

MINI NITROGEN EVAPORATION SYSTEM



Mini Nitrogen Evaporation System - ToronNitro™ Mini 1000 (Automated)

Nitrogen Evaporation System workflows often slow down at the final concentration step. ToronNitro Mini 1000 (Automated) is a compact, automated parallel evaporator designed for small-volume samples, using stable nitrogen blowdown with uniform heating to evaporate solvents quickly and consistently.

This mini platform supports both vials and microplates in the same instrument, which helps when your lab switches between chromatographic vials and plate-based prep. A multi-needle design keeps gas delivery consistent across positions, supporting repeatable endpoints across a full rack or plate.

APPLICATIONS

Mini Nitrogen Evaporation System - ToronNitro™ Mini 1000 (Automated) Applications

High-throughput microplate concentration

ToronNitro Mini 1000 supports common microplates, including 96 shallow-well, 96 deep-well, plus 24- and 48-well formats. That fits plate-based sample prep for LC/GC workflows where many extracts must be concentrated in parallel.

Chromatography vial concentration

Small vials used in chromatographic testing often need fast, controlled solvent reduction. This system supports rapid concentration for 2 mL injection vials, helping labs prep vials efficiently before analysis.

QuEChERS and small-tube workflows

QuEChERS-style sample prep can require a reliable concentration step after extraction or cleanup. ToronNitro Mini 1000 supports 1-2 mL centrifuge tubes and 2 mL purifying solutions, helping labs keep batch consistency during pesticide residue preparation.



FEATURES

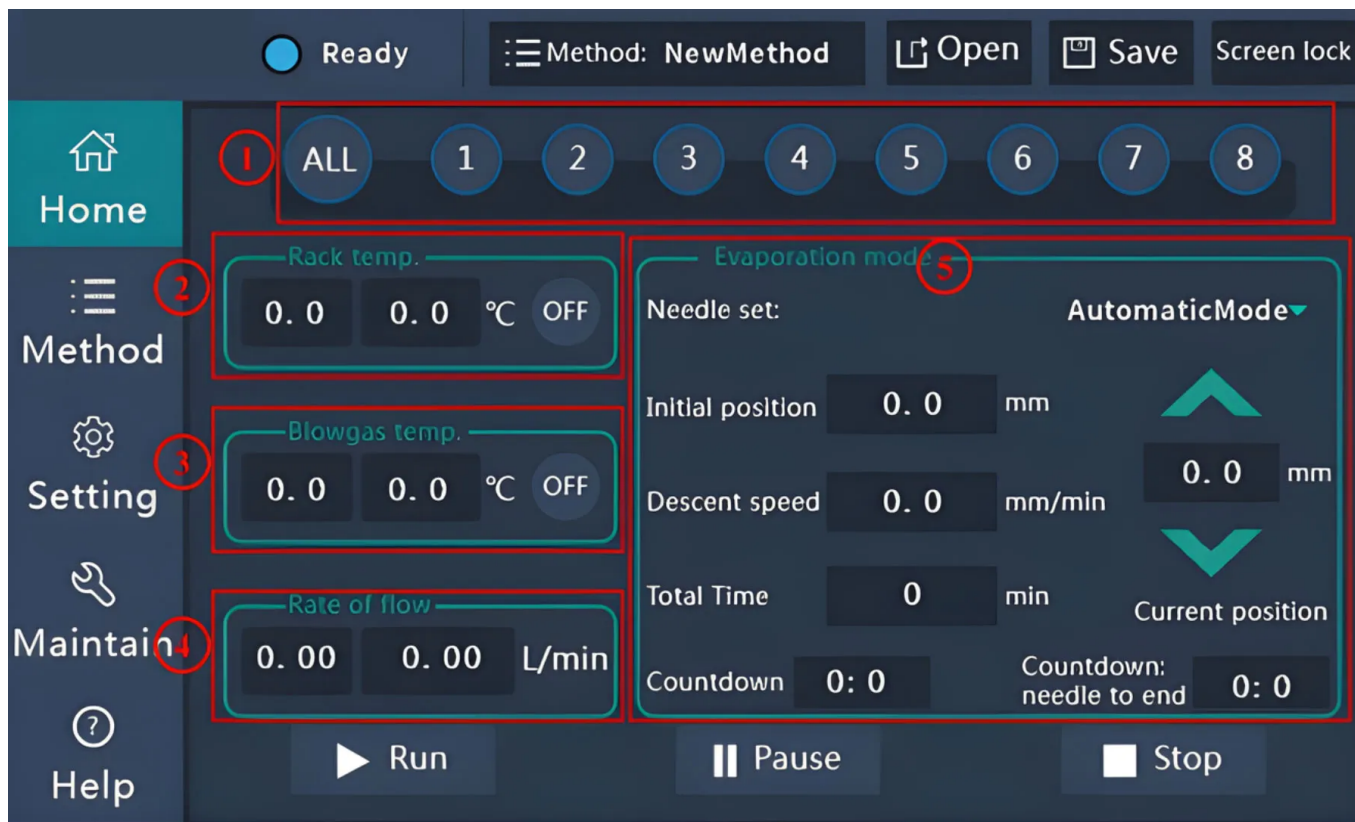
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Key Features



- Built for small-volume concentration
 - Designed specifically to concentrate small-volume solution samples using nitrogen blowing with uniform heating.
- Microplate and vial compatibility in one unit
 - Works with 96 shallow-well and deep-well plates, plus 24- and 48-well microplates, and supports 2 mL chromatography injection vials.
- Consistent nitrogen delivery across positions
 - A multi-needle nitrogen design helps keep each needle's flow consistent and stable for better parallel evaporation.
- Uniform flow control with gas-saving flexibility
 - A proportional valve helps equalize flow across apertures, while an eight-way solenoid design can control columns independently to improve flexibility and reduce gas use.
- Liquid-level needle tracing
 - The blowing needle can follow the liquid level during operation to accelerate evaporation while reducing the risk of sample loss. Needle height and tracing speed can be adjusted during the run.

- Visible rack and controlled heating
 - The rack area is visible for observing remaining volume during evaporation. Rack heating supports room temperature to 100°C with well-to-well temperature variation controlled to within $\pm 1^\circ\text{C}$.
- Touchscreen methods for repeatable operation
 - A touch interface supports parameter setup and method saving, including temperature and needle tracing speed, so runs can be reproduced.
- Automation-ready accessories
 - Optional modules can heat the nitrogen airflow to speed evaporation on PP microplates. A telescopic microplate guide can move the plate forward to support mechanical grippers.



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Technical Specifications

Parameter	Specification
Concentration	Nitrogen blowing and sample rack heating
Nitrogen channel	4
Sample capacity	24, 96
Sample vials	2 mL / 5 mL centrifuge vials; 2 mL GC vial; 96-well microplate
Range of flow rate	0 to 3.0 L/min, precise to 0.1 L/min
Temperature range of sample rack	Room temperature to 100°C, precise to 0.1°C
Temperature range of nitrogen gas flow	Room temperature to 70°C
Software interface	7-inch built-in touch screen
Dimensions	47 cm × 25 cm × 43 cm
Weight	21 kg
Voltage	200 to 240 V, 50/60 Hz (110V is also available)
Power rate	1000 W
Fume hood/ventilation	Required
Storage temperature	0 to 40°C
Storage humidity	20 to 85%
Operating temperature	10 to 40°C
Operating humidity	20 to 80%



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