube Homogenizer



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BeadBug™ 6 Microtube Homogenizer



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BeadBlaster™ 24 Microtube Homogenizer

## D1000 Homogenizer



Ergonomic, "Slim-line" handle design

### Technical Data:

Speed Range:	8,500 to 30,000rpm
Capacity:	0.1 to 250ml
Noise Level:	<70db
Dimensions: (W x D x H): (without probe)	1.8 x 2.3 x 9 in. 4.5 x 5.8 x 22.5 cm
Weight:	1.35 lbs (0.6kg)
Electrical:	115 or 230V, 50-60Hz, 130W
Warranty:	2 Years

- + Quickly homogenizes samples (in under 30 seconds)
- + For volumes 100µl to 250ml
- + Supplied with two generator probes (5mm and 7mm)

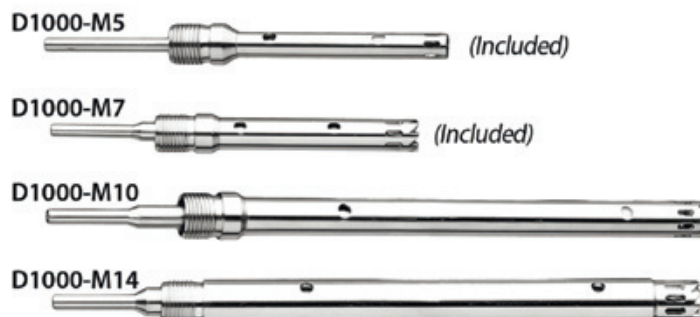
Benchmark's handheld homogenizer, the D1000, is designed to rapidly homogenize, emulsify, suspend and disrupt biological samples. Ideal for use with microtubes, the homogenizer works well with samples from 0.1ml to 250ml (depending upon the generator probe used).

The D1000 is a rotor stator homogenizer which works by drawing the sample, in liquid, into the generator probe with the variable speed rotor, and then forcing it out through the slots in the stator. This achieves mechanical shearing of the sample. As the sample is repeatedly drawn up and forced through the stator, additional shearing takes place.

A powerful, 130W motor drives the rotor at speeds from 8,500 to 30,000 rpm. Speed is adjustable in six steps to meet sample processing needs. A separate on/off switch allows the homogenizer to be left at the appropriate setting.

Generator probes are available in four sizes. The 5mm and 7mm diameter have a 50mm length for use with samples in microtubes. The 10mm x 115mm is ideal for use with 15 and 50ml tubes and 14mm x 130mm, for 50ml tubes and vessels up to 250ml. The unit is supplied with one each of the 5mm and 7mm generator probes. All the generator probes are made of stainless steel and can be sterilized by autoclaving.

### Available Generator Heads



### Ordering Information:

Item No.	Description:
D1000	D1000 Hand-Held Homogenizer includes one 5mm (flat-bottom) generator probe and one 7mm (saw tooth) generator probe
<u>Optional generator probes:</u>	
D1000-M10	10mm x 115mm saw tooth, for 15 and 50ml tubes
D1000-M14	14mm x 130mm saw tooth, for 50ml - 250ml vessels
D1000-M5	5 x 50mm for microtubes, 5 pk.
D1000-M7	7 x 50mm for microtubes, 5pk.
D1000-ST	Stand for D1000 Homogenizer

\*115V with US plug. For 230V (EU plug), please add (-E).

## BeadBug™ 3 & 6 Microtube Homogenizers

# BEADBUG

MICROTUBE HOMOGENIZERS



- + Extremely powerful mixing action for lysis, grinding or homogenization
- + Eliminates the cross contamination associated with hand-held homogenizers
- + Faster & more effective than tissue grinders
- + Process multiple tubes simultaneously

The BeadBugs™ are high energy benchtop homogenizers that set the performance standard for personal sized cell disruption and lysis instruments. Simultaneous homogenization of up to 6 samples takes place (often within 45 seconds) inside the disposable 2ml screw cap microtubes. The optimized mixing motion causes rapid cell disruption through constant high velocity impact from the hardened micro-beads chosen specifically for your sample type.

Developed for samples too tough to be homogenized in a common lab vortexer, the BeadBugs provides a convenient and economical alternative to larger and more expensive homogenizers on the market today. With compact footprints (as small as 7 x 8", in the 3 position model), the Beadbugs are the ideal homogenizing instruments for low to medium throughput laboratories.



BeadBug 3, accepts 3 x 2.0ml



BeadBug 6, accepts 6 x 2.0ml



Video Demonstration



Benchmark offers a wide range of homogenization beads (including glass, zirconium, stainless steel, etc.)

### Ordering Information:

Item No.	Description:
D1030*	BeadBug™ 3, Three Position Microtube Homogenizer
D1036™	BeadBug™ 6, Six Position Microtube Homogenizer
D1036-A5	Optional tube holder 2 x 5ml screw cap tubes (for D1036 only)
<b>Prefilled Tube Kits:</b>	Include 2.0ml non-skirted screw cap tubes with caps, sealing rings and beads as specified below:
D1031-01	Standard glass beads, Ø 0.1mm, 50pk.
D1031-05	Standard glass beads, Ø 0.5mm, 50pk.
D1031-10	Standard glass beads, Ø 1.0mm, 50pk.
D1032-01	Triple-Pure™, high impact zirconium beads, Ø 0.1mm, 50pk.
D1032-05	Triple-Pure™, high impact zirconium beads, Ø 0.5mm, 50pk.
D1032-10	Triple-Pure™, high impact zirconium beads, Ø 1.0mm, 50pk.
D1032-15	Triple-Pure™, high impact zirconium beads, Ø 1.5mm, 50pk.
D1032-30	Triple-Pure™, high impact zirconium beads, Ø 3.0mm, 50pk.
D1032-60	One ceria zirconium oxide satellite, Ø 6.0mm, 50pk.
D1032-SK	Starter Kit, 10 ea. of Ø 0.1, 0.5, 1.0, 1.5 & 3.0 Triple-Pure™ zirconium
D1033-28	Stainless steel beads, Ø 2.8mm, 50pk.
D1033-30G	Garnet shards with 1 zirconium bead Ø 6.0mm, 50pk.
D1034-MX	Mixed format, 0.1mm silica, 1.4mm zirconium, 4mm silica, 50pk
D1031-T20	Empty tubes (2.0ml) pack of 1000
D1031-RF	Reinforced empty tubes (2.0ml) pack of 500

\*115V with US plug. For 230V (EU plug), please add (-E).

