

**ProH Series Homogenizers**

**ProH-6000R**



**The ProH-6000R** refrigerated homogenizer / tissue shredder system uses the basic features of the ProH-6000 system and has a built-in powerful compressor. While low temperatures can prevent this, partial active ingredients are adversely affected when conventional methods are used to homogenize most soft or sensitive samples at room temperature.

Therefore, the cooling technique has been developed as an effective method to recover the entire sample, and in addition, the sample will be easier and more effectively homogenized.

As a result, the ProH-6000R cooled homogenizer plays an important role in the extraction progression of DNA and the determination of protein activity

**ProH-6000**



**The ProH-6000** Homogenization system homogenizes hard samples in a wide range, fast, effective and reproducible, including tissues and cells. It is also highly effective in impact-resistant specimens such as bone. ProH-6000 allows the release of molecules such as DNA, RNA, Protein, Enzyme, etc. from the most demanding samples with the special churning system and beaded tubes of different sizes.

**The ProH-1000** is built on innovative design and designed for personal use. It is the cheapest and most cost-effective product for small spaces with low volume. With a wide range of performance from 4 to 7 m / s, we provide a fast and successful solution.

Compatible with various tubes up to 6 x 0.5 / 1.5 / 2.0 or 2 x 5ml.

Patent design for damping institutions and ultra-quiet operation even at high speeds.

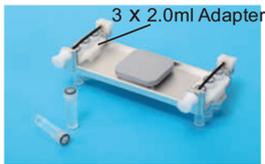
**ProH-1000**



## ProH Series Homogenizers

### How to use beads

1.4mm & 2.8mm Ceramic Beads	3mm & 6mm Metal Beads	1mm & 3mm Glass Beads
<p>Ideal for soft animal, plant or human tissues:</p> <ul style="list-style-type: none"> <li>• brain</li> <li>• liver</li> <li>• skin</li> <li>• leaves</li> <li>• gonad</li> <li>• muscle, etc.</li> </ul>	<p>Ideal for any hard tissue types:</p> <ul style="list-style-type: none"> <li>• hair</li> <li>• teeth</li> <li>• bones</li> <li>• seeds</li> <li>• corn</li> <li>• rice</li> <li>• nail, etc</li> </ul>	<p>Ideal for microorganisms</p> <p>Optimal for:</p> <ul style="list-style-type: none"> <li>• spores</li> <li>• fungi</li> <li>• yeast</li> <li>• e-coli, etc.</li> </ul>
<p>We will offer the Lysing Kits which are available with Plastic or Stainless Steel pre-filled sample tubes in future</p>		



Holder and 2-3 x 2.0ml Adapter



Holder and 2-5.0ml Adapter



**ProH-1000**  
Holder for 6 x 2.0ml and for 2 x 5.0ml



24 x 2.0ml rotor



12 x 5.0ml rotor

**ProH-6000 / ProH/6000R**  
Rotor for 24 x 2.0ml / Rotor for 12 x 5.0ml

### Applications Areas;

The ProH Series is designed to eliminate the need for any researchers who need Genomic DNA, total RNA, or recombinant protein as starting material.

1. Northern blot analysis, qPCR and microarrays
2. Optimization of recombinant protein expression
3. Library synthesis and Southern stains
4. RT-PCR and differential indicator
5. Pathogen screening of soil or water
6. Environmental research
7. Food safety verification

### Typical Examples;

1. Bone, Brain, Tumors
2. Gram bacteria + or -
3. Yeast, Mushroom, Sports
4. Seeds, Roots
5. Feces, Swabs
6. Soil, Sediments



\* Grinding tubes are must be high thoughness and low temperature resistance.

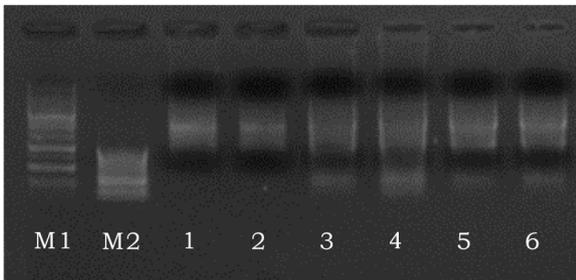
## ProH Series Homogenizers

### ProH-6000R

1. Lowest temperature: -10°C
2. Internal turbo fan located in homogenized space, keeping temperature stability at 2°C.
3. Environment friendly compressor.
4. When extracting samples such as RNA, Protein etc., the cooling function effectively prevents the reduction of sample activity from high temperature.
5. Has dry and wet homogenization function.

### Extraction results

#### ■ Animal tissue extraction result

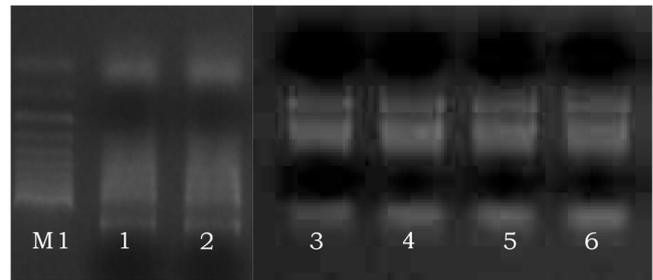


Remark: M1 was 10kb marker; M2 was 1000kb marker; Line 1 and 2 were room temperature homogenization; Line 3 and 4 were refrigerated homogenization which were homogenized directly when the temperature cooled to 0°C; Line 5 and 6 were refrigerated homogenization which cooled to 0°C and kept 5 min before homogenization.

