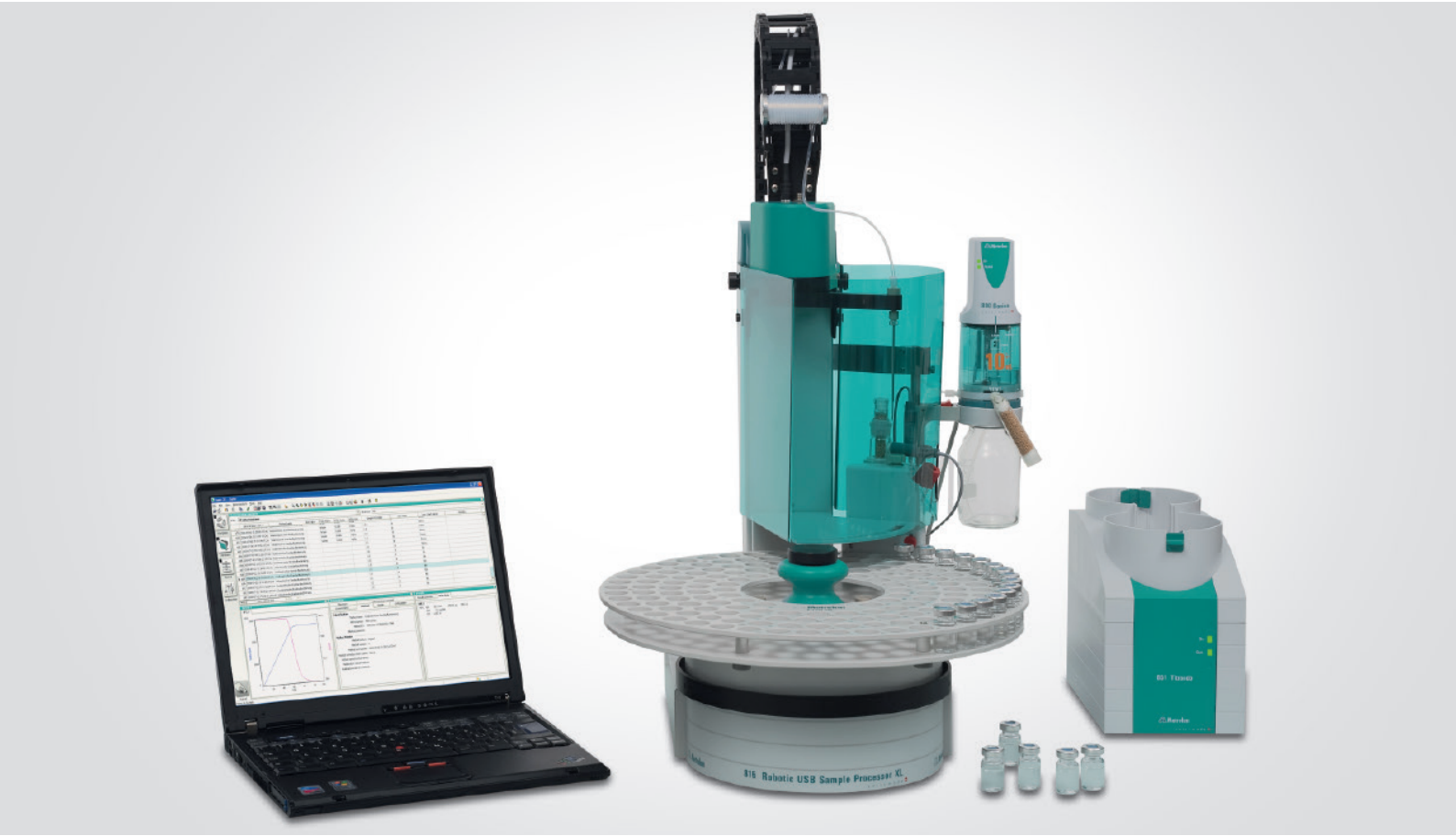
Water Content by Karl Fischer Titration with MATi 4



