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ICC-Standard Nr. 110/1
VO (EG) Tobacco 2182/2005

Brabender® Moisture Tester MT-CA

User-friendly determination of moisture
and solvent content



... where quality is measured.

Quick, precise,
reproducible



The **Brabender** Moisture Tester MT-CA 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 which results from drying.

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

The MT-CA provides an individual and serial determination of the water and solvent content – quick, precise, reproducible.

The difference

Benefit from the 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%

Moisture Tester MT-CA



Discover the Brabender MetaBridge®

The new software is characterized by its easy and intuitive handling. After log-in, the user finds all information about the device and a choice of options for his purpose on the start screen.



The MetaBridge enables the operation of the MT-CA from a tablet or smartphone. Track your test results from your lab, your home office or on the go.

The advantages

- User-friendly operation by touch
- Test tracking independently from end device and location
- Responsive web design: automatically adjusted screen resolution
- Ready to use, no installation necessary
- Access through easy user log-in
- Touch support for tablets and smartphones
- Test tracking from multiple end devices at a time
- Security of tests and data: protection from unauthorized access
- Quick software updates available online

Measurement, evaluation and administration functions

Benefit from new and optimized functions:

- Administration mode for user access rights
- Central test administration
- Live tracking of tests with end time indication
- Record, evaluate, print and export test results
- Interactive editing of measuring data
- Automatic measuring data storage mode
- Programming of up to 10 different drying methods
- Test protocol includes product names and test conditions like initial sample weight, drying temperature and drying time



The MetaBridge enables an easy positioning of the positioning wheel (manually or automatically).



By a mouse click or touch, the user can choose one of the tiles that are easily distinguished by colour.

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 your samples with the built in electronic precision balance.

Place your samples onto the positioning wheel in the drying chamber. The drying process runs fully automatically. Additional samples can be put into the drying chamber at any time, even if there are other samples still drying.

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 on this separate printer and get a complete documentation of your measurements.

It is also possible to hand on the data via an ethernet port (LAN-connection) to a data acquisition system.



Probenanalyse

Precise weighing directly in the drying chamber

The drying chamber of the MT-CA is easily accessible through a door with an inspection window. Put up to 10 samples onto the positioning wheel inside the drying chamber - the timing is up to you.

A fan blows air through an electric heater into the drying chamber. The temperature within the chamber is controlled by an electronic temperature controller and an RTD.

Weigh your samples quick and reliable on the electronic high-precision balance mounted below the drying chamber - outside of the drying chamber before drying, and automatically 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 a desiccator and the resulting faults by direct measurement after drying
- Avoid weighing errors

Examples of drying times and temperatures of various materials

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

more methods available upon request

... where quality is measured.

Moisture Tester MT-CA

Simple operation

- Entry of product and/or charge specification
- Automatic taring
- Free selection of the drying time for each individual sample
- Barcode reader
- 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 ranges - no time-consuming weighing of constant sample weights
- Automatic positioning of the positioning wheel
- Fully automatic re-weighing after drying
- Automatic recording of drying curves

- Automatic calculation of the absolute loss in weight and/or the percentage of moisture

Approvable under German law

The MT-C/Z is a specific version of the MT-CA, which is approved by the PTB, Braunschweig, which is responsible for standardizations in Germany.

This approval is valid for wheat, barley, rye, oats, triticale, corn, rape and sunflowers in the range of certain moisture contents.

Special accessoires for the MT-C/Z:

- Test sieves
- Maxima - Thermometer
- Software

Moisture Tester MT-CA

Mains connection	1x 220/230 V; 50/60 Hz + N +PE; 7,5 A 115 V; 50/60 Hz + PE; 14 A
Dimensions (W x H x D)	550 x 680 x 630 mm (without Touchscreen) 820 x 680 x 630 mm (with Touchscreen)
Weight	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
Display resolution	0.001 g
Reproducibility (balance)	± 0.002 g
Memory parameters	<ul style="list-style-type: none"> • Sample position in the drying chamber • Sample specification • Sample weight • Relative loss in weight • 10 methods
Data input / output	<ul style="list-style-type: none"> • Touch-screen-display • USB port for printer • Network (Ethernet) connection
Environmental conditions	Temperature: 10 – 40°C

Sample preparation



Break Mill SM 3

Break Mill SM 3

The Break Mill SM 3 is a certified laboratory mill to prepare samples for moisture tests.

The handling is easy and field-oriented. The design of the mill prevents loss of moisture. The sample is collected in a sealed container which can be closed with a lid.



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