

## MULTI-SAMPLE TISSUE GRINDER



### Product I Introduction

DHTISSUE-48 Multi-sample Tissue Grinder is a special, fast, efficient, multi-tube homogenization system. It can extract and purify raw DNA, RNA, and proteins from any source, including soil, plant and animal tissues/organs, bacteria, yeast, fungi, spores, paleontological specimens, and more.

### Product I Features

Compared with other sample preparation methods currently available, the DHTISSUE-48 multi-sample tissue grinder has the advantages of wide applicability, high efficiency, and flexibility. The system avoids the many drawbacks of traditional methods such as grinding, homogenization, and ultrasonic treatment, which are laborious, time-consuming, and inefficient. It can efficiently, quickly, and stably lyse and purify nucleic acids and proteins from various types of samples.



### Product I Applications

Sample for Grinding:

- Plant Tissues: roots, stems, leaves, flowers, fruits, seeds, etc.
- Animal Tissues: brain, heart, lung, stomach, liver, thymus, kidney, intestine, lymph nodes, muscle, bones, etc.
- Fungi and Bacteria: yeast, E. coli, etc.
- Food and Medicine: various food, pills, etc.
- Volatile Samples: coal, oil shale, wax products, etc.
- Plastics and Polymers: PE, PS, textiles, resins, etc.

#### ○ Nucleic Acid/Protein Extraction

Low-temperature grinding of samples can effectively inhibit nucleic acid degradation and preserve protein activity.

#### ○ Analysis of Active Pharmaceutical Ingredients

There are often significant differences between isomers of drug active ingredients. Low-temperature grinding can prevent molecular degradation due to pressure and heat.

#### ○ Reducing Sample Volatility

Low-temperature grinding can significantly reduce sample volatility and more completely retain the content of sample components.

#### ○ Grinding Tough/Hard Samples

For hard-to-grind samples such as tough plastics, high-strength plastics, and resins, low-temperature grinding can greatly improve grinding efficiency and effectiveness.

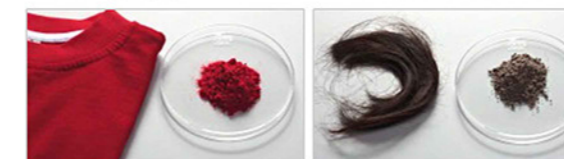
### Grinding Contrast:

The excellent grinding effect of LAWSON grinding instrument



▲ Before and after bone grinding with LAWSON grinding apparatus

▲ Mobile phone keyboard, grinding effect under freeze embrittlement condition



▲ Lapping analysis of fiber sample with KBr particles

▲ Before and after grinding of hair samples using LAWSON grinding apparatus

• LAWSON: More samples grinding contrast effect, welcome to contact us.

### Operation Process

LAWSON: Easy to complete sample processing, as long as 4 steps:



1. Put the sample and grinding ball into the centrifuge tube or grinding tank.

2. The centrifuge tube or grinding tank is put into the adapter;



3. Install the adapter into the LAWSON grinding machine, set the operating parameters, start the device;

4. At the end of the operation, the sample was centrifuged for 1min, and the nucleic acid or protein was extracted and purified by adding reagents.

• LAWSON are the corresponding supporting products to choose from.



## MULTI-SAMPLE TISSUE GRINDER

### Technical I Parameters

Model	DHTISSUE-48
Application Fields	Organic grinding, homogenization, cell disruption, tissue lysis, material dispersion, preparation, sample mixing, and oscillation
Processing Capacity	Maximum processing capacity of 24 samples at the same time within 15 seconds, including 12-well and 24-well liquid nitrogen cooling adapters
Compatible Sample Tubes	48*(0.2-0.5ml) /48*2ml /12*(7-15)ml /2*25ml /2*50ml, various specifications of grinding tubes can be customized
Display mode	LCD screen display, touch screen display (upgradeable)
Anti-vibration principle	Innovative anti-vibration principle of Schleifen-1 from Germany and a three-dimensional motion of up and down, left and right shaking - innovative grinding ball motion mode to ensure maximum sample processing and instantaneous crushing effect
Maximum feeding size	No requirement, adjustable according to the adapter
Final particle size	~5 $\mu$ m
grinder platforms	(Acceptable number of grinding jars) >2
Fastening device	With automatic centering

### Technical I Parameters

Homogenization speed	0~70 Hz/second, working time: 0 seconds~99 minutes, user can set it by themselves
Grinding ball diameter	0.02~30mm
Grinding ball material	Alloy steel, chrome steel, zirconia, tungsten carbide, quartz sand
Acceleration	Reaches maximum speed within 2 seconds
Deceleration	Reaches minimum speed within 2 seconds
Noise level	<55db
Grinding mode	Wet grinding, dry grinding, and cryogenic grinding are all possible
Temperature control can be additionally equipped with	The ability to upgrade to ultra-low temperature liquid nitrogen cooling or air cooling
Adapter material	Polytetrafluoroethylene (PTFE), alloy steel
Safety instructions	With an automatic centering locking device and safety lock during operation, full protection throughout
Grinding kit material	Hardened steel, polytetrafluoroethylene (PTFE), zirconia
Dimensions	41*34*55cm
Weight	28 Kg