C.W. Brabender® Instruments, Inc.
Measuring Beyond Expectations

Moisture Tester MT-C

Individual and serial determination of the water and solvent content...

Brabender® Measurement & Control Systems

C.W. Brabender® INSTRUMENTS, INC.

Individual and serial determination of the water and solvent content - quick, precise, reproducible

MT-C

The Brabender® Moisture Tester MT-C provides a quick method for moisture determination acc. to the drying chamber principle.

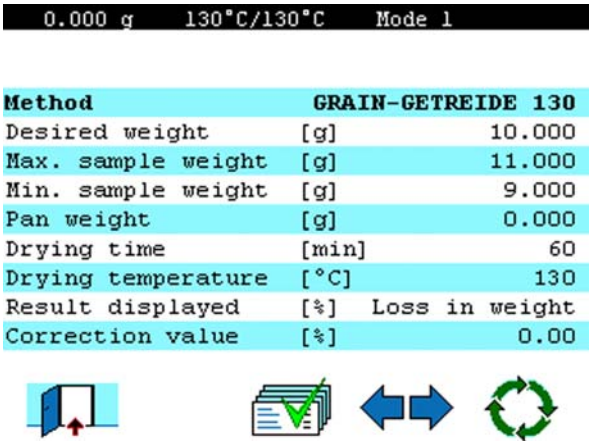
Simple, menu-controlled operation as well as the reliable and reproducible determination of the water and solvent content of organic and inorganic materials meets all demands of modern laboratory and production control.

The fully automatic MT-C offers even more operating comfort and time saving by

- Automatic positioning of the turntable when introducing the samples,
- Fully automatic re-weighing after drying,
- Automatic recording of drying curves.

Procedure

Select the desired drying method from a list of methods, each method including the drying temperature, drying time, and sample weight incl. tolerance range. Weigh samples with a variable sample weight of 1 to 20 g with the electronic precision balance.
Place samples onto the turntable in the drying chamber. The drying process runs fully automatically.
An acoustic signal after completion of the drying process indicates the sample can now directly be re-weighed within the drying chamber. Samples can be put into the drying chamber at any time, even if there are other samples still drying.



The difference

Benefit from the process-technical advantages of the MT-C as compared to other instruments and methods for moisture determination (e.g. NIR, drying balances, dielectric instruments):

- The drying chamber method is the reference method - there is no special calibration for different samples necessary,
- Gentle and uniform drying ensures precise results,
- Measure up to 10 samples at a time,
- Determine the water content with an accuracy of 0.1 %.

Software-aided operation

No complex training courses are required for operating the Moisture Tester. During the measurement, just follow the instructions of the software.
The display and control panel of the Moisture Tester is a touch-screen color display that is capable of handling graphics. The software offers:

- Programming of up to 10 different drying methods,
- Password protection for individual methods,
- Entry of product and/or charge specification,
- Automatic taring for variable dish weights or automatic consideration of preset dish weights for sample weighing and re-weighing,
- Free selection of the drying time for each individual sample,
- Automatic recognition of the selected sample position by a position sensor,
- Entry of any sample weights between 1 g and 20 g with presetting of tolerance range - no time-consuming weighing of constant sample weights,
- Display of residual drying time and results,
- Automatic calculation of the absolute loss in weight and/or of the percentage of moisture,
- Possibility of data exchange with other PCs via network connection (Ethernet).

After measuring and re-weighing of the sample, the absolute loss in weight and/or the water or solvent content in % are displayed.
In addition, the software creates a complete test protocol after the test. Including the product name and test conditions such as sample weight, drying temperature, and drying time.

Optional data output on a printer

By connecting an optional printer, you can easily file your tests: Just print the results and the complete test protocol via USB-connection on a separate printer and get a complete documentation of your measurements.

MT-C

Precise weighing directly in the drying chamber

The drying chamber of the MT-C is easily accessible through a door with an inspection window. Put up to 10 samples onto the turntable inside the drying chamber - the timing is determined by the operator.

A fan blows air through an electric heater into the drying chamber. An electronic temperature controller and a Resistance Temperature Detector control the temperature within the chamber.

Weigh samples quickly and reliably on the electronic high-precision balance mounted below the drying chamber – weigh samples outside of the drying chamber before drying and within the drying chamber immediately after drying while the samples are still hot.

Benefit from the process-technical advantages of this configuration:

- Avoid time-consuming cooling of your samples in an exsiccator and the resulting faults by direct measurement after drying,
- Avoid weighing errors,
- Re-weigh your dried samples precisely and reproducibly with an accuracy of < 0.1 %.

The principle

The Brabender® Moisture Tester MT-C is an electronic moisture tester using the principle of the drying chamber with moving air. The instrument determines the loss in weight of the sample material that results from drying.

Due to the continuous airflow within the drying chamber, the drying process takes considerably less time than in a conventional drying chamber without ventilation.

Examples of drying times and temperatures of various materials

	Material [g]	Temperature [°C]	Time [min]
Foodstuff			
Oats	10	130	60
Noodles	10	130	60
Bread	10	130	90
Starch*	10	130	30
Flour*	10	130	60
Rye*	10	130	60
Wheat*	10	130	60
Barley*	10	130	60
***** Rapid method**	*10*	*155*	*20*
Chocolate	10	105	45
Cocoa	10	105	40
Coffee (green)	10	105	60
Tobacco	5	123	30
Malt flour	10	105	60
Hops	5	105	180
Feedstuff			
Extraction residues	10	130	50
Rape	10	105	160
Roughage	5	130	50
Sugar beet cassettes	10	130	60
Cellulose products			
Wood	5	130	30
Paper pulp	10	130	70
Beech cellulose	5	130	15
Fibers			
Lambswool	10	105	100
Cotton	5	130	15
Jute	10	105	120
Artificial silk	10	130	60
Minerals			
Lignite	10	130	45
Phosphates	10	100	180
Foundry sand	10	130	20
Potassium nitrate	10	130	60
Washing agents			
Basic soap	5	120	60
Soft soap	5	150	60
Detergents	5	130	90
Polymers			
PVC	10	130	150
PE	10	130	125
PP	10	130	150
Others			
Cork	10	90	60
Leather	5	105	60
Casein	10	130	180

Specification

MT-C

Technical Data	
Dimensions (H x W x D)	690 x 800 x 630 mm
Weight	approx. 80 kg
Mains connection	240/115 V, 50/60 Hz (selectable)
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 100 % water content
Accuracy	< 0.1 % water content
Display resolution	0.001 g
Reproducibility (balance)	± 0.002 g
Memory parameters	• Sample position in the drying chamber • Sample specification • Sample weight • Relative loss in weight • 10 methods
Data input / output	• Touch-screen display • USB port for printer • Network (Ethernet) connection
Environmental conditions	Temperature: 10 ... 40°C

C.W. Brabender® Support

A modern application laboratory is at the disposal of all customers and interested parties for trials with their own materials. All Brabender® measuring systems can be tested under severe conditions.

An experienced expert team will assist the tests and will stay at your disposal at any time for further questions.

Be our guest…
Arrange a laboratory visit…
Discover the latest advancements…
Discuss what WE can do for YOU…

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Moisture Tester MT-C

Zertifiziert nach DIN EN ISO 9001:2000

Subject to change of design and technical modification without notice.

C.W. Brabender® INSTRUMENTS, INC.
C.W. Brabender® Instruments, Inc. • 50 East Wesley Street • South Hackensack, NJ 07606
Phone: 201-343-8425 • Fax: 201-343-0608
E-Mail: foodsales@cwbrabender.com • Internet: www.cwbabender.com

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