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# Water determination in oil samples

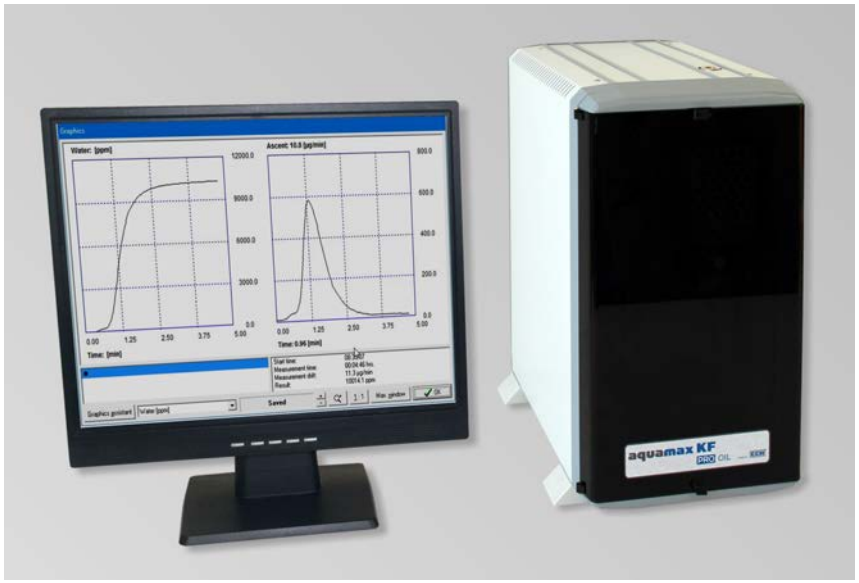
## aquamax KF PRO OIL


**Conform to Standard ASTM D 6304**

EXPERTS IN ANALYSIS

# aquamax KF PRO OIL

## Description




The Aquamax KF PRO Oil fulfils the requirements of the standard ASTM D 6304: Standard Test Method for Determination of Water in Petroleum Products, Lubricating Oils and Additives by Coulometric Karl Fischer Titration.

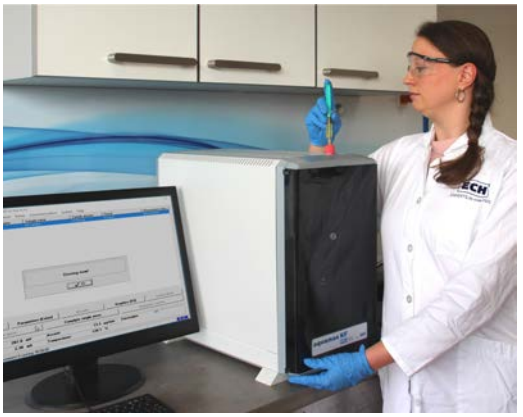
The Aquamax KF PRO Oil is the perfect instrument to measure ppm water in oils and fuels without the worry of interference side reactions caused by additives or sulphur/mercaptans. The unique “closed loop” principle means no additional carrier gas is necessary. Directly injecting the sample in to the oven means no blank value is required, making the Aquamax KF PRO Oil a truly accurate, trace level water in petroleum products titrator.

Learn more about your oils by using the temperature ramping program. This unique ECH feature allows you to see all various types of bonded water, making the Aquamax KF Pro Oil the perfect tool in the R & D, Refining, Used Oil analysis laboratories and lubricant blending plants. Crude oils are also perfectly analysed as we have the ability to display both free and bonded water.

All Aquamax KF PRO Oil parts are totally enclosed making this system completely safe and robust for use in the demanding petroleum industry. The ECH technique allows a very long reagent life, because its capacity can be used completely.

