



Homogenizer



Safe, Efficient, Homogeneous

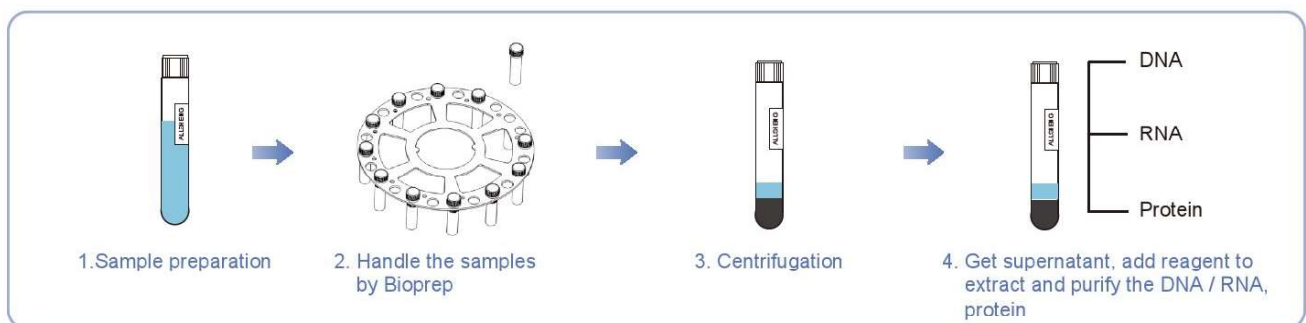
PrepCB Series Homogenizer

PrepCB series is a fast and effective homogenizer with function of grinding, lysis and homogenizing by three-dimensional vibration and the coordination of the grinding beads (glass beads, silica beads, metal beads etc.). Effective to homogenize the animal or plant tissue, bacteria, fungus and so on. It also has extraordinary power for processing hard lysis samples such as spore, hair, bones, feces, soil etc. With the use of relevant kits, it can quickly, efficiently and steadily extract DNA / RNA / protein from samples in bulk, and preserve the integrity of biomacromolecule.

Features

- Available to lysis most of biological samples and preserve the integrity of biomolecule (DNA, RNA and protein) and pharmaceutical molecule
- Process 24 samples at the same time within 35 seconds
- Choose different programs and grinding beads according to different samples
- Accurate setting of lysis time and speed, total 50 programs can be saved. Reduce the inter-batch and intra-batch differences
- Disposable tubes ensure no cross-contamination or sample degradation
- Equip with open lid protection and emergency braking function. Device will be stop running automatically when the lid open or program error for the safety operation
- Multiple material and diameter beads for the choice of different type of samples

Operation Procedure



Note: Because of the heat produced during the grinding process, so suggest to keep the tube with sample in the low temperature (-40°C) about 12 hours before grinding work for get a better effect.

Consumable Comparison



Holder for PrepCB-6



Tray of 6x2.0 mL tubes



Tray of 2x5.0 mL tubes



24x2.0 mL Rotor



12x5.0 mL Rotor

Rotor for PrepCB-24 (R)



PrepCB-6 Homogenizer

PrepCB-6 is an individual type homogenizer, gathered the up-to-date percussion force technology and rotational speed control technology. It has extraordinary power for animal and plant tissues, bacteria, fungi and other processing hard lysis samples, such as spores, hair, bones, feces, soil, etc. Rotor for 6×2.0 mL grinding tube and 2×5.0 mL grinding tube can be chosen.

- No need to process the sample by liquid nitrogen, just put the grinding tube with sample into device, it will be ground automatically
- Process 6 x 2 mL samples or 2 x 5 mL samples simultaneously
- Disposable tubes ensure no cross-contamination

PrepCB PrepCB



PrepCB-24 Homogenizer

PrepCB-24 is a fast and high-throughput homogenizer with function of grinding, lysis and homogenizing by three-dimensional vibration and the coordination of the grinding beads (glass beads, silica beads, metal beads etc.). With the use of relevant kits, it can quickly, efficiently and steadily extract DNA / RNA / protein from samples in bulk, and preserve the integrity of biomolecule.

- No need to process the sample by liquid nitrogen, just put the grinding tube with sample into device, it will be ground automatically
- Process 24 x 2 mL samples or 12 x 5 mL samples simultaneously
- Disposable tubes ensure no cross-contamination



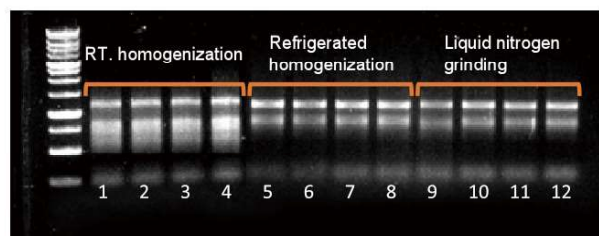
PrepCB-24R Refrigerated Homogenizer

PrepCB-24R refrigerated homogenizer has internal compressor which is upgraded on the basis of Bioprep-24 homogenizer. The sample will change to crisper which can be homogenized easily and efficiently at low temperatures. Thus, PrepCB-24R refrigerated homogenizer plays an important role in the extraction progress of RNA, DNA and the protein activity determination.

