

3D CENTRIFUGAL CRYOGENIC GRINDING MILL

Product Introduction

3D cryogenic grinder / Cryogenic mill

DHCL series cryogenic grinding mill integrates preparation, grinding, freezing, and centrifugation functions. It can also be used as a low-temperature centrifuge. With a maximum speed of 6000rpm, the sample and grinding balls are placed in the grinding mill (equipped with grinding jars or centrifuge tubes/adapters). Under high-frequency oscillation, the grinding balls rapidly collide and friction within the grinding mill, breaking up cells and cell walls of various samples in a very short time, quickly releasing original DNA, RNA, and proteins for subsequent extraction and purification.

Product Features:

○ Flexible parameters:

Microprocessor control allows for customization of various reagent kits, with a 5.7-inch color touch screen and easy program settings (up to 99 programs can be saved).

○ Good stability:

With a unique fastening mechanism, sample tube fixation is more convenient. Program calls are fast, with noise levels ≤ 54 db.

○ Professional and efficient:

Sample fragmentation and lysis time is short, avoiding nucleic acid degradation and protein denaturation, ensuring the integrity of extracted nucleic acids or proteins. Innovative design with low-speed, ultra-long continuous operation function (up to 30min), suitable for whole-genome library construction, cloning, and sequencing.

○ Zero sample contamination:

The operation is fully enclosed, avoiding cross-contamination between samples and external contamination.

○ Integrated preparation:

Unique grinding, freezing, and high-speed centrifugation three-dimensional integration function effectively prevents the reduction of sample biological activity due to heat. The highest centrifugation speed is 6000RPM, eliminating many complex transfer operations, and can also be used as a stand-alone low-temperature centrifuge.

○ High safety and easy maintenance:

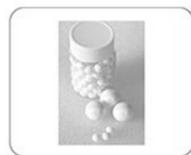
Uses a brushless frequency conversion motor that does not produce carbon particles and does not require carbon brush replacement. Long service life, no easily damaged parts, all-stainless steel inner chamber for easier cleaning and disinfection, and no need for dangerous materials such as liquid nitrogen for auxiliary processing.



Zirconia



Stainless steel



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Technical	Parameters
Model	DHCL-6K
Main Purpose	By low-temperature grinding of biological samples, nucleic acid degradation can be effectively inhibited, protein activity can be preserved, and samples can be processed in large quantities. It has the functions of tissue homogenization, grinding, cell disruption, homogenization, material dispersion, preparation, and vibration.
Related Core Technologies	Adopting the "multi-substance grinding and extraction" and "rapid grinding function of cell crushing device" technologies, it can grind and crush any source of samples (including soil, plant and animal tissues/organs, bacteria, yeast, fungi, spores, fossils, etc.). Raw DNA, RNA, and proteins can be extracted and purified, and it can process 24*2ML/12*5ML. It can process 24 samples at the maximum processing capacity within 15 seconds.
Display Method	Touch screen display, user-friendly interactive design, convenient operation, can be operated conveniently and intuitively, with electromagnetic lock function, automatic opening and closing function on the screen, reducing manual operation.
Data Storage	It can store ten sets of experimental data, and according to different experimental samples, it is set with animal heart, spleen, lung, kidney, bone, skin, hair modes. According to the set experimental parameters, it can continuously cycle among several set parameters, further reducing human interference factors.
Homogeneous speed	1-21M/S, working time: 1-9999S, user can set it by themselves.
Safety	The instrument adopts a double-layer shock absorption structure to ensure that the instrument remains stable during high-speed grinding work, does not interfere with external instruments, and ensures the safety of the overall environment.
Grinding ball material	Alloy steel, chrome steel, zirconia, tungsten carbide, and quartz sand.
Noise level	<54db.
Cooling function	Adopting the "grinding device with freezing function" technology, it can be adjusted from -50°C to room temperature. Temperature control accuracy: $\pm 0.5^\circ\text{C}$. Effectively solve the problem of sample denaturation and agglomeration caused by rapid heating during the grinding process, and improve the success rate.
Automatic centrifugation	Using the "dual-motor rotating centrifugation" technology, with centrifugation function, the highest grinding speed can be set to 6000 revolutions, realizing the integration of grinding and centrifugation.
Grinding method	Wet grinding, dry grinding, and low-temperature grinding are all available.
External dimensions	70*41.5*51cm
Weight	82 kg