Complete system for fully automated, coulometric Karl Fischer titration

Metrohm

MATi 4 – fully automated water content determination for up to 160 samples

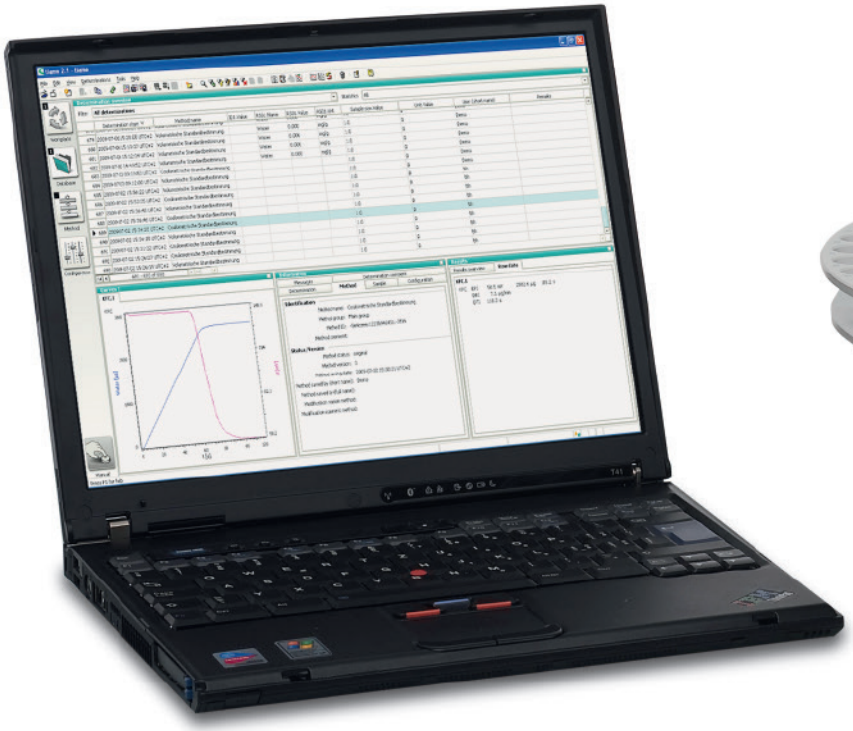
MATi 4 (MATi = **M**etrohm **A**utomated **T**itration) is a fully automated titration system for water content determination by coulometric Karl Fischer titration. The sample rack accommodates up to 160 sample vessels.

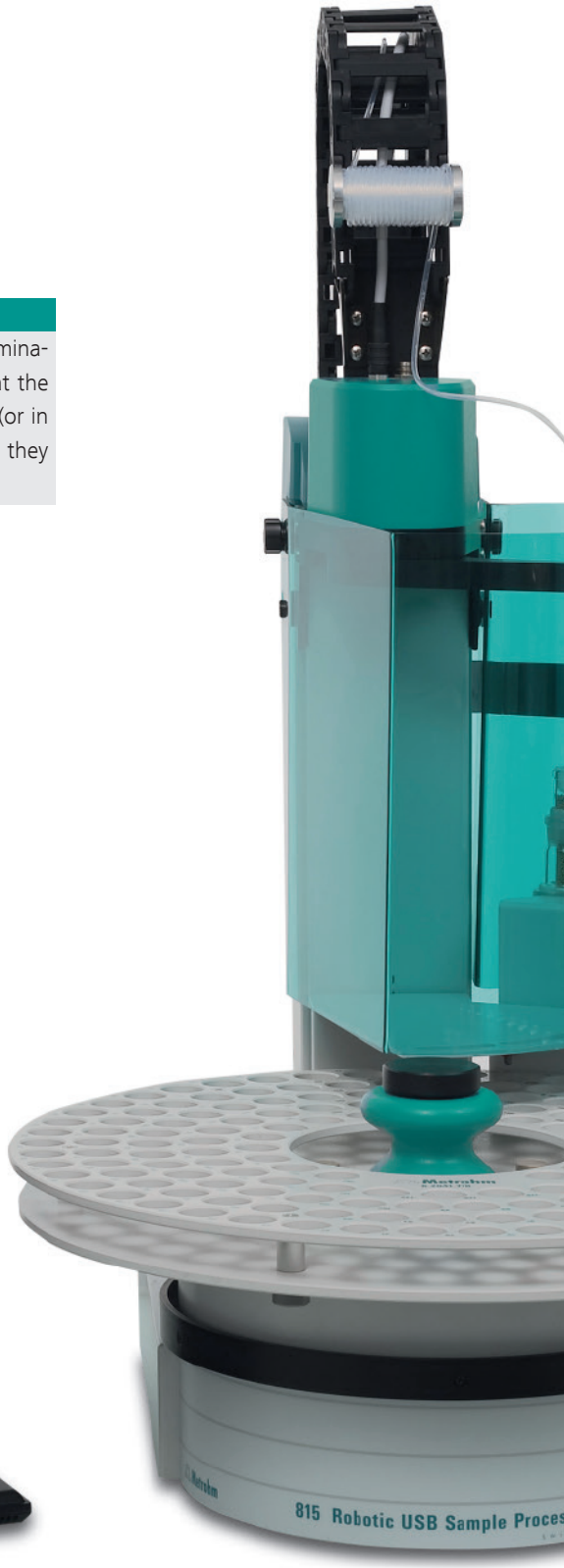
For liquid samples

The MATi 4 system is used for water content determination in liquid samples. The only prerequisite is that the samples must be completely soluble in methanol (or in a suitable solubility promoter) so that the water they contain can be released and titrated.

