

HydroTracer^{FMX/FLV}

Water Content Analyzer



Detection

Residual Water in Solids

Precise determination of very low water contents with an accuracy of a few ppm.

Robust design and low weight enables the mobile use in production.

Simple operation permits the usage by untrained staff members.

Safe procedure because of the easy to handle reagent powder.





Application

Engineering plastics

Whether for incoming goods inspection, process monitoring or inspection of finished products the HydroTracer is a useful tool to ensure a consistent product quality and minimizing manufacturing errors.

Save energy and time by an optimized process flow.

Operation

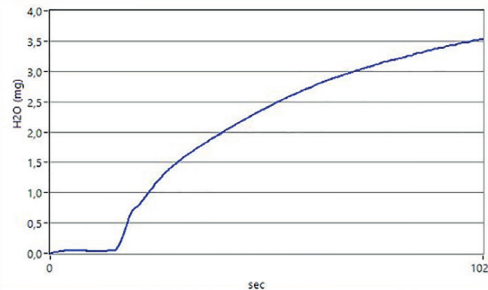
A few steps

Picture-supported menu navigation for easy test preparation and largely automated measurement consumes about 2 minutes of working time.

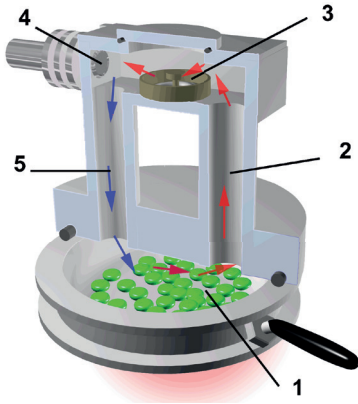
Seamless archiving of test results and generating multilingual reports for your process documentation.



Test Report



Date 16.07.07 Start of program 17:06
Name of operator Operator 1
comments
Material Zytel 70G2SHSLR (PA66 GFZS)
Sample weight in grams 5,55
Density 1,33
Heating temperature 160
Measuring time 0 : 17 : 7
Ambient air temperature deg C 28,3
Relative humidity of ambient air % 28,7
air pressure hPa 1018,2
Water content [%] 0,0677
Water content [ppm] 677
Water content [mg] 3,76



The sample material is heated up to force the water to evaporate (1). A hot humid gas flow rises to the upper part of the reactor (2). Here, the reagent transforms water and releases hydrogen (3). A gas sensor detects the hydrogen concentration (4). The cooled dry gas descends and can absorb more water vapour (5).

Measurement

Method principle

A chemical process converts gaseous water into hydrogen with use of a reagent.

The hydrogen concentration is detected by a gas sensor and a measure of the water within reactor room.

Technical

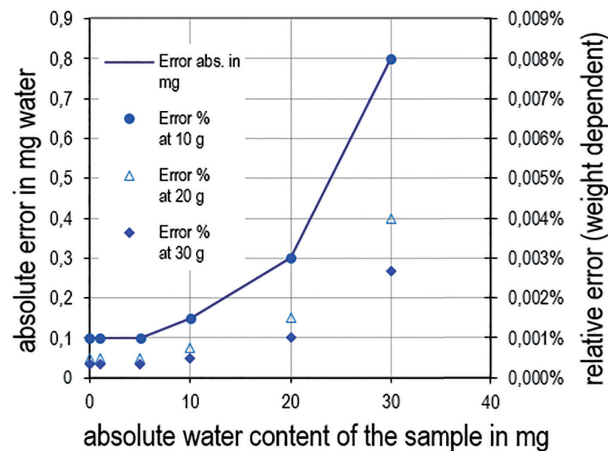
Data: Type FMX

Sample weight:	0.01 g...50 g
Sample volume:	approx. 40 cm ³
Abs. measuring range:	0.2 mg...30 mg H ₂ O
Rel. measuring range:	0.0005 %...5% H ₂ O
Accuracy:	see chart
Test temperature:	50°C...210°C
Reagent:	CaH ₂ powder
Power supply:	230 / 115 VAC
Weight:	4.6 kg
Dimensions:	285 x 170 x 250 mm
Interface:	USB
Requirements:	PC, min. Windows 7

Comparison with Karl-Fischer-Titrator

Material	HydroTracer % H ₂ O	KF-Titrator % H ₂ O
ABS	0,0351	0,0372
PA 66	0,0160	0,0150
PBT	0,0252	0,0270
PC	0,0203	0,0189
PE	0,0442	0,0403
PET	0,0029	0,0031
TPE	0,0097	0,0090

Accuracy vs. Water Content of Sample





Options

Type FLV

With enlarged sample tray (30 mm instead 10 mm) and higher measuring range up to 50 mg H₂O.

Suitable for materials with a low bulk density e.g. fibres, flakes, film chips or moulded parts with small wall thickness.

aboni GmbH
für Mess- und
Automatisierungstechnik

Friedrich-Ebert-Straße 27
14548 Schwielowsee, Germany

tel: ++49 700 22 66 43 66

email: info@aboni.de

fax: ++49 700 22 66 43 29

web: www.aboni.de