pulverisette 0

Vibratory Micro Mill

- For pulverizing and homogenizing small samples
- Convertible to dry or wet sieving

milling

ball mill

sample preparation

for your lab

FRITSCH

Application

Field of application

For fine milling of dry lab samples or solids in suspension. For homogenization of emulsions or pastes.
The vibratory micro mill pulverisette 0 is recommended for the sample preparation for RoHS-testing.

Method of operation

The vibratory micro mill pulverisette 0 achieves size reduction through the combination of impact and friction. An electromagnetically powered mortar generates vibration. These vibrations are transferred to the grinding balls via the grinding material. The impact energy of the grinding balls can be controlled to suit the application.

Advantages

- Selective milling. Reduction of size of coarse particles by impact at the beginning of grinding process. Further size reduction of ground material through friction due to tumbling motion of grinding balls.
- Size reduction in a narrow, homogeneous range of grain sizes
- Agglomeration phenomena avoided
- Ergonomically mounted membrane keyboard IP65, protected against spillage
- Plastic housing can be recycled
- Convertible for cryogenic grinding
- Safety tested (CE mark)
- 2 year guarantee

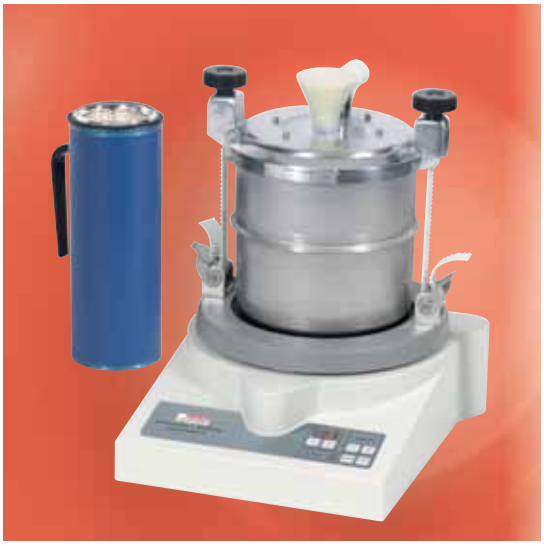
Design Characteristics

- Window to observe the grinding process
- Adjustable vibration amplitude so vibration energy can be adapted to suit sample being ground
- Maintenance-free vibratory system isolated and independent of the lab bench for the avoidance of vibration transmissions
- Loss-free grinding in closed vessel guaranteed, even in suspension
- Modular system permits simple conversion to dry- or wet-sieving
- Digital timer

quality control

fine grinding

Micro Mill



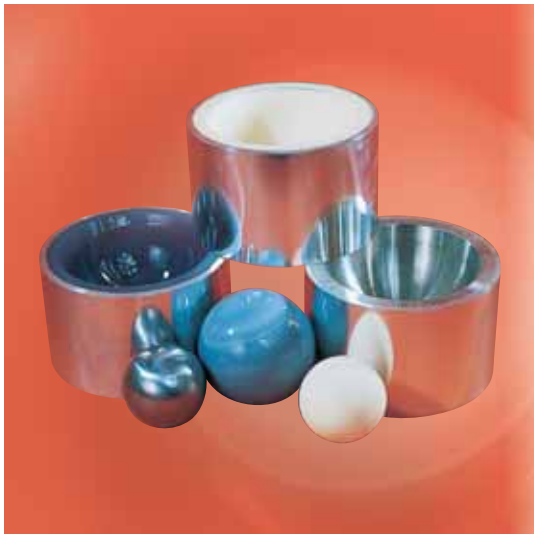
pulverisette 0 with cryo-box

vibratory sieve shaker
analysette 3 SPARTAN

Dry- and wet-sieving

The pulverisette 0 can be converted to the vibratory sieve shaker analysette 3 SPARTAN for dry and wet sieving. Then the pulverisette 0 can be used as a "shaking sieve" system in the classic sense for determining quantitative particle size analysis of solid samples (measuring range: 32 µm – 63 mm) and suspensions (measuring range: 20 µm – 10 mm) of all kinds.

