MTEKSONIC™
ULTRASONIC INNOVATIONS

ULTRASONIC BIOLOGICAL PROCESSOR

- ❑ Platelet Sonicator
- ❑ Plasma Sonicator
- ❑ Dual Frequency Cellruptor Refrigerated
- ❑ Vail Drug Sonicator
- ❑ Ultrasonic Bath with Chiller

BASIC REASERCH

CLINICAL REASERCH

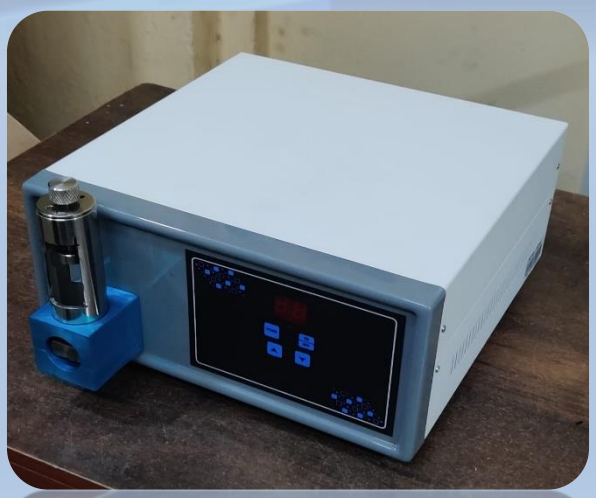
PHARMACEUTICALS

HEALTHACRE

MTEKSONIC

Ultrasonic Biological Sonicator

An **ultrasonic cell disruptor** (also known as a **Sonicator** or **ultrasonic homogenizer**) is a laboratory instrument that uses high-frequency sound waves to break open cells and other biological materials. The primary purpose is to release intracellular components, such as proteins, DNA, and RNA, for further analysis or processing.



Cell Lysis & Protein Extraction method by sonication

DIRECT SONICATION METHOD

- Direct sonication (inserting a probe directly in to sample vessel), is the most common way to process sample
- Energy is transmitted from the probe directly into the sample with intensity and the sample processing quickly
- The diameter of the probe's tip dictates the liquid volume that can be effectively process.
- Probe are offered with either replaceable or solid tips and are made from Titanium.

INDIRECT SONICATION METHOD

- Indirect sonication eliminates the need for a probe to come in contact with sample.
- This technique is often described as a high intensity ultrasonic bath or sonotrode.
- Indirect sonication is most effective for very small sales because foaming and sample loss and eliminated.
- To prevent cross contamination and the cup horn and microplate horn deliver indirect sonication

TECHNICAL SPECIFICATION

MTEKSONIC

FREQUENCY	20 KHZ OR 40 KHZ +/_3 KHz
PROBE CONSTRUCTION	TITANIUM WITH DIFFERENT SIZES
FABRICATION OUTER COVER	M.S. POWDER COATED WITH SOUND PROOF FOR LAB
TIMER	DIGITAL WITH PULSE MODE FUNCTION / HMI SYSTEM
ULTRASONIC GENERATOR	MOSPET OR IGBT BASE MICROCONTROLLER GENERATOR
GENERATOR FUTURES	SOFT START, AUTO TUNNING , VARIABLE POWER
COMPLIANCE STATUS	ISO 9001:2015
COMPLIANCE STATUS	CE : MACHINERY DIRECTIVE (MD) 2006/42/EC

APPLICATIONS :

- DNA shearing for Next-Generation Sequencing (5 -100 µl)
- Chromatin shearing (10µl – 2 ml)
- RNA shearing
- Protein extraction from tissues & Cell
- FFPE DNA extraction
- Protein aggregation studies
- Plasma sonication

MTEKSONIC
Classic Sterling , B/001, Plot No. 84, Sector -08
New Panvel (E), Navi Mumbai-410206,
Contact : 8779681396, 8850571344, 9594545503.
Email : info@mteksonic.com
Website : www.mteksonic.com

CERTIFIED ISO 9001:2015 COMPANY

CE

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