Straightforward sample preparation

Preparation for analysis consists solely of filling the sample into a sample vessel and then sealing this with a septum cap. No weighing in of the sample is necessary. The required sample amount is calculated from the sample density and the pipetted sample volume.



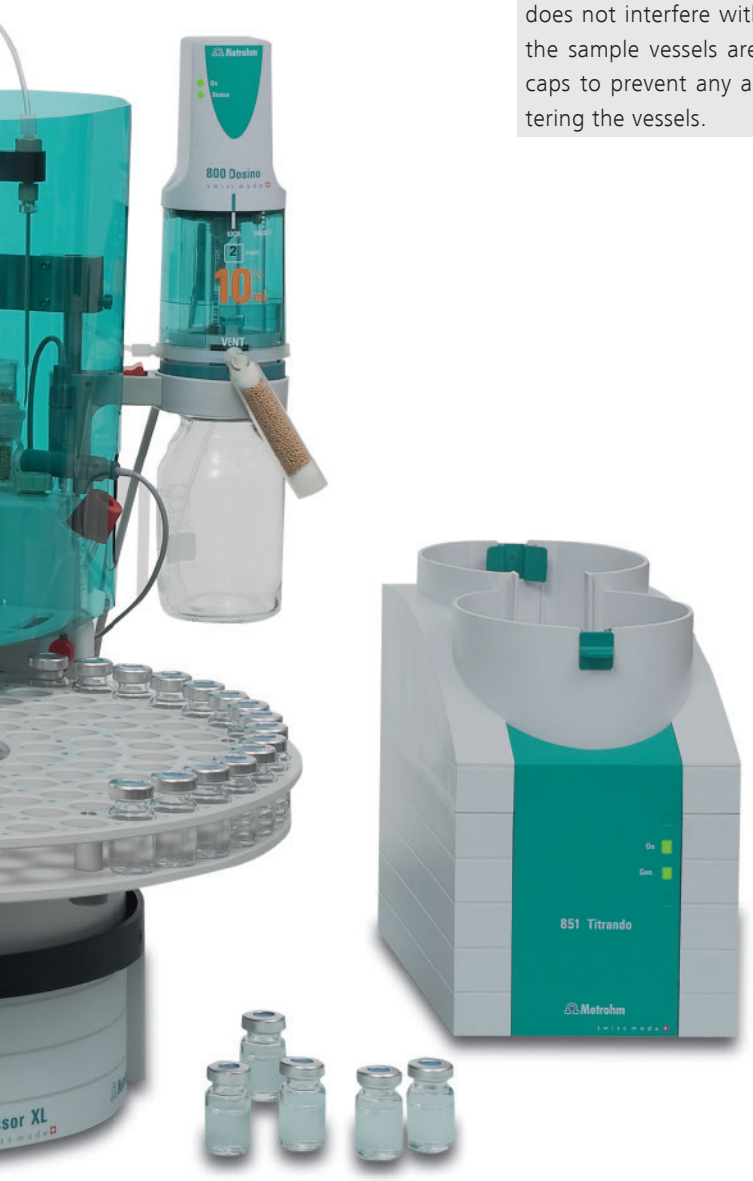


Automated measurement of sample size and sample addition

With the help of a dosing unit and an 800 Dosino buret, a defined amount of sample is precisely aspirated through a needle. Next, the sample is injected through a septum into the titration cell. The aspiration tubing and the needle are rinsed with conditioned KF reagent to ensure a residue-free sample transfer – this is especially important with oil samples.

Protection against moisture for reliable analysis results

If the entire sample rack is loaded with sample vessels, a certain amount of time may pass before determination of the last samples starts. However, this does not interfere with the quality of the results, as the sample vessels are sealed with air-tight septum caps to prevent any atmospheric moisture from entering the vessels.



Automatic reagent replacement

Reagents are exchanged automatically by the system. The exhausted reagent is aspirated out and the titration cell is filled with fresh reagent. If the sample to be analyzed does not completely mix with the reagent in the coulometric titration cell, it is also possible to aspirate out the sample phase alone following phase separation. The reagent can then be reused. This saves on reagent and costs.

Results

Content [µg/g]
1005
1005
1007
1003
1007
1004
1003
1000
1001
1001
Mean value: 1004
s(abs): 2.39
s(rel): 0.24%

Tab. 1: 10x determination of 1 mL water standard each (certified water content: 1006 µg/g)

Ordering information

MATi 4 – Automated coulometric KF titration

	Optional accessories
6.1448.050	Septum cap, 1,000 pcs
6.2419.000	Sample glass, 1,000 pcs

Subject to change without notice
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