

### Universal Automatic Moisture Tester

Brabender: Moisture Tester MT-CA





# Mastering Moisture Measurement

The MT-CA, powered by Anton Paar Brabender technology, sets the benchmark for automated moisture analysis in quality control and has established itself as the reference instrument in multiple industries. This high-throughput solution takes a highly automized approach to the oven drying method, offering up to 10 simultaneous precision measurements with a measurement accuracy of 0.1 % water content. Its direct measurement approach eliminates frequent calibration, ensuring reliable results and cost savings.

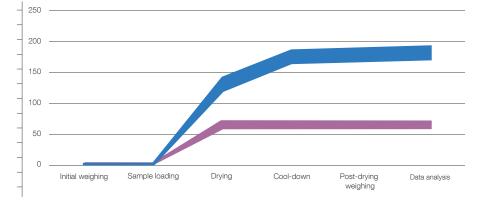
With a comprehensive, customizable methods database, the MT-CA adheres to international standards and is even used to calibrate other moisture analyzers. The MT-CA significantly reduces measurement times, optimizing laboratory workflows and enhancing efficiency.

The MT-CA isn't just a piece of equipment, it's a strategic investment in the future of your business, promising not only unmatched precision and efficiency but also cost savings and reliability. Because we know: Moisture affects profits.

#### Quickly go from weighing to drying to result

- → For accurate measurements, samples are weighed before drying using a high-precision balance → 2 min
- → After initial weighing, load up to 10 samples onto the positioning wheel → 1 min
- → The drying process utilizes controlled heating with air circulated by a fan for uniform drying of the samples → 60 min
- → The process is completed with automatic and immediate post-drying weighing, ensuring precise results in no time → immediately
- → Data analysis can take place directly in the integrated MetaBridge software, reducing transcription time and errors to zero → immediately





→ The MT-CA process reduces measuring time from 180 min with conventional devices to 63 min, while fully complying with standards.

## Meet MetaBridge Meet the Benchmark

Unleash the power of laboratory efficiency with MetaBridge – the revolutionary software that redefines your moisture testing. From intuitive touch operation to live test tracking from anywhere, MetaBridge transforms how you interact with data. Enjoy mobile operation with the responsive design, top security, and easy access with zero installation hassle. Meet the future of data management with real-time updates, comprehensive user control, and effortless data handling.



#### One software, endless benefits

~	Ready to use – no setup time and no installation effort
~	Optimized workflows to avoid common errors and ensure a smooth process in the laboratory
$\checkmark$	Easy access to your measurement data via a web browser within the company network
~	The feference feature lets you monitor material quality in real time and receive automatic feedback on whether or not specifications have been met
~	Support of measurement series to increase statistical accuracy

#### **Data sharing**

- → Standard data exports in typical formats such as Excel, CSV, PDF
- → Built-in mailing function for a quick exchange with colleagues and customers
- → Support of third-party systems (e.g., LIMS, ERP) via Brabender WebAPI, shared network folders, or OPC UA
- → Out of the box LIMS support for Bühler Insight and labfolder

#### Drying curve for deep insights

The MT-CA's drying curve diagram, showcasing mass loss percentage over time, offers a clear, real-time visual representation of the drying progress. This tool enhances understanding of material behavior, enables more precise monitoring, and facilitates informed decisions on desired moisture levels. With this understanding you can, e.g., increase the temperature and thus save considerable measuring time. For samples where, due to their nature (e.g., no powder, coarse granulation, lumpy), it's not possible to predict the drying time, the optimal drying time can be determined empirically.

#### Always on, never calibrate

The MT-CA's elimination of initial and regular calibration, unlike NIR devices, offers significant benefits: It reduces downtime and maintenance efforts, and ensures consistent, reliable results without the need for frequent recalibration.

# Applications and Methods

The MT-CA's method library offers optimized presets of precisely calibrated drying times and temperatures for various materials. From foodstuffs like oats and noodles to polymers and minerals, each material's unique requirements are meticulously catered to, ensuring accurate and efficient drying results across a wide spectrum of samples.

Material	Initial weight	Temperature	Drying time
$\downarrow$	$\downarrow$	$\downarrow$	$\downarrow$
Casein	10 g	130 °C	180 min
Coffee	10 g	120 °C	120 min
Сосоа	10 g	105 °C	40 min
Milk powder	10 g	105 °C	50 min
Tobacco	5 g	123 °C	30 min
Cement	10 g	110 °C	15 min
Plaster	10 g	95 °C	40 min
Нор	5 g	105 °C	180 min
Wheat	10 g	130 °C	60 min
Sugar	10 g	115 °C	10 min
Rubber	10 g	105 °C	90 min
Cellulose	5 g	130 °C	45 min
Kieselguhr	10 g	130 °C	30 min
Adhesive	10 g	80 °C	20 min



#### **Brabender: Moisture Tester MT-CA**

	$\downarrow$
Mains connection	1x 220/230 V; 50 Hz/60 Hz + N + PE; 7.5 A 115 V; 50 Hz/60 Hz + PE; 14 A
Dimensions (W x H x D)	820 mm x 680 mm x 630 mm (with touchscreen)
Power supply	1 x 230 V; 50 Hz/60 Hz + N + PE; 5.2 A 1 x 115 V; 50 Hz/60 Hz + PE; 10.4 A
Weight	Approx. 80 kg
Drying temperature	Max. 200 °C in the drying chamber
Heating capacity	1100 W
Sample weight	Min. 1 g, max. 20 g (optional setting of a tolerance range)
Number of samples	Max. 10 at a time
Measuring range	0.1 % to 99.9 % water content
Accuracy	<0.1 % water content
Balance resolution	0.001 g
Reproducibility (balance)	± 0.002 g
Temperature: 10 °C to 40 °C	Environmental conditions

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