

## Product description

The combination of the Karl-Fischer-Titrator AQUA 40.00 and the headspace technique offers a wide range of interesting applications to determine moisture in solid and pasty samples, oils and viscous compounds.

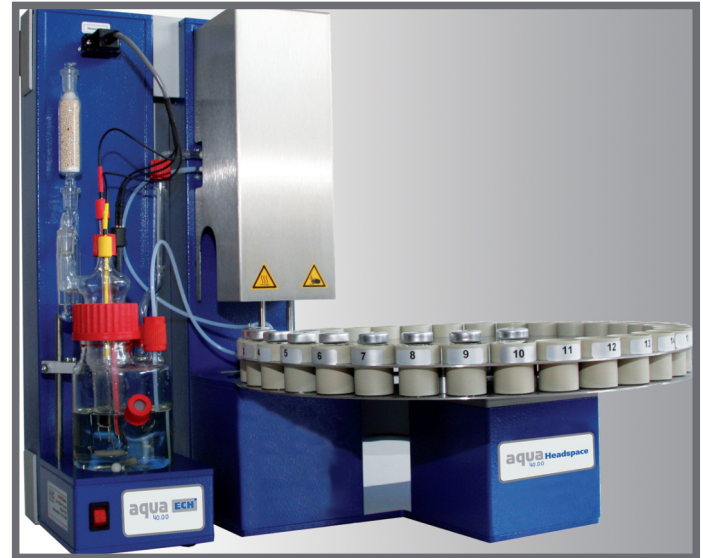
It does not require time-consuming sample preparation: Weigh the sample in a headspace vial, close and seal the vial, and then administer it into the AQUA 40.00 headspace oven.

The analysis procedure starts with heating up the sample up to a temperature set prior. A carrier gas transports the moisture from the sample into the measuring cell where the moisture is titrated.

With the unique advantage of the system using the closed-loop-carrier gas circulation, any additional gas drying is no longer necessary. Hence, the carrier gas is continually titrated to dryness within the closed loop.

The total dryness of the gas enhances the moisture liberation, and sensitive samples can be heated out very gently. Moisture liberation becomes possible even at ambient temperature.

All these advantages result in reducing reagent consumption considerably. Furthermore, temperature-programmed heating procedure can be defined individually by the user. Such a temperature program reveals in which way the moisture in question is bonded to the sample substance. You can distinguish between chemically bonded water of crystallization and adsorbed surface water.



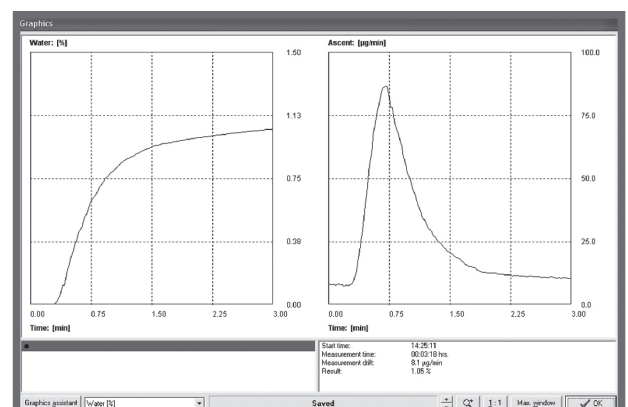
AQUA 40.00 with Head Space Module and autosampler (31 positions)



AQUA 40.00 with Head Space Module as manual version

## Applications

- Pharmaceutical products
- Biological substances
- Plastics
- Hygroscopic compounds
- Freeze-dried products, e. g. lyophilized cultures
- Oils and pastes
- Viscous materials
- Powder and pellets
- Food



Typical measurement with isothermal heating

## Advantages

- Reduced reagent consumption
- Gas drying is not required due to closed-loop carrier gas circulation
- Isothermal or temperature-programmed heating procedure
- Frequent system check with standards before, during and after measurement series
- Short measuring times of complex samples as well
- Stand-by titration for automated conditioning and easy blank tests

- Software with user-specific access, routine methods for individual and definable user levels, profound documentation and archiving of all measured data
- Software complies with requirements of FDA to 21 CFR Part 11
- Customer-specific vials can be used (0.5 - 100 mL capacity)

## Principle

- Filling and sealing of vials right after sampling in the laboratory or in the field
- Analysis without sample preparation
- Sample is heated up without contact with environment
- Short measuring time due to closed loop gas extraction
- Easy automation with autosampler (30 vials)
- Priorized express samples can set individually by user

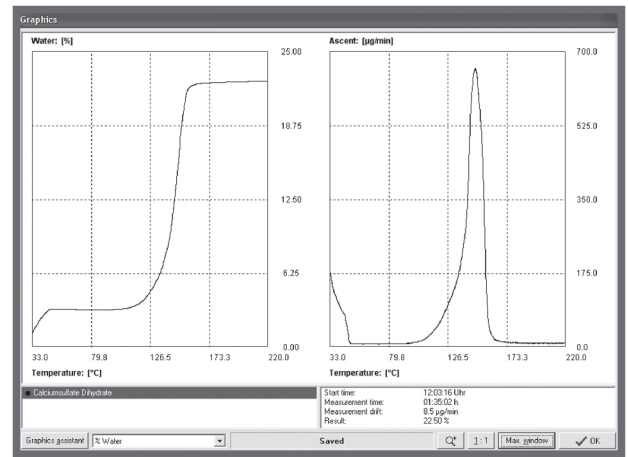
## Specifications

Sample vial:	head space vials (standard capacity 6 mL or customer specific)
Seal:	PTFE covered silica septum and aluminium cap
Temperature range:	ambient ... 300 °C (isothermal or temperature-programmed)
Power supply:	115 V, 50/60 Hz; 230 V, 50/60 Hz
Power input:	400 W
Dimensions:	AQUA 40.00 with manual version: 250 x 450 x 200 mm (L x H x D) AQUA 40.00 with autosampler (31 pos.): 480 x 450 x 460 mm (L x H x D)

## We are here for you



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Heating with temperature program



Head Space Module with compact autosampler (16 positions)