Detailed information for the use of the vibratory micro mill pulverisette 0 as vibratory sieve shaker analysette 3 can be seen in the separate leaflet vibratory sieve shaker analysette 3.



grinding mortars and balls

Accessories

Grinding sets

Material	Density g/cm³	Abrasion resistance	Material to be ground
Agate* 99.9 % SiO_2	2.65	good	soft to medium-hard samples
Sintered corundum* 99.7 % Al_2O_3	>3.9	fairly good	medium-hard, fibrous samples
Zirconium oxide* 94.2 % ZrO_2	5.7	very good	fibrous, abrasive samples
Stainless steel mortar: 17-19 % Cr + 8-10 % Ni ball: 12.5-14.5 % Cr + 1 % Ni	7.8	fairly good	medium-hard, brittle samples
Tempered steel mortar: 11-12 % Cr ball: 1-1.65 % Cr	7.9	good	medium-hard, brittle samples
Hard metal tungsten carbide 93.8 % WC + 6 % Co	14.95	very good	hard, abrasive samples

* not suitable for cryogenic grinding

Cryo-box

The grinding set is placed in a cryo-box to grind soft, oily, fatty or moist materials by adding liquid nitrogen to embrittle the grinding material. This method is employed to reduce samples which are very difficult to grind (e.g. soft PVC-foil pieces) to analytical fineness. The thick insulation of the cryo-box results in low coolant costs.

Data

Technical Data

Features	can be converted to vibratory sieve shaker analysette 3 SPARTAN for dry- or wet-sieving
working principle	impact force
max. feed size (depending on the material)	5 mm
min. sample quantity	0.1 ml
max. sample quantity	10 ml
final fineness	5 - 10 µm
typical grinding time (e. g. for quartz sand up to < 40 µm)	20 - 30 min
grinding process	dry / wet
oscillations mortar	3,000 - 3,600 oscillations/min at 1 - 3 mm amplitude
electrical details	100-240 V/1~, 50-60 Hz, 50 Watt
weight	net: 21 kg, gross: 22 kg
dimensions w x d x h	table top instrument: 37 x 40 x 20 cm
packing details	carton: 50 x 43 x 30 cm

Ordering data

Order no.	Description
00.6020.00	**Vibratory Micro Mill pulverisette 0** **incl. grinding head, without mortar and grinding ball** for 100-240 V/1~, 50-60 Hz
	Grinding mortars
40.0150.05	agate
40.0140.06	sintered corundum (99.7 % Al_2O_3)
40.0220.27	zirconium oxide
40.0130.10	stainless steel
40.0120.09	tempered steel
40.0110.08	hardmetal tungsten carbide
	Grinding balls
40.0170.05	agate 50 mm Ø, polished
40.0210.05	agate 70 mm Ø, polished
40.0170.06	sintered corundum (99.7 % Al_2O_3) 50 mm Ø
40.0230.27	zirconium oxide, 50 mm Ø
40.0180.10	stainless steel, 50 mm Ø
40.0190.09	tempered steel, 50 mm Ø
40.0200.08	hardmetal tungsten carbide, 50 mm Ø
	Further Accessories
00.2000.00	cryo-box (device for grinding in liquid nitrogen)
00.0130.17	sound absorption hood, plexiglas
	Accessories for dry-and wet-sieving vibratory sieve shaker analysette 3 SPARTAN Contact us for a detailed brochure

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FRITSCH

Fritsch GmbH
Manufacturers of Laboratory Instruments
Industriestrasse 8 · 55743 Idar-Oberstein · Germany
Phone: +49 67 84 70 0 · Fax: +49 67 84 70 11
E-Mail: info@fritsch.de · Internet: www.fritsch.de