



Affordable. Reliable. Home Improvement.

**PORTABLE HAND-HELD
ULTRASONIC HOMOGENIZER**

MODEL:YHAU-200A

Technical Support and E-Warranty Certificate
www.vevor.com/support

VEVOR




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This is the original instruction, please read all manual instructions carefully before operating. VEVOR reserves a clear interpretation of our user manual. The appearance of the product shall be subject to the product you received. Please forgive us that we won't inform you again if there are any technology or software updates on our product.

Symbol	Symbol Description
	Warning: To reduce the risk of injury, the user must read the instructions manual carefully.
	This symbol, placed before a safety comment, indicates a kind of precaution, warning, or danger. Ignoring this warning may lead to an accident. To reduce the risk of injury, fire, or electrocution, please always follow the recommendation shown below.
	CORRECT DISPOSAL: This product is subject to the provision of European Directive 2012/ 19/EC. The symbol showing a wheeled bin crossed through indicates that the product requires separate refuse collection in the European Union. This applies to the product and all accessories marked with this symbol. Products marked as such may not be discarded with normal domestic waste, but must be taken to a collection point for recycling electrical and electronic devices.

FCC INFORMATION

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment!

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1) This product may cause harmful interference.
- 2) This product must accept any interference received, including interference that may cause undesired operation.

WARNING: Changes or modifications to this product not expressly approved by the party responsible for compliance could void the user's authority to operate the product.

Note: This product has been tested and found to comply with the limits for a

Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This product generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this product does cause harmful interference to radio or television reception, which can be determined by turning the product off and on, the user is encouraged to try to correct the interference by one or more of the following measures.

- Reorient or relocate the receiving antenna.
- Increase the distance between the product and receiver.
- Connect the product to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for assistance.

1.Summary

Ultrasonic processor, or we can call it ultrasonic cell disruption system, Ultrasonic Cell Crusher, extraction apparatus, dispersing apparatus, homogenizer, or emulsifier. It is one of the common equipment for sample pretreatment in laboratory. It is widely used in the fields below:

Preparation of composite materials (nanomaterial dispersion)

Life sciences (cell disruption and extraction)

Pharmaceutical (extraction of medicinal herbs and other plants)

Environmental science (extraction of soil organic matter)

Sewage Treatment (COD degradation)

Homogeneous blending (accelerated dissolution, chemical reaction synthesis, oil-water emulsification)

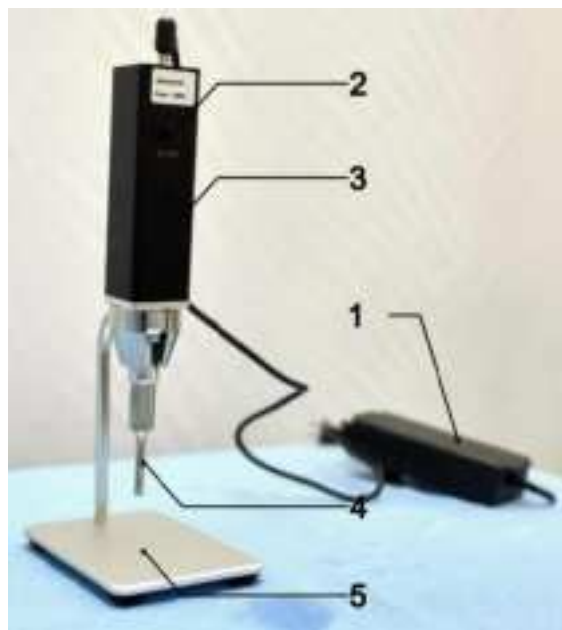
2.Working Principle

When ultrasonic wave generated by ultrasonic transducer vibrates on liquid, void or bubble in the liquid rapidly collapses, producing a shock wave, which is equivalent to instantaneously generating hundreds degrees of temperature and

thousands of atmospheric pressure. This phenomenon is called as "cavitation effect."

Cavitation is a unique physical process caused by strong ultrasound in fluid medium, coming along with wonderful phenomenons and amazing effects. Basic effects of cavitation are high temperature effect, discharge effect, luminescence effect, impact effect, and pressure effect etc. This unique effect is widely used in medicine, biology, chemistry, physics and other fields.

