



MELTING POINT APPARATUS - TORONMPA™ 800

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A Melting Point Apparatus helps labs confirm identity and screen purity by measuring melting range under controlled heating. ToronMPA™ 800 is a fully automatic, video-based system that records the entire transition and automatically reports melting range, initial melting, and final melting. It also supports additional methods such as boiling point, turbidity point, and sliding point in the same platform.

ToronMPA™ 800 combines precision temperature control with an HD camera module to make phase changes easy to observe, document, and review. The system is designed for efficiency with one-click measurement and AI-assisted parameter setup for routine work. It processes four samples per batch using 3 small positions and 1 large position, which supports higher throughput in QC and development labs.

For documentation control, the platform includes method locking, user authority levels, audit tracking, and electronic signatures. Exports support PDF and Excel formats, and the instrument supports direct printing. Sample information can be captured using QR-code scanning input to reduce manual entry errors.

APPLICATIONS

Melting Point Apparatus - ToronMPA™ 800 Applications

- Chemical and pharmaceutical R&D: Melting range data supports compound characterization and batch comparison during synthesis, purification, and formulation work. Video recording helps teams justify endpoints and improve internal repeatability.
- Incoming inspection and raw material identification: Melting range trends can help confirm whether an incoming solid matches internal reference expectations. This supports practical screening for mix-ups and off-grade lots.

- Purity screening and batch-to-batch consistency checks: A wider melting transition can indicate impurities or material variation. Automated capture of initial and final melting helps reduce operator-to-operator interpretation differences.
- Multi-parameter phasing point, turbidity point, and sliding point modes support workflows where labs track multiple transition behaviors using one instrument family.



Standards

- 21 CFR Part 11 expectations may apply when electronic records/e-signatures are used in regulated environments.

FEATURES

Melting Point Apparatus - ToronMPA™ 800 Key Features

- AI-assisted parameter setup to standardize routine configuration.
- One-click measurement with high automation integration for faster workflows.
- Four-sample processing per batch using 3 small + 1 large sample position
- Fully automatic recording of melting range, initial melting, and final melting.
- Multi-mode capability: melting poibidity point, and sliding point.
- Dic verification option for file integrity workflows.
- Connectivity options including USB, RS232, SD, Wi-Fi







THEORY & METHOD

Theory and Method

A sample is packed into a capillary tube and placed in the heating chamber. The instrument heats at a defined ramp rate while the HD camera records the phase transition. Software supports automatic recording of the melting process, including initial melting and final melting, then reports the melting range. Up to 10 programmable temperature segments help match

your SOP and maintain repeatability across operators and sites.

TECHNICAL SPECIFICATIONS

Melting Point Apparatus - ToronMPA™ 800 Technical Specification

Specification	ToronMPA™ 800
Instrument type	Melting Point Apparatus (video-based, automated)
Intended use / positioning	For manufacturers needing melting point production qualification or authorized production applications
Sample types	Multiple sample types supported
Test modes	Melting point, boiling point, turbid point, sliding point
Detection method	Fully automatic (compatible with manual operation)
Processing capacity	4 samples per batch (3 small + 1 large position)
Automatic recording	Melting process, initial melting, final melting
Parameter setup	AI-assisted automatic parameter setup
Temperature range	Room temperature to 420 °C
Temperature resolution	0.01 °C
Heating rate	0.1 °C to 20 °C (200 adjustable levels)
Temperature program	Up to 10 programmed segments
Temperature control / stability approach	Programmable segmented temperature setting (10 segments)
Accuracy	±0.2 °C (<250 °C); ±0.4 °C (>250 °C)

Specification	ToronMPA™ 800
Measurement report	Accuracy level 0.2; measurement report available
Repeatability	±0.1 °C at 0.1 °C/min
Magnification	Standard 9× (other magnifications can be set)
Display	10.4-inch TFT color touchscreen
Atlas / image viewing	Arbitrary scaling (zoom) for detailed viewing
Data storage	128 GB
Map / image storage	20,000 groups
Method storage	2,000 sets
User management	Four-level authority management
Audit tracking	Yes
Electronic signature	Yes
Compliance support	21 CFR Part 11 features listed (audit tracking, e-signature, pharmacopeia-focused documentation)
Custom method library	Yes
Method locking	Yes
Export verification	MD5 document verification supported
Printing	Direct printing supported (Wi-Fi printing and serial port printing)
Export formats	PDF, Excel
Data interfaces	USB, RS232, SD, Wi-Fi, RJ45, U disk (supports upload of test data; configurable)
QR code input	Supported (scan QR code to input sample information)

Specification	ToronMPA™ 800
Scanner	Scanning gun supported (QR code scanning input)
Small capillary size	OD ϕ 1.4 mm; ID ϕ 1.0 mm
Large capillary size	OD ϕ 4.0 mm; ID ϕ 3.8 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)



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