Product Introduction

Cryogenic Milling DH-S2010IN 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.

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(WhatsApp)

Product Applications

- 1. Within 1-3 minutes, 24, 48, and 192 samples can be quickly and effectively ground.
- 2. Closed LN2-system (autofill) for enhanced safety, avoids any contact of the user with LN2.
- 3. Various centrifuge tubes, PCR tube adapters, or grinding jars of different materials can be selected.
- 4. 8-shaped vibration, sample grinding without dead corners.
- 5. Simple and safe operation design.
- 6. Exquisite and compact appearance.
- 7. Screw cap grinding jar, sealed and dustproof.
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- 9. Suitable for dry and wet grinding of a variety of samples.
- 10. Programmable cooling and grinding cycles (10 s to 99 min).
- 11. 3 different grinding modes (dry, wet or cryogenic).
- 12. 20 SOPs can be stored.
- 13. Grinding jars of the DH-S2010IN perform radial oscillations in a horizontal position. The inertia of the grinding balls causes them to impact with high energy on the sample material at the rounded ends of the grinding jars and pulverize it. Also, the movement of the grinding jars combined with the movement of the balls result in the intensive mixing of the sample.

Function Principle

The grinding jars of the DH-S2010 perform radial oscillations in a horizontal position. The inertia of the grinding balls causes them to impact with high energy on the sample material at the rounded ends of the grinding jars and pulverize it. Also, the movement of the grinding jars combined with the movement of the balls result in the intensive mixing of the sample.
The grinding jar is continually cooled with liquid nitrogen from the integrated cooling system before and during the grinding process.

Technical Parameters

Model	DH-S2010IN
Applications	size reduction, mixing, homogenization, cell disruption, cryogenic grinding
Field of application	agriculture, biology, chemistry / plastics, construction materials, engineering / electronics, environment / recycling, food, geology / metallurgy, glass / ceramics, medicine / pharmaceuticals
Feed material	hard, medium-hard, soft, brittle, elastic, fibrous
Size reduction principle	impact, friction
Material feed size	⩽8 mm
Final fineness	~ 5 µm
Batch size / feed quantity	max. 2 x 50 ml
No. of grinding stations	2
Setting of vibrational frequency	digital, 0 – 70 Hz (0 – 3000 min-1)
Typical mean grinding time	30 s – 2 min
Grinding method	Dry grinding/Wet grinding/Cryogenic grinding
Cell disruption with reaction vials	yes, up to 96 x 2.0 ml

Technical Parameters

Self-centering clamping device	yes
Type of grinding jars	screw top design
Material of grinding tools	hardened steel, stainless steel, tungsten carbide, agate, zirconium oxide, PTFE
Grinding ball material	Alloy steel, chrome steel, zirconia, tungsten carbide, quartz sand
Grinding jar sizes	1.5 ml / 5 ml / 10 ml / 25 ml / 35 ml / 50ml
Setting of grinding time	digital, 10 s – 99 min
Storable SOPs	20
Power consumption	150 W
W x H x D closed	380*270*490
Net weight	26kg
Electrical supply data	100-240 V, 50/60 Hz