# Fastening type grinding can:

- Dry grinding
- Wet grinding
- Superfine grinding
- Mechanical alloying
- Freezing grinding



Recommended ball used								
Rinding tank capacity	maximum sample-in size	2mm	3mm	12mm	15mm	20mm	25mm	30mm
2.00ml	1mm	3-4	2-3					
25.00ml	6mm	When the c		2-3	2-3	1	1	
50.00ml	8mm	the tank is large, we 2-3 2-3 1 1 1 recommend that	1					
50.00ml	9mm		e a grinding	2-3	2-3	1	1	1
80.00ml	9mm	ball with a slightly 2-3 2-3 2-	2-3	1	1			
100.00ml	10mm	larger diameter		2-3	2-3	2-3	1	1
160.00ml	12mm		Optimal gr	rinding res	sults with sp	oiral mixing	samples	

### Order information

Item No.	Item	
57C1102A	HF Extract High-throughput grinder	

# HF Extract Grinding tank

Item No.	Material	Volume
8721123A	Rigid steel	25ml
8721124A	Stainless Steel	5ml
8721125A	Stainless Steel	10ml
8721126A	Stainless Steel	25ml
8721127A	Stainless Steel	35ml
8721128A	Stainless Steel	50ml
8721129A	Tungsten Carbide	10ml
8721135A	Tungsten Carbid	25ml
8721130A	Agate	10ml
8721131A	Zirconium oxide	10ml
8721132A	Zirconium oxide	25ml
8721133A	Zirconium oxide	35ml
8721134A	Teflflon (poly tetraflfluoride)	25ml
8721156A	Teflflon (poly tetraflfluoride)	35ml

#### Accessories

Item No.	Material
8721136A	Grinding tank cover tightening handle for grinding tanks of all materials
8721137A	Seals for 25ml stainless steel grinding tanks
8721138A	Seals for 35ml stainless steel grinding tanks
8721139A	Seals for 50ml stainless steel grinding tanks
8721140A	Suitable for 25ml zirconia grindingtank
8721141A	Suitable for 35ml zirconia grindingtank
Suitable for	the fragmentation of cells and fifibrous tissue
8721142A	Cryogenic tool set for liquid nitrogen cooling grinding tank
Suitable fo	r the fragmentation of cells and fifibrous tissue
8721143A	Adapter: PTFE made, receiving 5 reaction bottles, reaction bottle specififications of 15ml and 2.0ml, plastic made
8721144A	Adapter: PTFE made, receiving 10 reaction bottles, reaction bottle specififications of 1.5ml and 0ml, plastic made
8721145A	Adapter: TFE made, receiving 6reaction bottles, reaction bottle specifification of 5ml, plastic made
8721146A	Adapter: PTFE made, receiving 6 reaction bottles, reaction bottle specififications for PCmaterial, 5ml
8721147A	Adapter: PTFE made, receiving 24 reaction bottles, reaction bottle specififications of 15 ml and 20ml, plastic made
8721148A	Adapter, receiving 96 reaction bottles, reaction bottle specififications for 0.2-1.2ml eight tubes, plastic made
8721149A	Adapter, receive 96 reaction bottles, reaction bottle specififications for 0.2-1.2ml, one sample plate, plastic made
8721150A	Adapter: Stainless steel made, receiving 4 reaction bottles, reaction bottle specifification of 50ml, stainless steel ma
8721151A	Adapter: PTFEmade, receiving 12 reaction bottles, Reaction bottle specifification of 5.0ml, PC
8721157A	Adapter: PTFE made, receiving 12 reaction bottles, Reaction bottle specifification of 5.0ml, plastic
8721152A	Adapter: Stainless made, receiving 4 reaction bottles, reaction bottle specifification of 500ml, plastic
8721153A	96 Hole Sample Plate Bead Distributor, 0.3mm
8721154A	96 Hole Sample Plate Bead Distributor, 0.5mm
8721155A	Centrifugal Tube 2ml. 100 pieces/bag Plastic made
8721158A	Centrifugal Tube 5ml. 100 pieces/bag Plastic made
8721159A	Centrifugal 5ml, made of stainless steel for hard grinding
8721160A	Centrifugal 5ml, made of polycarbonate for hard grinding
8721161A	Centrifugal Tube 50ml. 20 pieces/bag Plastic made



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# HF Extract High-throughput grinder















#### More efficient grinding

Through the horizontal arc high-speed radial oscillation, the grinding ball in the grinding container collides with the sample, and the final sample size is less than 5µm.



With two grinding platforms fordifferent tubes, grinding tanks oradapters, it is suitable for dry, wetand freeze grinding methods.

Easier to operate Grinding time, vibration frequency can be freely adjusted, advanced LED 5-inch touch screen can be set, stores a variety of grinding

# Safe to use

procedures.

Integrated motor switch to ensure safe operation, with a safety chain device, unique EasyClamp system fastening grinding tank, upper cover ransparent window allows the operation's observation.

Modern laboratory applications, design and the production of acomprehensive application allows the grinder to quicklydry, wet and free zeluminescent grind different animal and planttissue as well as a small number of solid samples. Processing flux up to 192, sample volume covers 0.2ml-50ml, ideally meets the needs of high-throughput luminescent grinding

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#### Avariety of grinding accessoires, one machine multi-usage

The HF Extract fixture is not only designed to hold twos tandard deep orifice plates, it is also suitable for anything of the same size, including deep orifice plates with fewer or more sample holes, brackets with multiple independent centrifugal tubes and other possible components.



