



NITROGEN EVAPORATION SYSTEM

Nitrogen Evaporation System - ToronNitro™ 1700 Series (Automated)

Nitrogen Evaporation System speed and repeatability can make or break your sample-prep schedule. The ToronNitro™ 1700 Series (Automated) is a high-throughput, parallel nitrogen blowdown concentrator that removes solvents under water-bath heating and nitrogen blowing, helping labs concentrate extracts with better batch consistency.

This automated platform is built for large-batch workflows, with remote monitoring support and safety-focused protections for unattended runs. Uniform heating and a liquid-level tracing approach help maintain parallel concentration across positions, reducing variability between vials in the same batch.

APPLICATIONS

Nitrogen Evaporation System - ToronNitro™ 1700 Series (Automated) Applications

Environmental and food residue workflows

Extracts from soil, sediment, and food matrices often need a final concentration step before GC/LC analysis. ToronNitro 1700 supports parallel evaporation to help labs process more samples per shift while keeping concentration conditions consistent across the batch.

Pesticide and veterinary drug residue analysis

Multi-residue methods typically involve extraction and clean-up, followed by controlled solvent reduction. ToronNitro 1700 fits this step well, especially when your workflow is built around large batches and tight turnaround expectations.

Biochemical, pharmaceutical, and polymer sample preparation

Many analytical methods require gentle concentration to reach reporting limits without overheating sensitive compounds. Water-bath heating with PID temperature control helps maintain stable setpoints while nitrogen blowdown accelerates solvent removal.



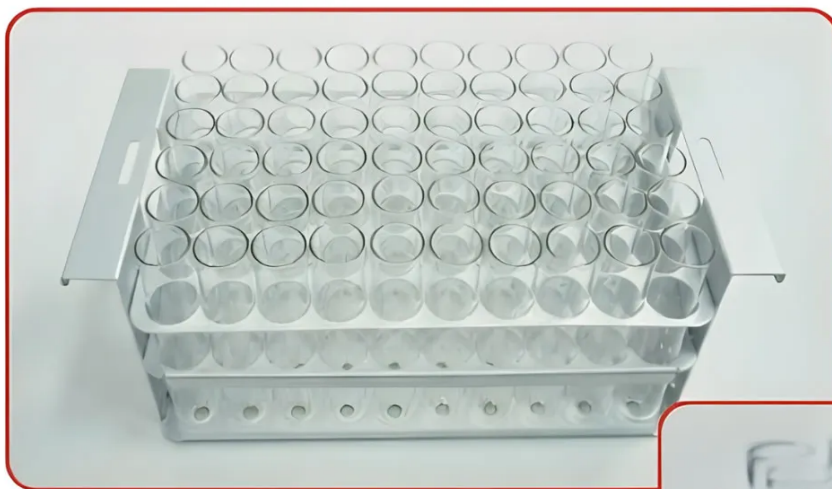
FEATURES

Nitrogen Evaporation System - ToronNitro™ 1700 Series (Automated) Key Features

- Parallel, high-throughput concentration
 - Runs large batches in one cycle, supporting high sample-volume labs and helping standardize evaporation conditions across the rack.
- Water-bath heating plus nitrogen blowdown
 - Designed to concentrate samples using uniform water-bath heating with nitrogen blowing for faster, controlled solvent removal.
- Liquid-level tracing nitrogen needles
 - The nitrogen blowing needle can track the liquid level automatically, helping maintain consistent blowdown conditions from start to endpoint across all positions.
- Unattended operation with method storage
 - Methods can be saved and started without constant operator presence, supporting repeatable day-to-day processing.
- Remote monitoring and control
 - Monitor the concentrating process in real time through a smartphone or tablet, supporting easier supervision during long runs.
- Flexible racks and sample formats
 - Sample racks are easy to swap, and the needle module can be adjusted for different sample volumes to match your vial and tube requirements.
- Automation-ready workflow compatibility
 - Designed to work alongside automated extraction and purification steps, supporting higher-level lab automation strategies.
- Built-in safety protections

- Includes active exhaust to reduce exposure risk, physical isolation between nitrogen and heating modules, and automatic detection/alarms for low air pressure, low bath level, and dry-heating risk with shutdown protection.





TECHNICAL SPECIFICATIONS

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Technical Specifications

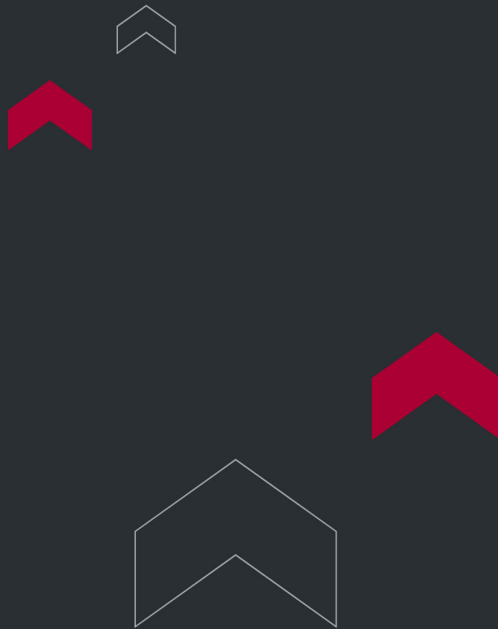
Parameter	Specification
Concentration	Water bath heating and nitrogen blowing
Nitrogen channel	10
Sample capacity	60
Sample vials	10 to 100 mL
Temperature control	PID
Temperature range	Room temperature to 90°C, precise to 1°C
Software interface	Android tablet/smartphone; WiFi connection
Dimensions	55 cm × 40 cm × 58 cm
Weight	45 kg
Voltage	200 to 240 V, 50/60 Hz (110V is also available)
Power rate	1700 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%

Series note: Auto parallel evaporation configurations can scale to higher batch sizes depending on model and rack setup.

ToronNitro™ 1700 Series Models, Channels, and Sample Tube Rack Options

Module	Channels	Sample Tube Rack
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ToronNitro™ 1700-20PLUS	3	20 × 16 mL tube (12 mm × 150 mm) 18 × 80 mL tube (30 mm × 150 mm)
ToronNitro™ 1700-20	5	20 × 80 mL tube (40 mm × 150 mm) 12 × 260 mL tube (60 mm × 150 mm)
ToronNitro™ 1700-12	12	12 × 65 mL tube (30 mm × 150 mm) With 0.5 mL / 1.0 mL endpoint constant volume
ToronNitro™ 1700-60	10	60 × 15 mL tube (12 mm × 150 mm) 60 × 50/60/80 mL tube (30 mm × 150 mm)
ToronNitro™ 1700-80	8	80 × 15 mL tube (12 mm × 150 mm) 48 × (15-30 mL) tube (12-23 mm × 150 mm) 48 × 50/60/80 mL tube (28-30 mm × 150 mm)
ToronNitro™ 1700-Mini		24 × 1.5 mL vial 24 × 2 mL / 5 mL centrifuge tube
ToronNitro™ 1700-G	N ₂ ≥ 99%, 35 L/min, 70 L/min	



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