End-to-end sample prep automation.

revvity

LH 96 automated homogenizer workstation

Automate sample prep. Reduce bottlenecks. Maximize throughput.

The LH 96 automated homogenizer workstation has a modular design, relatively small footprint, and brush-less motors for automated homogenizing, but also integrates multiple sample prep steps, such as weighing, diluting, and pipetting into one end-to-end system. Laborious manual processing that used to take hours or days can now be automated and completed effortlessly in a matter of minutes. Fully customizable, the LH 96 can increase productivity, reduce errors, and improve results, completing large projects faster than otherwise possible.

Highlights of the LH 96 include:

- Automated homogenization of up to 96 samples
- Liquid handling of up to 4 separate liquids
- Pipetting and liquid transfer
- Create custom sample processing methods in the LH 96 intuitive touchscreen interface
- Unique oscillating motion to help ensure complete homogenization
- Process 250 µl to 40 mL in 2 to 50 mL tubes
- Variable speed from 3,000 to 28,000 rpm
- Compatible with 5, 7, and 12 mm Omni Tip plastic homogenizing probes
- Compatible with 7 mm Omni Tip hybrid probes
- Compatible with 5, 7, or 10 mm stainless steel generator probes

Omni Tip™ plastic homogenizing probes

The Omni Tips patented design reduces the hassle of disassembly and maintenance of traditional stainless steel generator probes. Proprietary Omni Tip probes are available in 5, 7, and 12 mm versions, accommodating a wide range of sample sizes. Designed with convenience in mind, they are so economical they can be disposed of after each use to significantly reduce cross contamination. The outer tube of probes is made of Lexan 144R, a polycarbonate. The inner shafts are made of Ultem™ 1000, a polyetherimide. The patented design significantly reduces the hassle of disassembly and maintenance of traditional stainless-steel generator probes.

Hybrid probes

The 7 mm Omni Tip hybrid probes combine the convenience of disposable plastic probes with the durability of traditional stainless-steel probes. Hybrid probes are made up of an outer stainless-steel tube with an inner Ultem™ plastic shaft. The plastic shafts can either be disposed of after use or cleaned and reused multiple times. The simple two-piece design makes these probes much easier to clean and disassemble than traditional stainless-steel probes.

Stainless-steel probes

Our stainless-steel probes available in 5, 7, and 10 mm diameters are ideal for larger sample volumes, larger initial sample tissue sizes, and tougher tissue types. Stainless steel probes offer superior resistance to most organic solvents commonly used during homogenization.

