



TURN-KEY ULTRASONIC EXTRACTION SYSTEM

High-intensity ultrasound is extremely effective at extracting substances from plants, mushrooms and microorganisms. Rapid, high-yield extraction of alkaloids, cannabinoids, terpenes, polyphenols, recombinant proteins, and many other bioactives is possible. In many cases, harsh organic solvents can also be replaced with green alternatives, such as ethanol or water, while still providing superior results.

Overview:

Ultrasonic cell disruption (lysing) is the “gold standard” extraction method, owing to its simplicity and superior efficiency in extracting a wide variety of substances from plants, mushrooms and microorganisms, including cannabinoids, alkaloids, terpenes, algae oils, polyphenols, and recombinant proteins. It is conducted using an ultrasonic processor equipped with a high-amplitude Barbell Horn® immersed in a stationary or flowing biomass slurry prepared with a suitable solvent. High vibration amplitudes are required as this process relies on intense acoustic cavitation to generate extremely strong solvent micro-jets able to disrupt/penetrate cell membranes and bring out their contents.

The Industrial Sonomechanics® Difference:

- Patented Barbell Horns® that can generate very high ultrasonic amplitudes at any scale of operation (unlike conventional high-amplitude ultrasonic horns, which are restricted to the laboratory scale only).
- Processors that can be configured in both batch and flow-through modes, and handle anywhere from a few milliliters to many hundreds of liters of slurry at a time.
- Reactor chambers (flow cells) designed without narrow gaps or capillaries, eliminating clogging (common with some alternative approaches).
- Turn-key flow-through processor configurations with an incorporated in-line high-shear mixing pump for biomass slurries with a strong tendency to settle out of the solvent.
- Precise temperature control, making it possible to extract heat-sensitive substances.
- Patented fully sealed water-cooled transducers that can work with flammable organic solvents.
- Possibility to replace harsh organic solvents with milder, greener and more economical food-grade alternatives and still achieve superior results.

INDUSTRIAL FLOW-THROUGH SETUP



What is Included:

- Full equipment package based on a bench- or industrial-scale ultrasonic processor.
- Choice of a 25, 50, or 150 L storage tank with a magnetically driven mixer (smaller and larger tanks available upon request)
- 1-Hour remote setup call with an installation specialist.
- Warranty support through online portal.
- Remote or on-site setup and process optimization service (upon request).

Price:

- \$26,193 - \$107,989, depending on configuration and included accessories.

**Contact our Sales Team
to learn more or request a quote:**

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Visit: Sonomechanics.com