Additional bead types are also available (in both bulk and prefilled kits). Please contact Benchmark for a complete listing.

### Technical Data:

Speed Range:	2,800 to 4,000rpm (D1030) 2,500 to 4,350rpm (D1036)
Max. Capacity:	3 x 2.0ml non-skirted (D1030) 6 x 2.0ml (skirted or non) or 2 x 5ml (D1036)
Timer:	3 sec. to 3 min. (D1030) 1 sec to 90 sec. with up to 10 cycles (D1036)
Operating Temp. Range:	+4° C to +45° C (ambient temp.)
Dimensions: (W x D x H)	6.9 x 8.3 x 5.3 in. / 17 x 21 x 13.5 cm (D1030) 8.6 x 14 x 8 in. / 22 x 35.5 x 20.5 cm (D1036)
Weight:	5 lbs (2.2kg) / 20lbs (9kg)
Electrical:	115 or 230V, 50-60Hz, 50W (D1030) 100 to 240V, 50-60Hz, 145W (D1036)
Warranty:	2 Years



# BeadBlaster™ 24 Microtube Homogenizer



- + Fast, efficient homogenization, usually in 35 seconds or less
- + For all sample types, from soft tissue to bone
- + High throughput, up to 24 samples
- + Sealed 2.0ml tubes, no cross contamination

The BeadBlaster™ 24 completely lyses, grinds and homogenizes a broad variety of biological samples. Even the most difficult and resistant samples are fully homogenized, often in 35 seconds or less. The stainless steel tube carrier subjects up to 24 samples to an optimized, high speed, 3D motion, producing high energy impacts between the samples and micro-beads to release cellular contents. To protect heat sensitive samples, the unit can be digitally programmed to operate in shortened consecutive cycles with a rest period in between.

Benchmark offers an assortment of prefilled tube kits for a variety of sample types. The popular Triple-Pure™ kits include acid washed, heat treated, zirconium beads. The beads are tested to be free of nucleases, making them ideal for molecular biology applications. A convenient starter kit (D1032-SK) is available to accommodate a broad range of samples and optimize applications.



Stainless steel, 24 position tube carrier



## Ordering Information:

Item No.	Description:
D2400*	BeadBlaster™ 24 Microtube Homogenizer* with 24 x 2.0ml tube holder
D2400-R5V2	Optional tube holder, 12 x 5ml
<b>Prefilled Tube Kits:</b>	Include 2.0ml non-skirted screw cap tubes with caps, sealing rings and beads as specified below:
D1031-01	Standard glass beads, Ø 0.1mm, 50pk.
D1031-05	Standard glass beads, Ø 0.5mm, 50pk.
D1031-10	Standard glass beads, Ø 1.0mm, 50pk.
D1032-01	Triple-Pure™, high impact zirconium beads, Ø 0.1mm, 50pk.
D1032-05	Triple-Pure™, high impact zirconium beads, Ø 0.5mm, 50pk.
D1032-10	Triple-Pure™, high impact zirconium beads, Ø 1.0mm, 50pk.
D1032-15	Triple-Pure™, high impact zirconium beads, Ø 1.5mm, 50pk.
D1032-30	Triple-Pure™, high impact zirconium beads, Ø 3.0mm, 50pk.
D1032-SK	Starter Kit, 10 ea. of Ø 0.1, 0.5, 1.0, 1.5 & 3.0 Triple-Pure™, high impact zirconium
D1032-60	One ceria zirconium oxide satellite, Ø 6.0mm, 50pk.
D1033-28	Stainless steel beads, Ø 2.8mm, 50pk.
D1033-30G	Garnet shards with 1 zirconium bead Ø 6.0mm, 50pk.
D1034-MX	Mixed format, 0.1mm silica, 1.4mm zirconium, 4mm silica, 50pk
D1031-T20	Empty tubes (2.0ml) pack of 1000
D1031-RF	Reinforced empty tubes (2.0ml) pack of 500
D1034-28	5ml tubes with stainless beads, Ø 2.8mm, 50pk

\*Includes US plug. For EU plug, please add (-E).

## Technical Data:

Speed:	4.00 to 7.00 m/s (2430 to 4260rpm)
Speed Increments:	0.05 m/s
Capacity:	24 x 2.0ml tubes or 12 x 5ml
Cycle Time:	1 to 90 sec. (1 sec. increments)
Pause Between Cycles:	0 to 2 min. (1 sec. increments)
Max Cycles per program:	10
Program Memory:	50
Accel/Decel:	<2 sec. / <2 sec.
Noise Level:	<68 db
Operating Temp. Range:	+4 °C to +65°C (ambient temp.)
Dimensions: (W x D x H)	11 x 14.2 x 15.2 in. 28 x 36 x 38.5cm
Weight:	55 lbs (25kg)
Electrical:	Universal Voltage 100V to 240V, 50-60Hz, 600W
Warranty:	2 Years

Additional bead types are also available (in both bulk and prefilled kits). Please contact Benchmark for a complete listing.