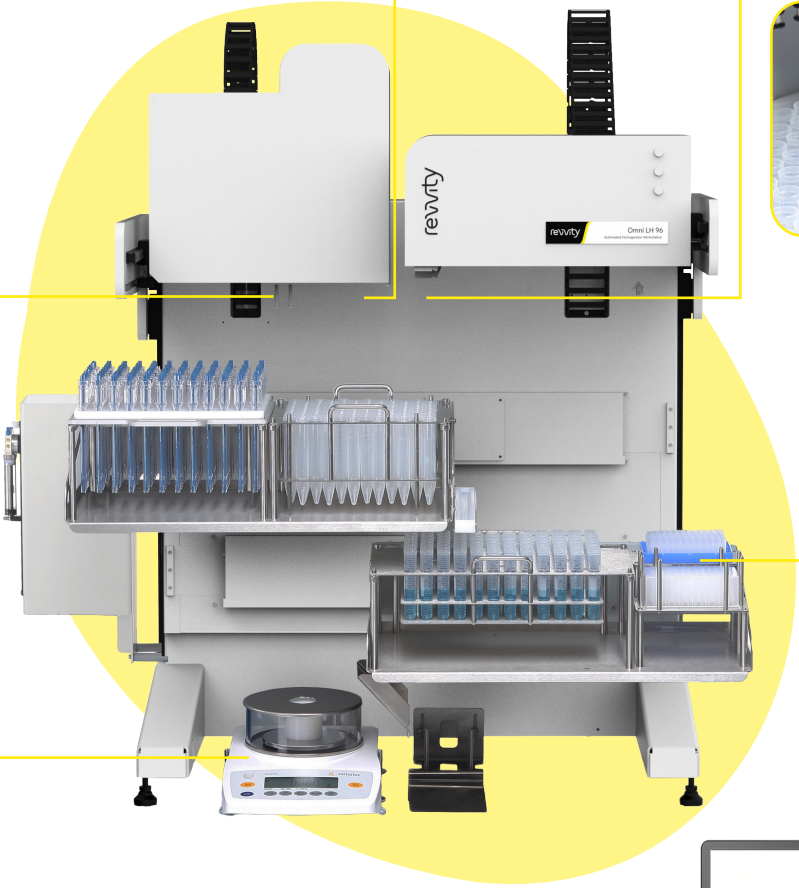
Meet the LH 96 workstation

Dilute

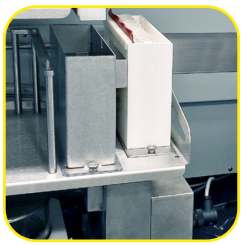
Homogenize

Gripper for sample tube transfer

Reformat



Integrated balance



Cleaning station *(Optional)*

Intuitive touchscreen interface

Passive or active cooling *(Optional)*

"Implementation of the **LH 96 resulted in ~40% increase in throughput.**"

"Use of the system [LH 96] resulted in an estimated **40% reduction of overall processing time** needed to prepare samples."

Read application note

LH 96 system specifications	
Part number	53-0001
Application	High throughput rotor stator homogenization
Programming/operation	15.6″ touchscreen monitor or keyboard/mouse using LH 96 software
Sample capacity	Up to 96 in any single batch
Compatible tube sizes	2, 5, 14, 30, and 50 mL sample tubes.
Processing volumes	Sample size varies from 250 µL to 40 mL per tube depending on tube size.
Probe compatibility	Disposable Omni Tip plastic homogenizing probes (5, 7 and 12 mm) , Omni Tip hybrid probes (7 mm), stainless steel generator probes (5, 7 and 10 mm)
Homogenization motors	8 x 100-watt DC brushless
Speed control	3,000 to 28,000 rpm (maximum depending on probe size)
Balance module	0.001 g readability
Syringe pump dilution module	10 mL capacity, accuracy ≤ 0.5 % deviation at full stroke, precision ≤ 0.05% CV within run at full stroke. Up to 4 reagents
Pipetting module	4 independent air displacement rotary pump channels. ±1% typical at 100 µL. 900 µL or 1 mL tips and 175 or 200 µL
Passive cooling module	Cooled utilizing dry ice in sealed tray
Conductive (active) cooling module	4°C/39°F ±1°C/1.8 °F utilizing a recirculating chiller (50/50 ethylene glycol/distilled water)
Cleaning station	3 stage cleaning bath (for hybrid and stainless steel probes). Consists of flush, rinse and ultrasonic tanks
Maximum dimensions during operation (W × D × H)	47″ (119.4 cm) x 23″ (58.4 cm) x 45″ (114.3 cm). If the unit is to be installed inside an enclosure or fume hood a minimum of 3″ (7.6 cm) clearance is recommended on all sides. 53″ (134.6 cm) x 29″ (73.6 cm) x 48″ (121.9 cm). The touchscreen monitor and/or keyboard/mouse combination will add approximately 30″ to either side of the instrument depending on installation location.
Weight	195 lbs. (88.5 kg)
Site requirements	The unit must be placed on a solid work surface. The work surface also requires a 15 amp circuit; only two units can be placed on this circuit simultaneously.
Power supply	100-230 VAC, 50/60 Hz
Input current	8 Amp maximum
Power connector	IEC 60320 C13
Power outlet requirement	1 x LH 96 main Instrument, 1 x balance, 1 x touch screen, (1 x conductive cooling chiller - *optional*), (1 x cleaning station - *optional*)
Circuit breaker	8 Amp
Operating environment	39°F to 104°F (4°C to 40°C)
Relative humidity	5% to 85% non-condensing
Altitude	Up to 2000 m
Certification	TUV, NRTL, CE, UKCA, FCC Part 15 Approved
Warranty	1-year extended warranty/service agreements are available.

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Not for use in diagnostic procedures.