TORONTECH

MELTING POINT APPARATUS – TORONMPA™ 500

Melting Point Apparatus – ToronMPA™ 500

Melting Point Apparatus measurements help confirm identity and purity for solid materials in QC and R&D.

ToronMPA™ 500 is a fully automatic, video-based system that records the full melting process and reports initial and final melting for better documentation control. It processes 4 samples per batch, stores methods and curves, and supports audit trail and electronic signature workflows for regulated labs.

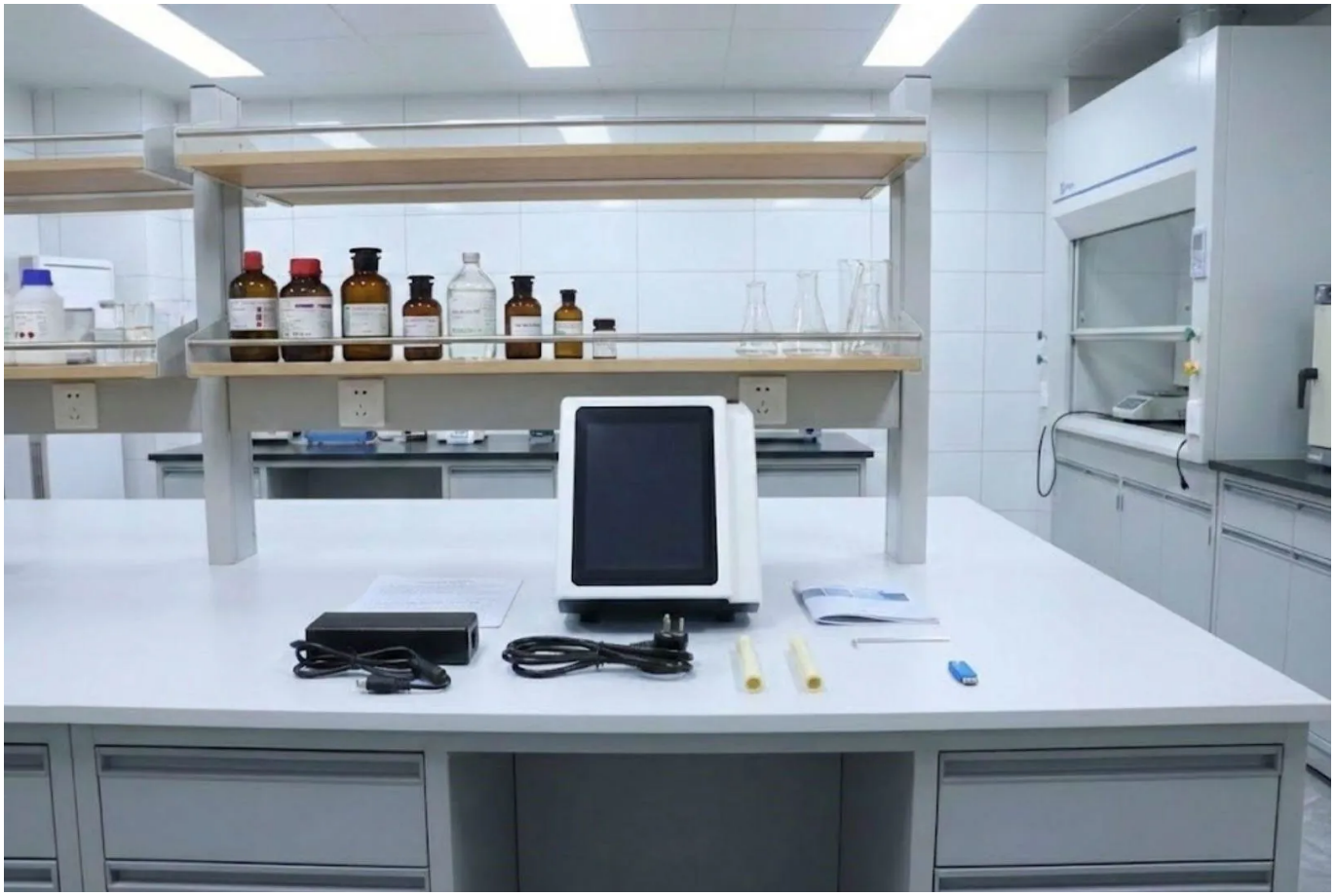
ToronMPA™ 500 combines precise furnace temperature control with HD video observation, replacing manual microscope viewing and helping operators capture consistent melting range results.

