

# **ULTRASONIC PROBE SONICATOR**

# **Specially For Laboratories**





STAGE-1



STAGE-3



STAGE-2

ULTRAAUTOSONIC are Manufacturers, Suppliers, and Exporters of Probe Sonicator. We designed the Probe Sonicator according to applications like Cell Disruption, the Chemical Industry, the Agriculture Industry, the Cosmetic Industry, the Distillery, Emulsification, Extraction, Oil, Food & Beverages, Paint & Coating Industry, and the Pharmacy Industry.

Ultra Autosonic introduced the different models of Probe Sonicator. Probe Sonicator is also known as a Sonication, Ultrasonic processor, Ultrasonic Sonicator, Sonifier, Cell Disruptor, Ultrasonic emulsifier or Ultrasonic homogenizer. Sonication is commonly used in nanotechnology for evenly dispersing nanoparticles in liquid. Probesonicator breaks up aggregates of micron-sized colloidal particles. Sonication has numerous effects, both chemical and physical.

A Sonicator system comprises of 3 main components: generator, convertor and horn (probe). The sonication process uses ultrasonic sound waves. During the process, there is a production of thousands of microscopic vacuum bubbles in the solution due to applied pressure.

This results in the disruption of the molecular interactions between the molecules of water. As there is a reduction in the molecular interactions, the particles start to separate and allow the mixing process to take place. There is a release of energy from the sound waves that result in friction in the solution.

#### **SPECIFICATION**

Frequency (Khz)	20/30/40	20/30/40
Power (Watt)	125/150/250	500/750
Probe / Sonotrode (mm)	φ3, φ6,φ13 mm	φ19, φ25 mm
Actual Weight	Approx. 13 Kg	Approx. 22 Kg
Actual Size (L X W X H)	Approx. (409 x 262 x 262) mm	Approx. (484 x 458 x 238) mm
Packaging Type and Size	Corrugated Box and Approx. Size (507 x 360 x 360) mm	Corrugated Box & Approx. Size (581 x 556 x 336) mm

Operational Rquirement		
Input Power Supply	AC 230V 50/60Hz, 16Amp	
CVT / Stabilizers	If the voltage is unstable then use CVT / Stabilizer to avoid damage	

### **FEATURES**

- 1. Large LCD screen Display, friendly human-machine interface.
- 2. Maximum 98 Program of experimental data can be set and stored, safe and convenient.
- 3. Efficient and durable titanium alloy probe, reliable and accurate.

- 4. The program has over-temperature/delay/fault protection settings and an alarm system
- 5. They offer precise control over processing parameters such as amplitude, sonication time, and duty cycle
- 6. Probe Sonicator model has Auto frequency chasing
- 7. Variable power output in four stage

#### **ADVANTAGES**

- 1. Probe sonicators provide efficient sample disruption and homogenization through the application of ultrasonic energy. 2. This allows researchers to optimize conditions for specific samples and applications.
- 3. Probe sonicators are available in various sizes, from bench-top models for small-scale research to industrial-scale units for large-scale production processes. This scalability makes them suitable for both laboratory and industrial applications.
- 4. Unlike some mechanical homogenization methods, probe sonicators do not require sample contact with grinding media, reducing the risk of contamination. This is particularly important for sensitive samples or applications where purity is critical.
- 5. Probe sonication is a non-thermal process, which makes it suitable for temperature-sensitive samples, preserving their integrity and bioactivity.
- 6. Modern probe sonicators are often equipped with user-friendly interfaces and intuitive controls, making them easy to operate even for those without extensive technical expertise.
- 7. Sonication can achieve homogenization and particle size reduction rapidly, often within minutes, compared to other methods which may take hours or require multiple steps.
- 8. Probe sonicators provide consistent and uniform results across samples, ensuring reproducibility and reliability in experiments or production processes.

