

Nano Premixer PR-1

The Next Generation of Nano Dispersion

Excellent Dispersing Performance

The Nano Premixer uniformly disperses nanomaterials in an enclosed container. The container rotates around its axis and is treated by ultrasonic waves from the sides and the bottom to achieve a uniform dispersion.

**Adjustable RPM**

The rotation of the container generates circulation by convection to achieve a uniform dispersion.

Dual-Sonic System

The container is treated by ultrasonic waves from the sides and the bottom of the bath so that the nanomaterial is deagglomerated and dispersed.

Small Batch Processing

Using a vial, the maximum volume of material is 5 ml/50 mg

Minimum Cross Contamination

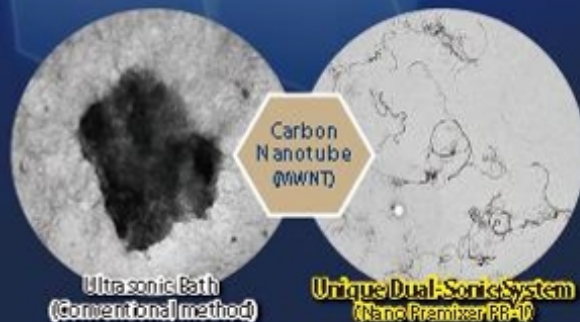
Minimum cross contamination is achieved since the material is dispersed in an enclosed container.

Cooling System

The ultra sonic bath is cooled to prevent overheating of the material.

Temperature Control

To keep the material properties, dispersion process is completed within the set temperature limits.



A New Approach to Uniformly Disperse Nanomaterials

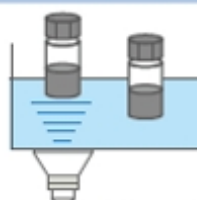
Unique Dual-Sonic System
(Nano Premixer PR-1)

Patented

Since the distance between the water level and the ultrasonic transducer is fixed, and rotation of a vial generates stable circulation by convection, high reproducibility and dispersibility can be achieved.

Output
140 WVial
Max. 5 mlSUS Container
Max. 200 ml

※Different vials can be set. Please ask for more information.

Ultrasonic Bath System
(Conventional method)

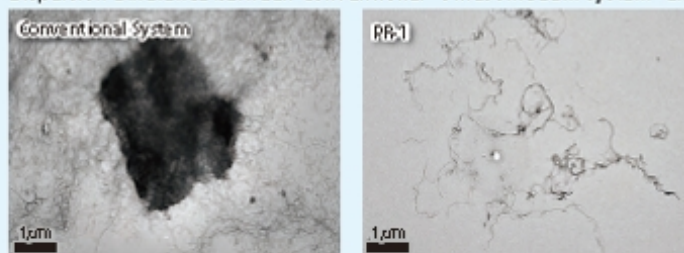
Reproducibility and dispersibility is poor since the distance between the water level and the ultrasonic transducer varies.

Application

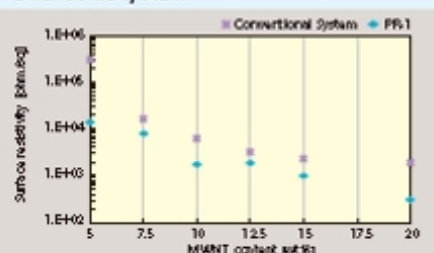
■ Multi-Walled Carbon Nanotube (MWCNT)

Uniform dispersion of agglomerated nano fiber is achieved without shearing.

Dispersion Difference between Conventional "Ultrasonic Bath System" and New "Dual-Sonic System"



Agglomeration remains when the sample is treated in a conventional ultrasonic bath. PR-1 can deagglomerate and uniformly disperse the sample.

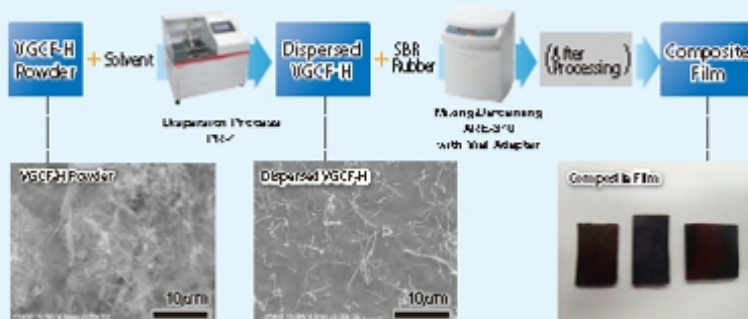


Compared to a conventional ultrasonic bath machine, lower resistivity (higher dispersion effect) can be observed with PR-1.

■ Vapor Grown Carbon Fiber (VGCF-H)

Without changing the container, other materials can be added to the same dispersed material and mixed/deformed with ARE310/ARE-250CE.

Example of VGCF-H Dispersion and SBR Composite Film



Specifications

Ultrasonic wave Transducer output	Max 70W x 2 transducers (side and bottom)
Ultrasonic wave frequency	40kHz
Rotation speed	80 - 600 rpm
Timer setting range	0 hour 00min00 sec to 2 hours00min00 sec (Max 2 hours/run / Setting in the unit of 1 sec)
Maximum processing volume	- 6 ml Vial 5 ml (50 mg) - 200 ml SUS Container 200 ml Different vials can be set. Please ask for more information.
Standard container	Vial (capacity 5 ml)
External dimensions	400 mm(H) x 450 mm(W) x 380 mm(D)
UNIT Weight	Approx. 25 kg
Power Supply	1φ AC85 - 265 V (47Hz - 63 Hz) Continuous input

*Product appearance/specifications may change without notice

THINKY CORPORATION

"NIPPON MONOZUKURI" INNOVATOR

Headquarters: 2-16-25 Sakurada, Chiyoda-ku, Tokyo 100-0021
Phone: +81-3-5207-2781 Fax: +81-3-5209-3281

THINKY USA Inc.: 28151 Verdugo Drive, Suite 112 Laguna Hills, CA 92653, USA

THINKY CHINA: East building HuiMin Kefunuo Mansion, Shennan road,
Qianhai road, Nanshan district, Shenzhen

<http://www.thinkyusa.com/>

Email: info@thinky-usa.com

Sales agent