

NeoSamplePrep-6 / 24 / 24R

#Cat: NB-12-0004

#Cat: NB-12-0004B

#Cat: NB-12-0004C

Product Introduction

NeoSamplePrep 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 spores, 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
- Multiple material and diameter beads for the choice of different type of samples
- Not only saving time and effort, but also smaller differences between batches

Safety

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



NeoSamplePrep-6



NeoSamplePrep-24



NeoSamplePrep-24R



Method Comparison

	Traditional method	Homogenizer
Sample preparation	<ol style="list-style-type: none"> 1. Liquid nitrogen grinding: the mortar needs to be replaced when processing different samples, and the operation is dangerous 2. Samples are grinded one by one, time-consuming and labor-intensive 3. Cross-contamination is easy to occur during grinding 	<ol style="list-style-type: none"> 1. No liquid nitrogen treatment is required, just put the sample cut into the grinding tube, and the machine automatically grinds 2. Processing multiple samples at the same time makes the operation easier 3. Single sample and single operation to avoid cross-contamination 4. After putting the sample into the grinding tube, it is recommended to keep the grinding tube at low temperature (below -40 °C) for 12 hours before taking it out for homogenization, so that the homogenization effect will be better
Grinding effect	Operation difference and inconsistent grinding effect	Processing multiple samples at the same time, good homogeneity

01 Holder and Adapter

Holder for 6 x 2.0 ml and for 2 x 5.0 ml
For NeoSamplePrep-6



Tray of 2.0 mL tubes



Tray of 5.0 mL tubes



02 Rotor Adapter

Rotor for 24 x 2.0 ml / Rotor for 12 x 5.0 ml
for NeoSamplePrep-24(R)



03 Application

Any researcher who requires genomic DNA, total RNA or recombinant protein as a starting material will benefit from the unit system.

- Northern blot analysis, qPCR and microarrays
- Optimization of recombinant protein expression
- Library synthesis and Southern blots
- RT-PCR and differential display
- Pathogen screening of soil or water
- Environmental surveys
- Verification of food safety

Typical Samples

1. Bones, brains, tumors
2. Bacteria gram + or -
3. Yeast, fungi, spores
4. Seeds, roots
5. Feces, swabs
6. Soil, sediments

Grinding Tubes

1. NeoSampleprep-6: simultaneous processing 6*2 mL / 1.5 mL / 0.5 mL tubes or 2*5 mL tubes
2. NeoSampleprep-24 (R): simultaneous processing 24*2 mL / 1.5 mL tubes or 12*5 mL tubes
3. The grinding tubes must be with high toughness and low temperature resistance

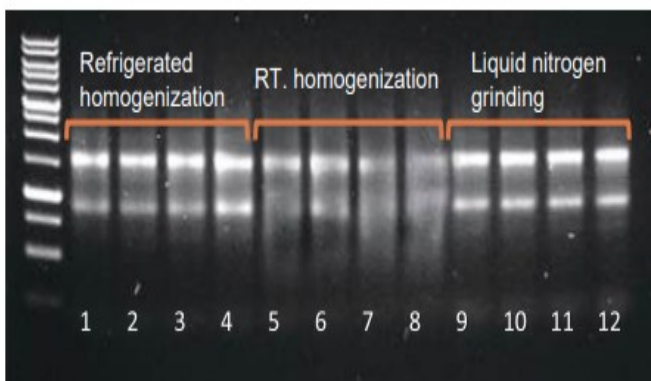
NeoSamplePrep-24R Product Introduction

NeoSamplePrep-24R refrigerated homogenizer has the internal compressor which was upgraded on the basis of normal NeoSamplePrep-24 homogenizer. Partial active ingredients will be negatively affected when use the conventional methods to homogenize most of the soft or sensitive samples under room temperature, while the low temperature can prevent this situation. Therefore, the cooling technique is the key effective method to save the complete sample. In addition, the sample will change more crisp which can be homogenized easily and efficiently. Thus, NeoSamplePrep-24R refrigerated homogenizer plays an important role in the extraction progress of RNA, DNA and the protein activity determination.