No.	260nm	280nm	260/280	C:ng/ul
1	3.872	1.963	1.972	154.874
2	4.219	2.073	2.035	168.772
3	16.65	8.177	2.036	665.989
4	20.379	10.15	2.008	815.151
5	17.433	8.741	1.994	697.308
6	13.726	6.792	2.021	549.059

According to the RNA concentration and electrophoretogram above, the results which were homogenized directly when the temperature cooled to 0°C by the refrigerated homogenizer is much better than in room temperature

#### ■ Plant sample extraction result



Remark: M1 was 1000bp marker; Line 1 was vegetable leaf which was treated by liquid nitrogen before homogenization; Line 2 was vegetable leaf treated by refrigerated homogenization; Line 3 was rice which was treated by liquid nitrogen before homogenization; Line 4 was rice treated by refrigerated homogenization; Line 5 was corn leaf which was treated by liquid nitrogen before homogenization; Line 6 was corn leaf treated by refrigerated homogenization.

No.	260nm	280nm	260/280	C:ng/ul
1. liquid-N2	26.371	16.177	1.63	1054.852
2. Bioprep-24R	20.668	12.285	1.68	826.79
3. liquid-N2	2.143	1.24	1.73	85.741
4. Bioprep-24R	2.014	1.1058	1.82	80.6227
5. liquid-N2	1.911	1.114	1.72	76.447
6. Bioprep-24R	1.898	1.045	1.82	75.9924

According to the RNA concentration and electrophoretogram above, the results which were homogenized by refrigerated homogenizer and treated by liquid nitrogen were similar, while for some soft samples, the results which treated by liquid nitrogen were better because of the sample became more crisp after the treatment by liquid nitrogen

## ProH Series Homogenizers

### General Features;

1. "3D Rotating High Speed Motion" for quick disruption of those fibrous tissues and resistant cells.
2. 50 Programmable memory settings and user optional condition settings for ProH-6000 and ProH-6000R
3. A wide range of rotation speed settings from 4.0 m/s to 7.0 m/s, increment 0.05 m/s.
4. Brushless motor realizing no brush particle generation and no brush replacement.
5. Easy to remove sample tube holder and easy to fix sample tubes with the turn of the central knob.
6. Easy to monitor the disruption process through the clear lid.
7. Simultaneously homogenization;
  - ProH-1000 6 x 2ml tubes or 2 x 5ml tubes
  - ProH-6000 24 x 2ml tubes or 12 x 5ml tubes
  - ProH-6000R 24 x 2ml tubes or 12 x 5ml tubes
8. Disposable tubes ensure no threat of cross-contamination.
9. ProH-1000, ProH-6000, and ProH6000R shake the tubes firmly and smoothly, usually in 35 seconds or less, providing an efficient, consistent, high-efficiency and high-quality homogenization.



### Technical Specifications;

Model	ProH-1000	ProH-6000	ProH-6000R
Temperature Range	N/A	N/A	-10° - 40°C
From RT to 0°C	N/A	N/A	<30min
Temperature Uniformity	N/A	N/A	±2°C
Cooling Method	N/A	N/A	Compressor Refrigeration
Speed Range (m/s)	4.00m/s - 7.00m/s Increment 0.05m/s	4.00m/s - 7.00m/s Increment 0.05m/s	4.00m/s - 7.00m/s Increment 0.05m/s
Speed Range (rpm)	2500rpm - 4350rpm Increment 10rpm	2430rpm - 4260rpm Increment 10rpm	2430rpm - 4260rpm Increment 10rpm
Display	LCD	OLED	OLED
Cycle Duration	1s - 90s, Increment 1s	1s - 90s, Increment 1s	1s - 90s, Increment 1s
Pause Time	1s - 90s, Increment 1s	1s - 90s, Increment 1s	1s - 90s, Increment 1s
Cycle Duration	10	10	10
Program Memory	1	50	50
Tube Types	6 x 1.5/2ml or 2 x 5ml	24 x 1.5/2ml or 12 x 5ml	24 x 1.5/2ml or 12 x 5ml
Acceleration Time	<2s	<4s	<4s
Noise	<65db	<70db	<70db
Wearing Part	No	No	No
Adapter Holder for	2ml / 5ml (Standard)	Rotor for 2ml x 24 (Standard) Rotor for 5ml x 12 (Optional)	Rotor for 2ml x 24 (Standard) Rotor for 5ml x 12 (Optional)
Power Supply	AC100/240V 50/60Hz	AC100/240V 50/60Hz	AC100/240V 50/60Hz
Power Consumption (W)	150	150	150
Dimensions (WxDxH)(mm)	354x218x206	280x360x385	300x500x360
Weight	8.9 Kg	25 Kg	40 Kg