

**Fast and Accurate Measurements**  
**Quick Analysis of Dry Mass and Moisture Content**  
**Automatically Opening Drying Chamber**



# MA X7.A

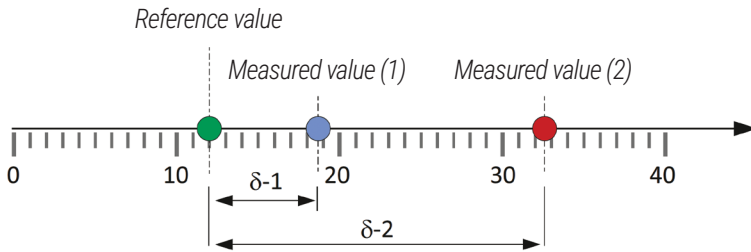
## Moisture Analyzers

ADVANCED MOISTURE CONTENT ANALYSIS

# Measurement Accuracy

## Definition

Measurement accuracy is the closeness of agreement between a measured value and the true value of the measured quantity. A measurement is considered accurate when the difference between the measured value and the true value (reference value) is very small.



Switch on the moisture analyzer to the mains at least 1 hour before starting the test.

## Equipment

Glass fiber filters, pipette, NaCl standard.

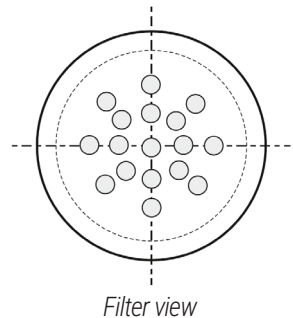
## Set the drying parameters

Drying profile	Temperature	Power*	Auto switch off	Result
Standard	105 °C	100%	Auto 2	Dry mass

\*only for PMV 5Y

## Procedure

- put the filter on the moisture analyzer pan
- start drying after adding approx. 1 g of NaCl on the pan  
note: sodium chloride should be doses onto the filter in drops
- take 6 measurements and records the results
- calculate the mean value of the series of measurements
- compare the mean value with the value given in the EAN code



## EAN code structure

04	Week of the year
25	Number of the day
1022	Dry matter content (decimal separator omitted) (1022 = 10.22%)
15	Repeatability value (15 = 0.15%)
08	Two digits as pattern number in the format 01, 02... 99
2	Check digit



## Sample calculation

Reference value = 10.22%

Measured value as mean value = 10.15%

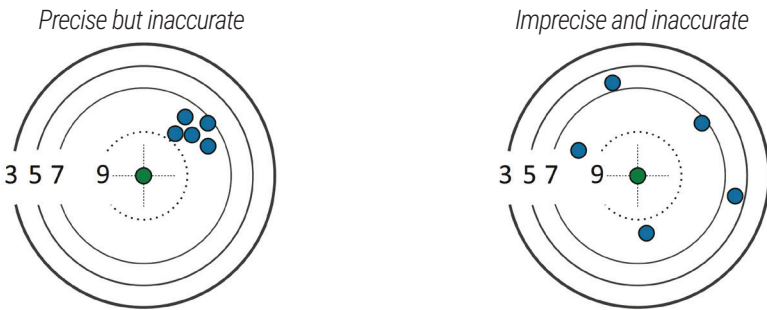
Accuracy of measurements A = 10.15% – 10.22% = 0.07%

# Measurement Precision

## Definition

Measurement precision is the closeness of agreement between results obtained in a series of measurements performed under the same conditions by the same operator.

Measurement precision is usually expressed as a standard deviation.



Switch on the moisture analyzer to the mains at least 1 hour before starting the test.

## Equipment

Glass fiber filters, pipette, NaCl standard.

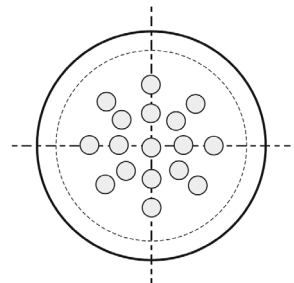
## Set the drying parameters

Drying profile	Temperature	Power*	Auto switch off	Result
Standard	105 °C	100%	Auto 2	Dry mass

\*only for PMV 5Y

## Procedure

- put the filter on the moisture analyzer pan
- start drying after adding approx. 1 g of NaCl on the pan  
note: sodium chloride could be doses onto the filter in drops
- take 6 measurements and records the results
- calculate the mean value of the series of measurements

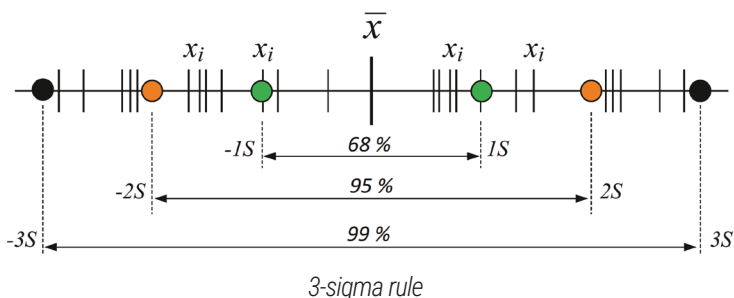


Filter view

## Exemplary results

10.1232%	10.1502%	10.1316%	10.1653%	10.1267%	10.1942%	<b>S = 0.03%</b>
----------	----------	----------	----------	----------	----------	------------------

Using the 3-sigma rule, it is possible to determine with a certain probability the range within which the moisture content result is expected to lie.



Ultra-short drying time  
Uniform heating of the sample  
Complex database of drying programs



# PMV 5Y

## Microwave Moisture Analyzers

HIGHLY PRECISE ANALYSE AND FAST DRYING PROCESS