The system supports AI-assisted parameter setup, multi-level user permissions, and secure data handling features such as method locking and MD5 verification for exports. Connectivity options support typical lab data flows, including USB and network interfaces, plus PDF/Excel export for reporting.

APPLICATIONS

Melting Point Apparatus – ToronMPA™ 500 Applications

- Pharmaceutical QC and compounding checks: Melting range testing supports incoming raw material verification and batch-to-batch consistency checks for crystalline APIs and excipients, with full traceability through stored curves and methods.
- Chemical manufacturing and R&D: Use melting point as a fast characterization tool during synthesis, purification, and comparative analysis of organic crystalline substances such as intermediates, dyes, and fine chemicals.
- Food, flavors, and specialty materials: Supports screening and qualification of solid ingredients where phase-change behavior is part of material ID or acceptance criteria, with standardized heating control and automated recording.

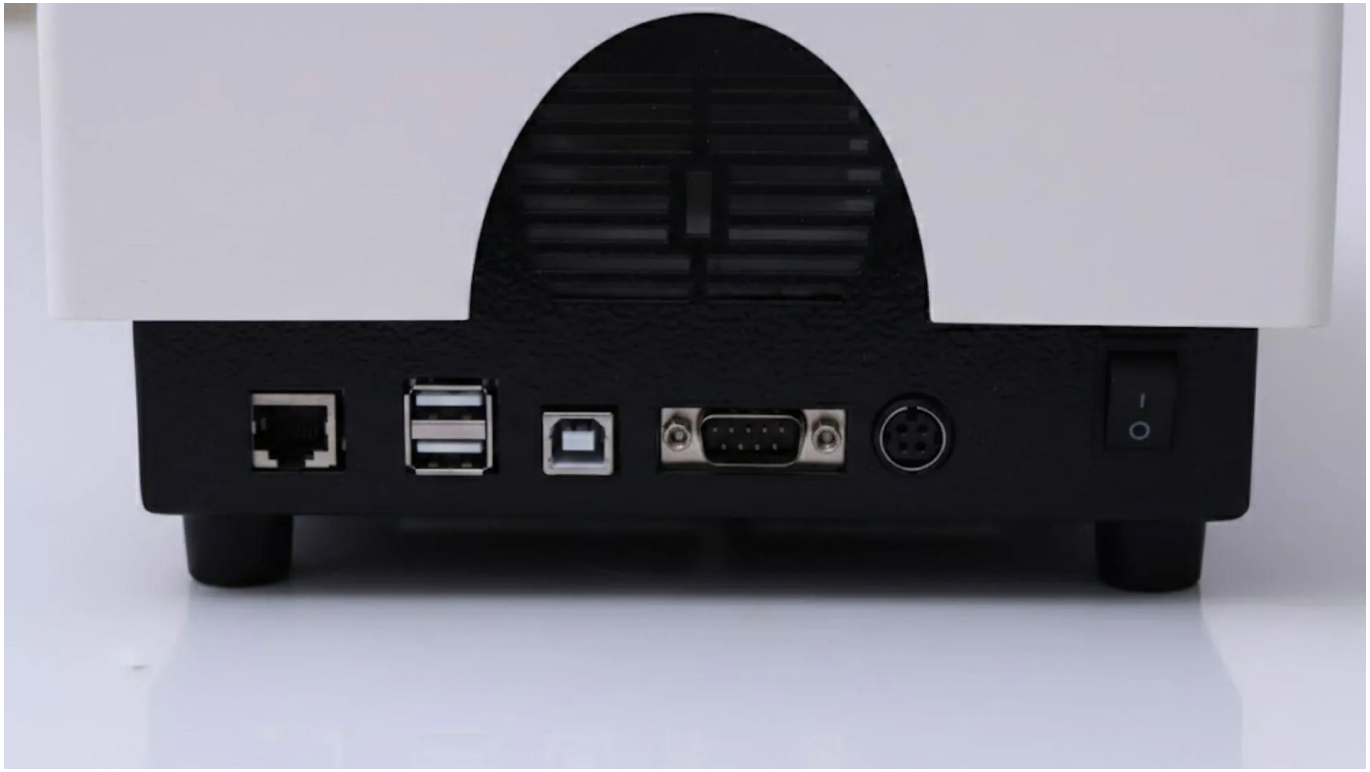


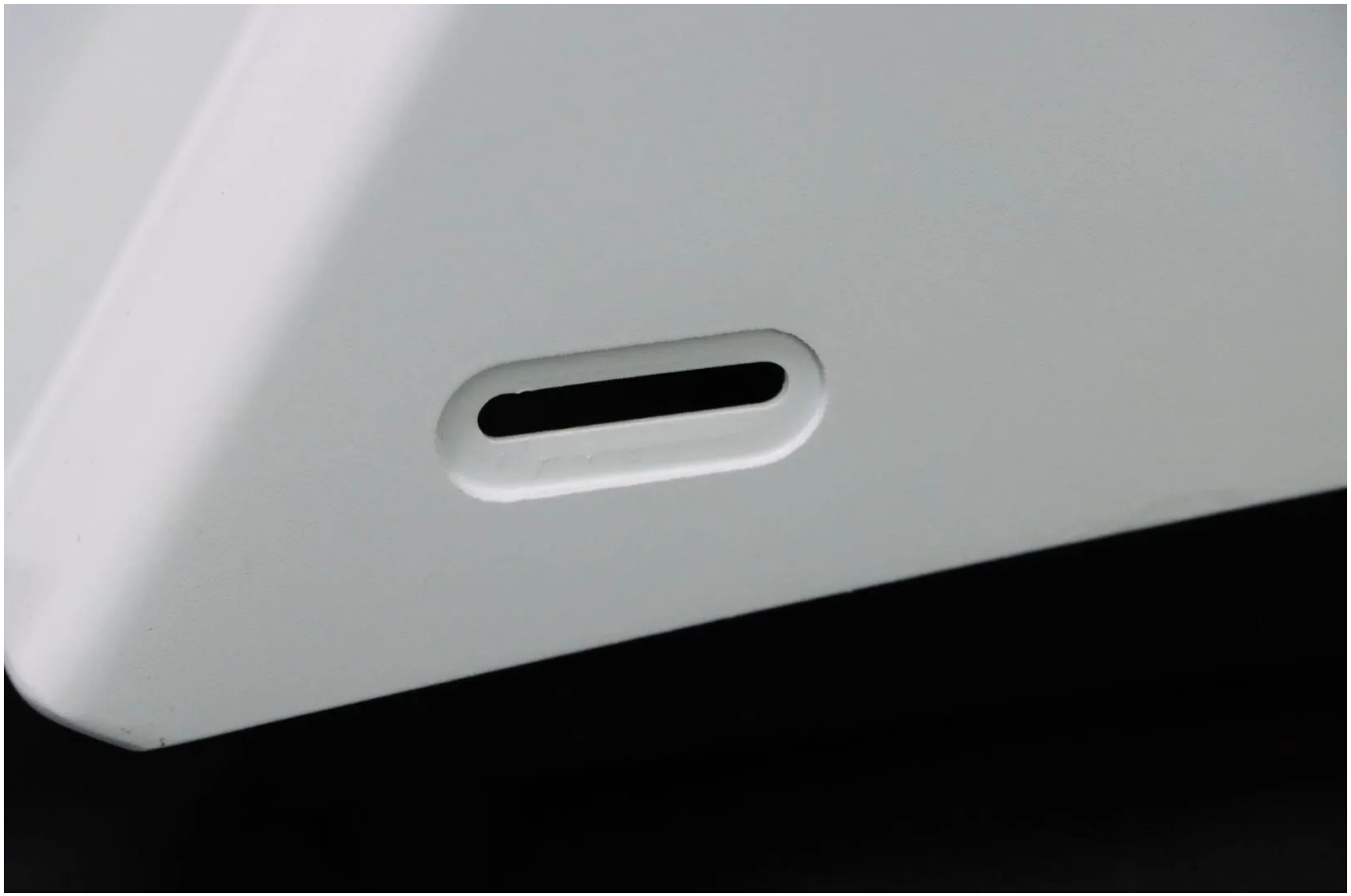
FEATURES

Melting Point Apparatus – ToronMPA™ 500 Key Features

- Fully automatic video observation to capture melting behavior clearly without microscope viewing.