#### **APPLICATION**

- ♦ CELL DISRUPTION: Cell Lysis, DNA & RNA Extraction, Nanotechnology, Protin Extraction
- CHEMICALS & AGRICULTURE INDUSTRY: Adhesive, Silicon Oil, Fertilizer Industry, Pesticides Industry, Plant Growth Regulators
- ♦ COSMETIC INDUSTRY: Aloe vera Gel, Body Spray, Chocolate Wax, Face Cream, Face Wash, Fragrance Oil, Lip bam, Lipstick, Liquid Foundation, Lotion, Mascara, Nail Polish, Perfume, Soorten Wax, Sunscreen, Waxes, Serum, Body Mist
- ♦ COSMETIC INDUSTRY: Aloe vera Gel, Body Spray, Chocolate Wax, Face Cream, Face Wash, Fragrance Oil, Lip bam, Lipstick, Liquid Foundation, Lotion, Mascara, Nail Polish, Perfume, Soorten Wax, Sunscreen, Waxes, Serum, Body Mist
- ♦ **DISTILLERY**: Beer, Rum, Vodka, Wine, Whisky
- ◆ EMULSIFICATION /EXTRACTION/OIL : Almond Extract, Blackberry Extract, Rose Extract, Saffron Extract, Herbal Extract Olive Leaf Extract, Emulsification, Spices Emulsification, Icecream Emulsification, Palm Oil, Flower Oil, Mint Oil, Mustard Oil, Castor Oil, Cumin Oil, Turmeric Oil, Spices Oil, Engine Oil
- ♦ FOOD & BEVERAGES INDUSTRY : Coffee Powder, Dairy Products, Fruit Juices, Honey, Jam, Masala Soda, Mayonnaise, Peanut butter, Sauces, Soda, Sugar, Vegetable Juices, Whey Powder, Mushroom Extract, Mulberry Extract, Raspberry Extract
- ◆ PAINTS AND COATINGS INDUSTRY: Epoxy, Ink, Paint Colour, Pigments, Paint Thinne, Solvents, Additives, Extender
- ♦ PHARMACY: Drugs, Medicines, Omega 3, Vitamin D 3
- SAMPLE HOMOGENISATION: Liquid Syrup, Material Science, Pharmaceutical Liquid filling, Pharamceutical Paste Sample Homogenisation For Plasmid

#### A. Cell Disruption







**DNA & RNA Extraction** Nanotechnology





**Protin Extraction** 

### **B. Chemicals & Agriculture Industry**



**Adhesive** 





Fertilizer Industry Pesticides Industry



**Pesticides** 

**Plant Growth Regulators** 

### **C.** Cosmetic Industry



**Face Cream** 



Aloe vera Gel



**Body Mist** 



**Body Spray** 



Lip bam



Fragrance Oil



**Soorten Wax** 



**Chocolate Wax** 



Serum



**Perfume** 



Waxes



Lotion



Mascara



**Nail Polish** 



Sunscreen



Lipstick



**Liquid Foundation** 



**Face Wash** 

### **D.** Distillery



Whisky



Beer



Rum



Vodka



Wine

# **E. Emulsification / Extraction / Oil**



**Almond Extract** 



**Blackberry Extract** 



**Rose Extract** 



**Saffron Extract** 



**Herbal Extract** 



**Emulsion** 



**Emulsification** 



**Spices Emulsification** 



**Icecream Emulsification** 



**Castor Oil** 





**Cumin Oil** 



**Turmeric Oil** 



**Mint Oil** 



**Mustard Oil** 



**Spices Oil** 



**Engine Oil** 



**Olive Leaf Extract** 



Palm Oil



**Mushroom Extract** 

### F. Food & Beverages Industry



**Coffee Powder** 



**Dairy Products** 



**Fruit Juices** 



Honey



Masala Soda



Mayonnaise



**Mulberry Extract** 



**Raspberry Extract** 



Sauce



**Tomatto Sauce** 



Sauces



Sugar



Jam



**Peanut butter** 



Soda



**Vegetable Juices** 



**Whey Powder** 

# **G. Paints and Coatings Industry**



Ероху



**Paint Thinner** 





**Solvents** 



**Paint Colour** 



**Additives** 



**Pigments** 



**Extender** 

### **H. Pharmacy**







**Medicines** 



Omega 3

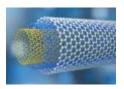


Vitamin D 3

### **I. Sample Homogenisation**



**Liquid Syrup** 



**Material Science** 



Pharmaceutical Liquid filling



Pharamceutical Paste



Sample Homogenisation For Plasmid



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# **ULTRAAUTOSONIC LLP**

 $World\ Class\ Ultrasonic\ Equipments\ Manufacturer\ \&\ Exporter$ 

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