LIQUID NITROGEN CRYOMILL

Product Introduction

LN CryoMill DH-S2020IN instrument, which is a product launched for "small samples".

Cryogenic Milling can quickly and effectively dry or wet grind hard, soft, and elastic samples within 1-3 minutes. It can also achieve the purpose of mixing and homogenizing powder and turbid liquids. It can be used for cryogenic grinding with liquid nitrogen, as well as for biological cell disruption and DNA/RNA extraction. The types of samples that the high-throughput tissue grinder can grind include: plant tissues, animal tissues, cells, bacteria, spores, and yeasts.

The liquid nitrogen grinder first freezes the above-mentioned substances below the embrittlement point, and then is ground to the required fineness in the grinder, and the original ingredients will not be destroyed. In addition, flammable and explosive substances at room temperature can also be crushed at low temperature, and the effect is more significant.

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Product Applications

◆ 1. High data accuracy and reproducibility
1.1. The sample is always at liquid nitrogen temperature during the grinding process.
1.2. The sample is always at liquid nitrogen temperature during the grinding process.
1.3. The sample bottle is in a fully enclosed state during the crushing process, and the sample is completely kept in the bottle to ensure the control of dangerous and important samples.
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◆ 2. Versatility, humanized design.
2.1. Touch screen, can set the grinding time, cycle period, grinding operation frequency and other parameters (optional).
2.2. Removable control panel (optional).
2.3. 10 programs can be stored (optional).
2.4. Suitable for dry and wet grinding of a variety of samples.
2.5. 1.5ML 2ML 5ML 10ML 25ML 50ML and other sample tubes can be installed for sample grinding.
◆ 3. Durability.
3.1. There is only one moving part-the collider, which greatly reduces the mechanical stress and prolongs the service life of the equipment.
3.2. Strong technical support: Shanghai Jingxin Company has more than 500 users, professional sample pre-processing equipment production.

Operation steps

◆ 1. Manual operation
1.1. Manually immerse the adapter and grinding tank in the liquid nitrogen sample, and quickly cool down to -196 degrees. Prevent sample degradation or change the physical characteristics of the sample.
1.2. Install the adapter and the grinding jar on the grinding machine. Put on the safety cover and lock the safety lock for operation.
◆ 2. Automatic operation
1.1. Install the adapter and grinding jar on the grinder. Put on the safety cover and lock the safety lock for operation.
1.2. Open the liquid nitrogen connection device, start the liquid nitrogen delivery/or open the air refrigeration instrument (to achieve 0 degree refrigeration).
1.3. Turn on the liquid nitrogen control switch. After the liquid nitrogen flows into the crushing tank, the temperature is physically cooled. In about a minute, the temperature quickly drops to -192 degrees.
1.4. Turn on the grinding button to operate. It only takes 15 seconds to crush the object instantly.
1.5. The flow of liquid nitrogen can be controlled in the whole process, and it can be charged at any time during the operation.

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Technical Parameters

Model	DH-S2020IN
Processing system	It has five major systems, sample grinding system, low temperature conveying system, low temperature control system, circuit control system, and heat preservation system
Application	Biology, food, agriculture, pharmaceuticals, chemical/synthetic materials, engineering/electronics, building materials, glass/ceramics
Automatic filling of liquid nitrogen	The flow of liquid nitrogen can be controlled in the whole process, and it can be charged at any time during the operation
Operation method	Fully automatic
Connection device	With liquid nitrogen connection, automatic transfer from storage system to sample grinding system
Low temperature or liquid nitrogen grinding	Yes, it can be connected to a liquid nitrogen tank (Type II) or an air cooler (Type I)
Shell Design	The shell is all made of hard steel, to avoid having a plastic cover, which affects safety
Sample Features	Hard, medium-hard, soft, brittle, elastic, fibrous
Crushing principle	Low temperature freezing force, mechanical impact force, physical friction force
Temperature range	-196°C-100°C

Technical Parameters

Feed size	⩽ 8 mm
Discharge size	0~ 5 μm
Standard machine processing sample size	50ml*2(Can be customized)
Grinding jar size	1.5ml/2ml/5 ml /10ML/ 25 ml / 35 ml / 50 ml.(Can be customized)
Grinding jar placement	It can be done once without the need to repeat the placement twice, extending the working time and affecting the sample temperature
Grinding working speed:Grinding speed	1-70HZ adjustable (30-2100 rpm/100-7000RPM)
Anti-vibration principle	DHFSTPRP-1 anti-vibration principle, as well as a special three-dimensional vibration mode of up and down and left and right shaking, the sample moves in a three-dimensional figure 8 shape in space, which can be suitable for cracking various animal and plant tissues and microorganisms, and extract DNA, RNA and protein conveniently and quickly
Typical liquid nitrogen grinder	15S
Grinding jar material	Stainless steel, PTFE, Teflon, carbide steel, etc.
Grinding Ball Material	Alloy steel, chrome steel, zirconia, tungsten carbide, quartz sand
Accelerate / Decelerate	Reach maximum speed in 2 seconds / Reach lower speed in 2 seconds
Standard	ISO / CE