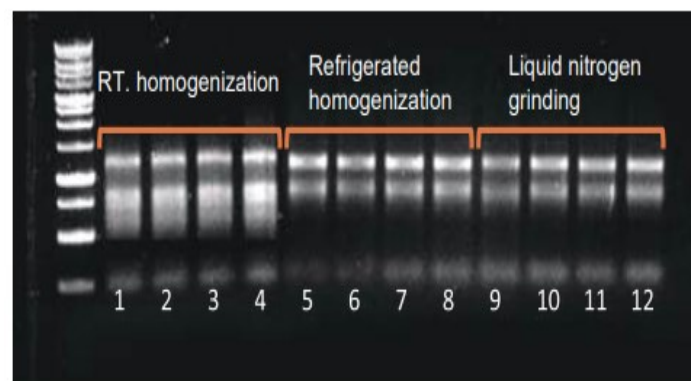
1. The lowest temperature: -10 °C
2. Internal turbo fan in the homogenized cavity can keep the temperature uniformity within 2 °C
3. Environment friendly for compressor
4. The refrigerated function effectively prevents the reduction of sample activity which caused by the high temperature when extracting the RNA, Protein etc
5. Has the dry homogenization and wet homogenization function

NeoSamplePrep-24 Extraction Effect

Extraction Effect from Animal tissues



Extraction Effect from Plant Tissues



RNA Extraction Effect from Animal Tissues

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/μl)	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	80μl											

RNA Extraction Effect from Plant Tissues

Material	Plant leaves (Pachira macrocarpa)											
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/μl)	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	80μl											

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

Model	NeoSamplePrep-6	NeoSamplePrep-24	NeoSamplePrep-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 1s	1 s -- 120 s, increment 1 s
Cycle	10	10	10
Stored program	1	50	50
Sample volume	6×2 mL / 1.5 mL, 2×5 mL	24×2 mL / 1.5 mL, 12×5 mL	24×2 mL / 1.5 mL, 12×5 mL
Acceleration/ Deceleration time	< 2s	< 4s	< 4s
Noise	< 65 db	< 70 db	< 70 db
Wearing part	No	No	No
Rotor	Rotor for 2mL/5 mL (standard)	Rotor for 2 mL (standard), rotor for 5 mL (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 kg	40.0 kg
Power supply	AC 100~240 V, 50 / 60 Hz	AC 100~240 V, 50 / 60 Hz	AC 100 / AC 240 V, 50 / 60 Hz

Ordering Information

No.	Code	Description	No.	Code	Description
01	NB-12-0004	NeoSamplePrep24	11	NB-12-0004-12	Grinding tube 5ml
02	NB-12-0004B	NeoSamplePrep6	12	NB-12-0004-13	Grind tube F1.4mm Silica beads
03	NB-12-0004C	NeoSamplePrep-24R homogenizer (w/cooling)	13	NB-12-0004-14	Grind tube F2.8mm Silica bead
04	NB-12-0004-02	Rotor for 24x2.0ml for NeoSamplePrep24	14	NB-12-0004-15	Grind tube F3mm Metal beads
05	NB-12-0004-16	Rotor for 12x5.0ml for NeoSamplePrep24	15	NB-12-0004-08	Grind tube F6mm Metal beads
06	NB-12-0004-17	Holder for tubes for NeoSamplePrep6	16	NB-12-0004-09	Grind tube F0.2mm glass beads
07	NB-12-0004-18	Adapter 3x2ml for NeoSamplePrep6	17	NB-12-0004-10	Grind tube F0.5mm Glass beads
08	NB-12-0004-01	Adapter for 5ml for NeoSamplePrep6	18	NB-12-0004-04	Grind tube F3mm Glass beads
09	NB-12-0004-20	DC24V, 6A Adapter for NeoSamplePrep6h			
10	NB-12-0004-11	Grinding tube 2ml	19	NB-12-0004-05	Grind tube F1.4mm Glass bead