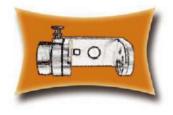
The adapter used to place the microporous tube prevents ross-contamination of the sample and realizes highnroughput screening; The grinder can place liquid nitrogen for freezing.



Grinding tanks of various materials with a maximum volume of 50 ml; Suitable for ecological soil, ore, plants, dental materials and other samples.



Particularly suitable for the detection of pesticide residue samples of 50 ml centrifugal tube, centrifugal pipe fifittings, each batch can be made up to samples; Comply with international standards of QuECHER.



The clamping device inside the handle is provided with a removable positioning block, which greatly improves the service life of the grinding fifittings and the clamping device, and the gasket can be disassembled and replaced conveniently, reducing the maintenance cost of the instrument.



#### Frozen Grinding Kits

Insulation box, grinding tank fixture, goggles. Pre-frozen samples by liquid nitrogen and grindingtanks can be ground for thermal sensitive samples such as plastics and rubber.

#### Little Bead Distributor •

Suitable for grinding ball distribution of 96-hole sample plates, with 3 mm and 5mm two sizes available Choose.





## Avariety of materials microporo us tubes and low temperature accessories

Ordinary plastic, PC, PTFE and stainless steel microporous tubes, can be paired with stainless steel materials, zirconia or tungsten carbide and other materials of the ball, suitable for small samples of low temperature grinding or a small amount of hard, brittle samples of standardized grinding.

#### Microporous tube Fixers for cell breakage:

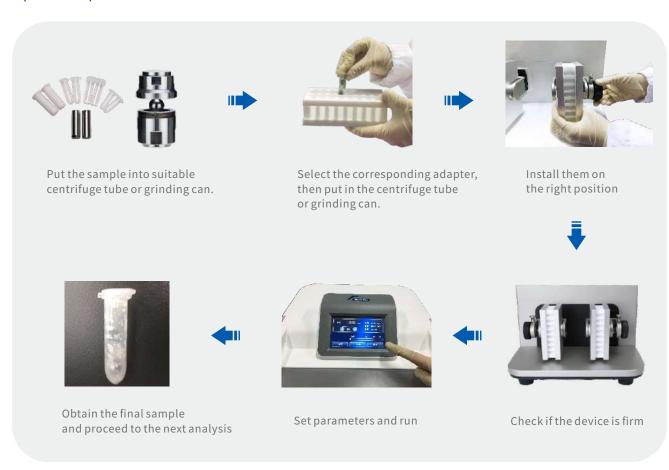
- In response to the requirements of high-throughput screening analysis, Extract can effiffifficiently and safe ak multiple samples such as spores, microorganisms, cereals, seeds, plant blades, animal and plant tissues, soil and other types at once.
- Samples and extracts, small metal balls, or ceramic balls are placed in a microporous tube, and after 2 tes of grinding, more than 95% of the cells are broken. Microporous tubes and grinding balls can be used once, especially for PCR, PAGE, Probe and other strict requirements, to eliminate crosscontamination between samples analysis methods.
- The HF Series offffers 5, 10, 24 hole adapters for 1.5 and 2.0ml microporous tubes, as well as a 6-hole adapter for 5ml centrifugal tubes and 96-hole adapters for 1.2 ml deep orififice plates.

#### Technical parameters

Sample-insize< 10mm			
Vibration speed 180-1800rotations/min  Time range 00: 01-99:59 (min/s)  Sample volume 0.2-20ml  Rated Power 200W  Rated voltage 220V, 50Hz  Instrument size 366*502*335mm  Packaging size 460*380*660mm	Sample-insize	<10mm	
Time range 00: 01-99:59 (min/s)  Sample volume 0.2-20ml  Rated Power 200W  Rated voltage 220V, 50Hz  Instrument size 366*502*335mm  Packaging size 460*380*660mm	Sample-outsize	<5µm(Depending on the properties of sample)	
Sample volume  0.2-20ml  Rated Power  200W  Rated voltage  220V, 50Hz  Instrument size  366*502*335mm  Packaging size  460*380*660mm	Vibration speed	180-1800rotations/min	
Rated Power 200W  Rated voltage 220V, 50Hz  Instrument size 366*502*335mm  Packaging size 460*380*660mm	Time range	00:01-99:59 (min/s)	
Rated voltage 220V, 50Hz  Instrument size 366*502*335mm  Packaging size 460*380*660mm	Sample volume	0.2-20ml	
Instrument size 366*502*335mm  Packaging size 460*380*660mm	Rated Power	200W	
Packaging size 460*380*660mm	Rated voltage	220V,50Hz	
	Instrument size	366*502*335mm	
Instrument weight 34KG	Packaging size	460*380*660mm	
	Instrument weight	34KG	

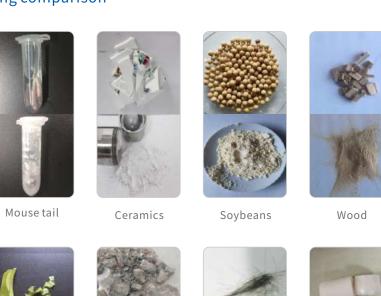


#### Operation process



#### **Grinding comparison**

Yedongqing





Oily rocks





Zirconia



Teeth





Liuweidihuang Pills