- Four-sample batch testing to increase throughput and keep runs consistent across shifts.
- AI-assisted parameter setup to speed routine configuration and reduce setup variation.
- Programmable temperature control with up to 10 segments for repeatable ramps and SOP alignment.
- Zoomable atlas/spectrum viewing to inspect melt transition details during analysis.
- Audit trail and electronic signature support for controlled documentation workflows.
- Method library with method locking to standardize testing and prevent unauthorized changes.
- MD5 verification for exported files to support integrity checks in regulated environments.
- Direct printing plus PDF/Excel export for fast reporting and easy sharing.
- Connectivity options including USB, RS232, SD, Wi-Fi, RJ45, and U-disk for lab data transfer.
- Optional QR-code scanner input to speed sample ID entry and reduce transcription errors.





THEORY & METHOD

Theory and Method

ToronMPA™ 500 uses a controlled heating ramp to raise the furnace temperature while a camera continuously observes each capillary tube sample. The system records the melting process and reports the melting range endpoints (initial to final

melt) based on the observed phase change.

Programmable multi-segment temperature control helps match method requirements, while saved curves and methods support repeatable operation across operators and shifts.

TECHNICAL SPECIFICATIONS

Melting Point Apparatus – ToronMPA™ 500 Technical Specification

Specification	ToronMPA™ 500
Temperature range	Room temperature to 400 °C
Test modes	Melting point, sliding point
Sample types	Multiple sample types supported
Detection method	Fully automatic (manual operation compatible)
Processing capacity	4 samples per batch
Temperature resolution	0.01 °C
Heating rate	0.1 to 20 °C/min (200 adjustable levels)
Temperature program	Up to 10 programmable segments
Spectrum / image viewing	Atlas zoom supported for detailed viewing
Accuracy	±0.2 °C (<250 °C); ±0.4 °C (>250 °C)
Repeatability	±0.1 °C at 0.1 °C/min
Magnification	Standard 9× (other magnifications can be set)

Specification	ToronMPA™ 500
Display	10.4-inch TFT color touch screen
Data storage	128 GB
Map / atlas storage	50,000 groups
Method storage	200 sets
User management	Four-level authority management
Audit tracking	Yes
Electronic signature	Yes
Custom method library	Yes
Method locking	Yes
Export verification	MD5 verification supported
Printing mode	Wi-Fi printing; serial port printing
Export formats	PDF, Excel
Data interfaces	USB, RS232, SD, Wi-Fi, RJ45, U disk
Scanner input	QR-code scanner supported
Small capillary size	OD φ1.4 mm, ID φ1.0 mm
Large capillary size	OD φ4.0 mm, ID φ3.8 mm
Packing size	430 × 320 × 370 mm
Voltage	110–230 V, 50/60 Hz, 120 W
Gross weight	6.50 kg

Optional Accessories

- Melting point reference material: Naphthalene (GBW(E) 13234)
- Melting point reference material: Adipic acid / 1,6-hexanedioic acid (GBW(E) 130236)
- Melting point reference material: Anthraquinone (GBW 13238)
- Melting point capillary tubes: Standard capillaries
- Agate mortar and pestle (for sample grinding and preparation)
- Thermal printer (for direct result printouts)
- Needle-type printer (impact-style printing option)

TORONTECH.com

TORONTECH

Torontech Inc.
251 Consumers Road, Suite 1200
Toronto, Ontario, M2J 4R3, Canada

Phone: +1 416 368 2721 | Fax: +1 416 981 7652
Email: info@torontech.com

Torontech, LLC
601 Brickell Key Drive, Suite 700
Miami, FL 33131, USA

Toll-Free: 1-866-383-7919
Email: sales@torontech.com

Torontech ME FZE
Meydan Grandstand, 6th Floor,
Meydan Road, Nad Al Sheba,
Dubai-261440, UAE

Phone: +971 488 19252
Email: me@torontech.com

USA | Canada | EU | UAE | GCC | KSA | India | Africa | Latin America | Asia