



MTEKSONIC



ULTRASONIC PROCESSOR

BASIC REASERCH

CLINICAL REASERCH

PHARMACEUTICALS

MAIN FUTURES

DIGITAL DISPLAY

ADJUSTABLE POWER

INTERNAL TIMER

DUTY CYCLE SETUP

AUTOMATIC FREQUENCY TRACKING



Ultrasonic Crusher Disrupter Disintegrator Probe Sonicator Ultrasonic Processor

The Ultrasonic Disruptor/Crusher which used for multifunctional and multipurpose instrument for ultrasonic processor by cavitation in liquid material. It can be used for a variety of plants and animals, bacteria, viruses, cells and the organization of broken, at the same time can be used to emulsify, separation, scattered, cracking, homogenization, extraction, defoaming, cleaning, nanometer material preparation, graphene dispersion and chemical reactions, etc.

Application

Ultrasonic Processor is widely used in the fields of biology, microbiology, physics, zoology, agronomy, pharmacy, petroleum, etc. It also can be used in Nanotechnology research such as the dispersion of nanomaterials (nanotubes, graphene, silica, etc.); sample homogenization and emulsification; accelerate dissolution, accelerate chemical reaction and other sample processing.

TECHNICAL SPECIFICATIONS

FREQUENCY	25 KHZ / ± 5 TOLARNCE
PROBE CONSTRUCTION	S.S. 316 L OR TITANIUM MATERIAL
FABRICATION OUTER COVER	M.S POWDER COATED OR BETTER FOR SOUND PROOF
TIMER	DIGITAL WITH PULSE MODE FUNCTION
ULTRASONIC GENERATOR	MOSPET BASE WITH OVER HEAT PROTECTION
GENERATOR FUTURES	SOFT START, FREQUENCY SWEEPING AND VARIABLE POWER
COMPLIANCE STATUS	MANUFACTURING ACCORDING ISO 13485:2016 FOR MEDICAL DEVICES
COMPLIANCE STATUS	CE : 93/42/EEC: MEDICAL DEVICES

Ultrasonic Dispersing and De- agglomeration:

The dispersing and de-agglomeration of solids into liquids is an important application of ultrasonic devices. Ultrasonic cavitation generates high shear forces that break particle agglomerates into single dispersed particles.

Ultrasonic Emulsifying:

Emulsions are dispersions of two or more immiscible liquids. Highly intensive ultrasound supplies the power needed to disperse a liquid phase (dispersed phase) in small droplets in a second phase (continuous phase). In the dispersing zone, imploding cavitation bubbles cause intensive shock waves in the surrounding liquid and result in the formation of liquid jets of high liquid velocity. At appropriate energy density levels, ultrasound can well achieve a mean droplet sizes below 1 micron (micro-emulsion).

A wide range of intermediate and consumer products, such as cosmetics and skin lotions, pharmaceutical ointments, varnishes, paints and lubricants and fuels are based wholly or in part of emulsions.

Ultrasonic Cell Disintegration:

This effect can be used for fermentation, digestion and other conversion processes of organic matter. After milling and grinding, ultra sonication makes more of the intra-cellular material e.g. starch as well as the cell wall debris available to the enzymes that convert starch into sugars. It does also increase the surface area exposed to the enzymes during liquefaction or scarification. This does typically increase the speed and yield of yeast fermentation and other conversion processes, e.g. to boost the ethanol production from biomass. Ultrasonic treatment can disintegrate fibrous, cellulosic material into fine particles and break the walls of the cell structure. This releases more of the intra-cellular material, such as starch or sugar into the liquid. In addition to that the cell wall material is being broken into small debris.

Ultrasonic Cell Extraction:

The extraction of enzymes and proteins stored in cells and subcellular particles is an effective application of high-intensity ultrasound, as the extraction of organic compounds contained within the body of plants and seeds by a solvent can be significantly improved. Ultrasound has a potential benefit in the extraction and isolation of novel potentially bioactive components, e.g. from non-utilized by-product streams formed in current processes.



Advantages :

Advantages of Ultrasonic Homogenizing is very efficient for the reduction of soft and hard particles. The homogenization is based on cavitation. Our Ultrasonic Cell disruptor/Crusher is password protection system, is a multifunctional and multipurpose instrument for ultrasonic processing by cavitation in liquid material. We provide the Sound-proof Chamber for standard configuration with perfect transportation.

TIP MODEL	FREQUENCY (KHZ)	POWER RANG	CAPACITY
3 MM / 1/8"	20 – 25 KHZ	30 - 400 W	3 – 10 ML
6 MM / 1/4"	20 – 25 KHZ	60 - 650 W	10 – 100 ML
10 MM / 5/12"	20 – 25 KHZ	100 - 950 W	100 – 200 ML
12 MM / 1/2"	20 – 25 KHZ	200 - 950 W	100 – 200 ML
15 MM / 5/8"	20 – 25 KHZ	200 - 950 W	200 – 500 ML
20 MM / 3/4"	20 – 25 KHZ	400 - 1200 W	500 – 1000 ML
25 MM / 1"	20 – 25 KHZ	800 - 1800 W	500 – 1200 ML



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