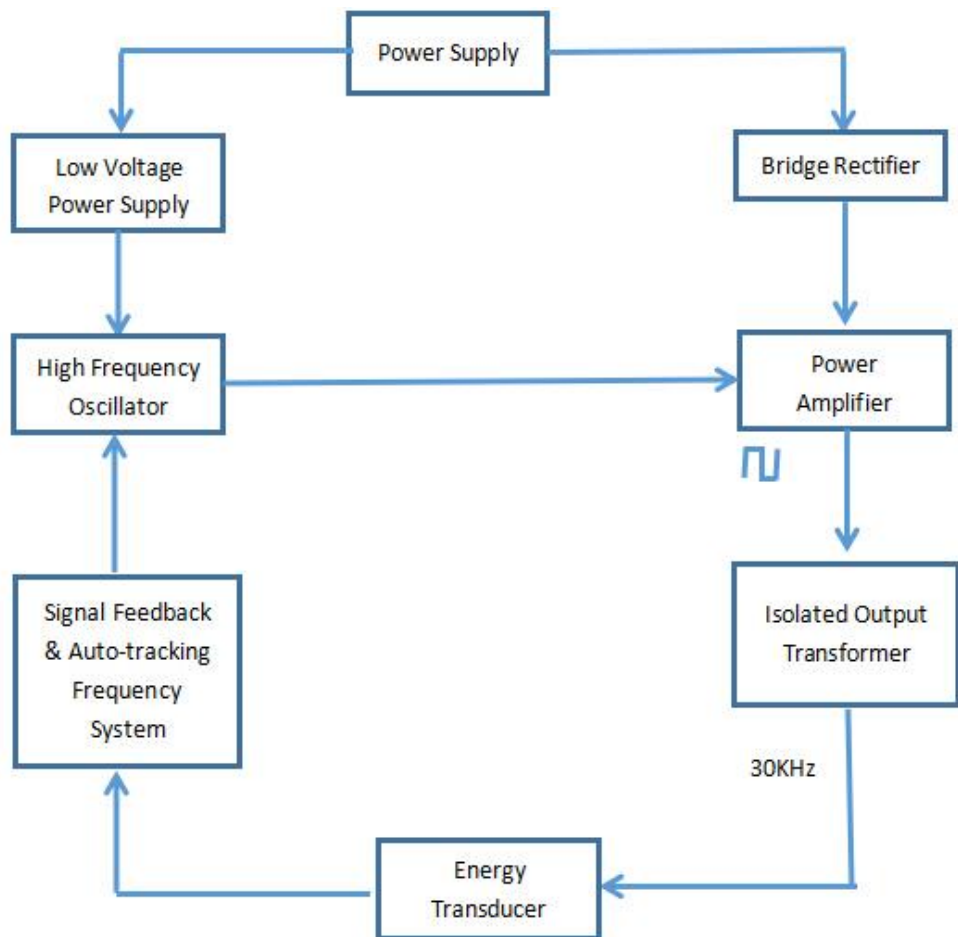
3.Structure



1. Power supply
2. Switch button
3. The host shell
4. Titanium alloy probe
5. Stand holder

4.Schematic Diagram

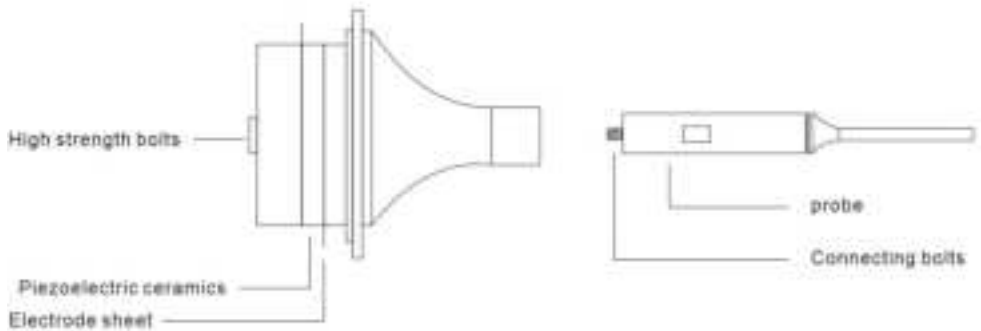
4.1 Ultrasound Circuit Diagram



4.2 Structure of transducer

Transducer is made of single screw supported sandwich structure.

Different types of transducers come with different modes or quantities of piezoelectric ceramics.



5. Features

- A. Can be held by hand or on stand, especially suitable for samples in EP tubes.
- B. AC and DC power supply; Can be connected to vehicle adapter
- C. Circuit made of SMT process has the features of automatic frequency tracking, automatic amplitude control, thermal protection.
- D. Amplitude pole is made of titanium alloy, which is of high strength, high sound speed, good corrosion resistance, high heat resistance, etc.
- E. With overloading protection and wide voltage input, it can be used in any country all over the world.

6. Technical parameters

Frequency Range	30 KHz (frequency is auto-tracking)		
Max. Output Power	150 W (0%-100% continuous adjustable)	200 W (0%-100% continuous adjustable)	300 W (0%-100% continuous adjustable)
Adapter input	110V/AC-220V/AC		
Adapter output voltage	12-24V/DC		
Diameter of ultrasonic probe	Φ3 mm	Φ6 mm	Φ8 mm
Sample processing volume	0.1~100ml	0.1~200ml	0.1~300ml
Material of Probe	Titanium alloy		

7. Operating instruction

1. Please make sure DIP switch is in position of 12V before turning on the machine.
2. Connect transducer with power cord, and plug in. If indicator light is on, the machine is OK.
3. Immerse tip of probe into liquid for 5 to 10 mm.
4. Press button on transducer to turn on the machine.
5. Adjust 12 - 24V/DC switch to adjust the output of ultrasound.

8. Warnings & Notes

- A. The instrument should be used in a dry, clean and ventilated room.
- B. Handle main machine with care to avoid breaking probe.
- C. When main machine gets hot, please cool it down before restarting.

- D. Probe should be used in liquid instead of air, or it will get damaged.
- E. Do NOT touch probe while using the machine, or you will get hurt by heat produced by ultrasonic waves.
- F. Power supply can ONLY be used to the hand held ultrasonic homogenizer. Please cut off power supply when finishing the process.

9. Packing List

9.1 Standard packing list

Item description	QTY
Main machine	1
Power supply	1
Power cord	1
User manual	1
Stand holder	1

Manufacturer: Shanghaimuxinmuyeyouxiangongsi

Address: Shuangchenglu 803nong11hao1602A-1609shi, baoshanqu, shanghai 200000 CN.

EC REP: E-CrossStu GmbH.

Mainzer Landstr.69, 60329 Frankfurt am Main.

UK REP: YH CONSULTING LIMITED.

C/O YH Consulting Limited Office 147, Centurion House, London Road, Staines-upon-Thames, Surrey, TW18 4AX

Imported to AUS: SIHAO PTY LTD.

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Imported to USA: Sanven Technology Ltd.

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