

# **HOMOGENIZER**

## **(Refrigerated Bead Beater)**

### **ALS-INS034**



## DESCRIPTION

The ALS-INS034 Homogenizer (Refrigerated Bead Beater) is a high-speed, low-temperature tissue grinding instrument designed to operate in environments as cold as -50°C. Utilizing a vertical vibration system, it ensures efficient sample processing by causing grinding beads and frozen samples to collide, creating shear and impact forces for thorough tissue homogenization. It is ideal for research institutions, universities, agricultural colleges, biomedical labs, and food testing facilities that require rapid, one-time processing of multiple samples

## FEATURES

- **Versatile Grinding Options:** Suitable for dry grinding, wet grinding and homogenization of samples.
- **High Throughput:** Capable of processing up to 192 samples simultaneously, ensuring quick and efficient sample preparation.
- **Adaptable Sample Sizes:** Compatible with a range of adapters (0.5ml, 2ml, 5ml, 10ml, 15ml, 30ml and 50ml) for various sample volumes.
- **Wide Sample Compatibility:** Perfect for grinding and crushing a wide range of plant tissues—including roots, stems, leaves, flowers, fruits, and seeds—as well as diverse animal tissues such as brain, heart, liver, kidneys, muscles, and bones etc. From delicate thymus and lymph nodes to robust plant samples, it handles it all with ease. Ideal for precise analysis and detection of food and drug ingredients, making it an essential tool for diverse laboratory applications.
- **Cross-Contamination Prevention:** Enclosed disposable centrifugal tubes ensure sample integrity by preventing cross-contamination.
- **Low-temperature freezing table:** Designed to support various low-temperature experiments, including sample storage, electrophoresis, and membrane transfer, ensuring precise and reliable results.
- **consistent repeatability:** The experiment ensures consistent repeatability, delivering the same precise grinding results each time by simply setting the same grinding frequency and duration.
- **Temperature Control:** Maintains a temperature range from -50°C to room temperature, with precision control of  $\pm 1^\circ\text{C}$ .
- **Swift refrigeration:** Quickly lowers the temperature below 0°C after startup, ensuring effective sample preservation and minimizing degradation. This enables consistent lowtemperature grinding, reducing the breakdown of proteins and RNA.
- **Emergency stop button:** Instantly halts the grinding process at any time, ensuring quick and safe operation.
- **Electromagnetic safety lock:** Includes an electromagnetic safety lock that ensures the lid remains secure during operation, providing protection throughout the grinding process.
- **Optimized Grinding:** The vertical shaking system moves back and forth at high speed for optimized grinding. Preset programs: Pre-programmed with 10 sets of common tissue grinding parameters, ensuring optimal grinding conditions for various specimens.

TECHNICAL SPECIFICATION	
Model	ALS-INS034BBH
Frequency	20-25 KHz, Automatic tracking
Display	LCD
Power	650W
Power Range	1-99%
Display function	Temperature, Power, Time etc.
Timer (Selectable)	Yes
Overload Protection	Yes
User password Protection	Available
Input method	Touch Screen control
Std.Tip (Φ)	6 mm (1/4")
Tip options(Φ)	2,3,10,12,15,18,20 and 25 mm
Processing Volume	0.5-500 ml
Duty Ratio	0.1-99.9%
Date memory	20 groups
Temperature Alarm	0.1-99°C (Prevent sample overheating)
Alarm	Time, temperature, overload
Power Supply	220V 50Hz/60Hz
Dimensions LxWxH) (mm)	490x370x280
Weight	10kg + 5kg (Sound Proof Enclosure)

TITANIUM ALLOY TIPS/PROBE/HORN SIZE REFERENCE VALUE				
Tip Model	Tip diameter	Frequency (KHZ)	Power Range	Crushing Capacity
Φ2	1/12"	20-25KHz	120-250W	0.5-5ml
Φ3	1/8"	20-25KHz	30-400W	3-10ml
Φ6	1/4"	20-25KHz	60-650W	10-100ml
Φ10	5/12"	20-25KHz/19.5-20.5KHz	100-950W	100-200ml
Φ12	1/2"	20-25KHz	100-950W	100-200ml
Φ15	5/8"	20-25KHz/19.5-20.5KHz	200-950W	200-600ml
Φ18	3/4"	20-25KHz	200-950W	200-500ml
Φ20	3/4"	19.5-20.5KHz	400-1200W	500-1000ml
Φ25	1"	19.5-20.5KHz	800-1800W	500-1200ml