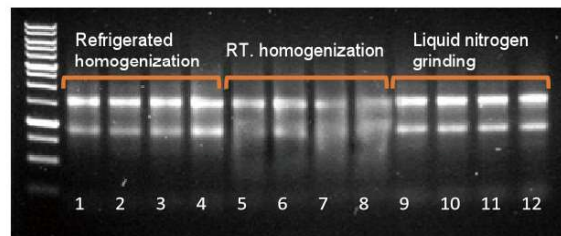
- Sealed grinding chamber, the lowest temperature reach to -10 °C
- Builtin eddy fan to let the temperature difference ≤ 2 °C in the grinding chamber, and make the consistent homogenization effect
- Refrigeration by fluorine-free compressors, non-pollution
- Available for both dry grinding and wet grinding function

Comparison of Homogenization and Extraction with Different Instruments

RNA Extraction Effect from Plant Tissues



RNA Extraction Effect from Animal Tissues



Nano-500 to Measure RNA Concentration and Purity

Material	Plant leaves (<i>Pachira macrocarpa</i>)											
No.	1	2	3	4	5	6	7	8	9	10	11	12
Mass (mg)	51	50	52	52	51	50	50	49	50	57	56	56
Sample pre-processing	Refrigerated homogenization				RT. homogenization				Liquid nitrogen grinding			
Nucleic acid extraction	Trizol precipitation method											
RNA (ng/ μ L)	475	465	394	408	491	486	469	473	272	302	307	263
A260/280	2.05	2.05	2.03	2.03	2.06	2.03	2.07	2.07	2.05	2.06	2.05	2.04
A260/A230	1.87	1.83	1.82	1.86	1.93	1.90	2.07	1.96	2.12	2.13	2.04	1.93
Volume	80 μ L											

Material	Mouse liver											
No.	1	2	3	4	5	6	7	8	9	10	11	12
Mass (mg)	59	62	60	63	61	62	63	60	59	61	58	62
Sample pre-processing	Refrigerated homogenization				RT. homogenization				Liquid nitrogen grinding			
Nucleic acid extraction	Trizol precipitation method											
RNA (ng/ μ L)	1252	1828	1735	2057	1728	1643	1649	1600	801	843	832	856
A260/280	2.02	2.05	2.06	2.06	2.05	2.01	2.04	2.02	1.98	1.92	1.95	1.97
A260/A230	2.30	2.05	2.30	2.27	2.29	2.28	2.28	2.28	2.20	2.24	2.18	2.19
Volume	80 μ L											

Note: By comparing the measured RNA concentration and electropherogram, it can be analyzed that the RNA extracted by the normal temperature homogenizer will be discrete, while the RNA extracted by refrigerated homogenization and liquid nitrogen grinding is complete and not discrete, but from the concentration and total amount, refrigerated homogenization extraction is higher than liquid nitrogen grinding. After many tests on different samples, we found that the effect of refrigerated homogenizer for RNA extraction is equivalent to that of liquid nitrogen grinding, but for samples with soft materials, the effect of refrigerated homogenization is slightly worse than that of liquid nitrogen grinding, which is mainly because the liquid nitrogen immersion makes the sample brittle and ground more fully.

Specification

	PrepCB-6	PrepCB-24	PrepCB-24R
Temperature range	----	----	-10 °C~40 °C
From RT. to 0 °C	----	----	<30 min
Temperature uniformity	----	----	±2 °C
Display	LCD	OLED	OLED
Speed range (m/s)	4.00 m/s~7.00 m/s, increment 0.05 m/s	4.00 m/s~7.00 m/s, increment 0.05 m/s	4.00 m/s~7.00 m/s, increment 0.05 m/s
Speed range (rpm)	2500 rpm -- 4350 rpm, increment 10 rpm	2430 rpm -- 4260 rpm, increment 10 rpm	2430 rpm -- 4260 rpm, increment 10 rpm
Cycle duration	1 s -- 90 s, increment 1 s	1 s -- 90 s, increment 1 s	1 s -- 90 s, increment 1 s
Pause time	1 s -- 90 s, increment 1 s	1 s -- 120 s, increment 1 s	1 s -- 120 s, increment 1 s
Cycle	10	10	10
Stored program	1	50	50
Sample volume	6×2 mL/1.5 mL or 2×5 mL	24×2 mL/1.5 mL or 12×5 mL	24×2 mL/1.5 mL or 12×5 mL
Acceleration time	<2 s	<4 s	<4 s
Deceleration time	<2 s	<4 s	<4 s
Noise	<65 db	<70 db	<70 db
Wearing part	No	No	No
Rotor	Rotor for 2 mL / 5 mL (standard)	Rotor for 2 mLx24 (standard)	Rotor for 5 mLx12 (optional)
Power	150 W	500 W	1000 W
Dimension (W×D×H)	354 mm×218 mm×206 mm	280 mm×360 mm×385 mm	330 mm×520 mm×400 mm
Weight (kg)	8.9 kg	25.0 kg	40.0 kg
Power supply	AC100~240 V, 50/60 Hz	AC100~240 V, 50/60 Hz	AC100/AC240 V, 50/60 Hz

Ordering Information

Code	Description	Code	Description
CB-13010-00	PrepCB-24 homogenizer	CB-13011-03	2.0 mL tubes
CB-13020-00	PrepCB-6 homogenizer	CB-13011-04	5.0 mL tubes
CB-13011-01	Rotor for 24×2.0 mL	CB-13011-05	Φ1.4 mm silica beads
CB-13011-02	Rotor for 6×5.0 mL	CB-13011-06	Φ2.8 mm silica beads
CB-13011-30	Rotor for 12×5.0 mL	CB-13011-07	Φ3 mm metal beads
CB-13021-01	Holder for tubes (Bioprep-6)	CB-13011-08	Φ6 mm metal beads
CB-13021-02	Adapter for 3×2 mL (Bioprep-6)	CB-13011-09	Φ0.2 mm glass beads
CB-13021-03	Adapter for 5 mL (Bioprep-6)	CB-13011-10	Φ0.5 mm glass beads
CB-13021-04	DC24 V, 6 A adapter (Bioprep-6)		