## Applications

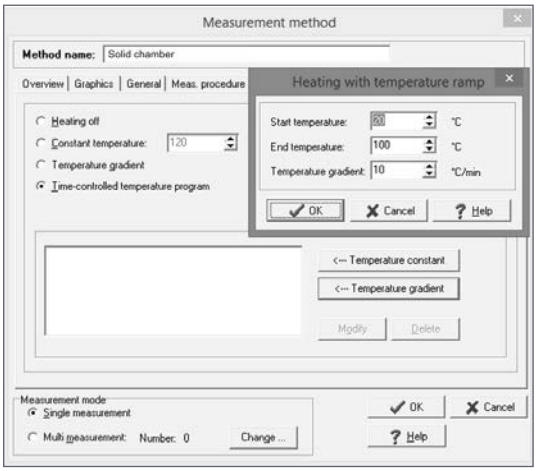
- Transformer oils
- Hydraulic oils
- Engine oils
- Gear oils
- Crude oils
- Fuel oils
- Gasoline
- Diesel
- Jet fuel
- Bio fuel
- Petroleum products
- Insulating oils
- Silicone oils
- Lubricating oils
- Biopetroleum
- Biological oils



# Features

Water extraction of the samples at temperatures 35 °C up to 250 °C, e. g.:

- Constant temperature
- Individually set up temperature programs
- Freely selectable temperature ramp
- Time-controlled temperature programs for step-by-step heating
- Type of result: µg, µg/L, mg/L, mg/kg, ppm, %, by using the formula generator

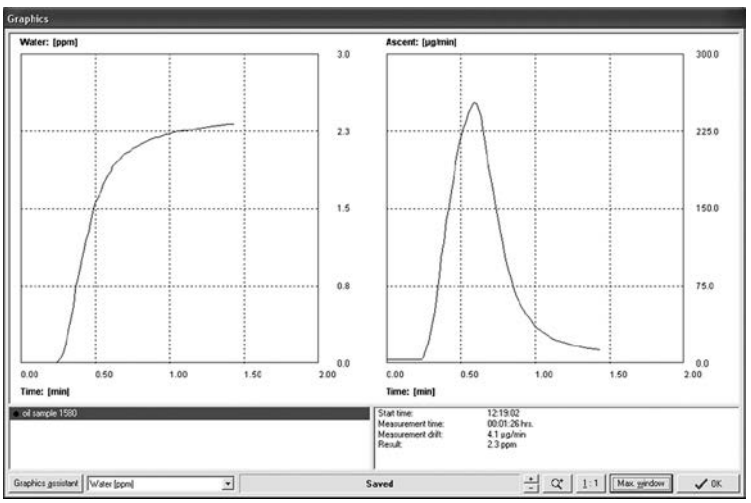



Preparation of measurement with temperature ramp

# Results

## Water determination in different oils

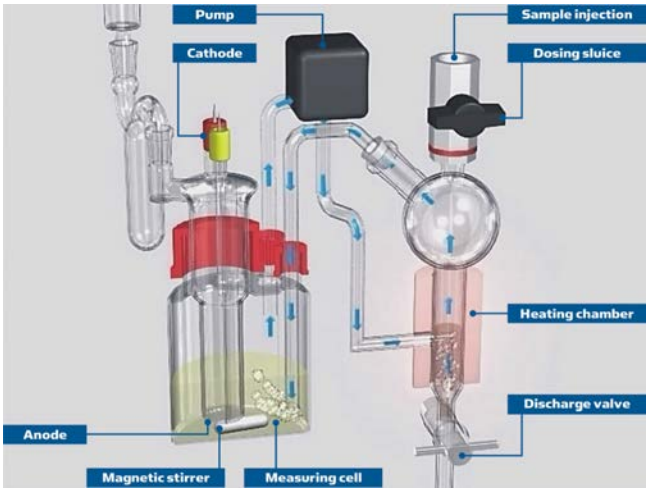
| Sample | Dosing volume [mL] | Water content [ppm] | Measurement time [min] | Heating temperature [°C] |
|---|---|---|---|---|
| Transformer oil | 2 - 5 | 9.5 ± 0.4 | 3 - 4 | 120 |
| Compressor oil | 2 - 5 | 34.4 ± 0.7 | 3 - 4 | 120 |
| Lubricating oil | 2 - 5 | 23.9 ± 0.5 | 3 - 4 | 120 |
| Silicone oil | 1 - 2 | 308 ± 2 | 4 - 8 | 70 |
| Used oil | 0.5 - 1 | 641 ± 10 | 8 - 10 | 120 |
| Hydraulic oil | 0.5 - 1 | 1415 ± 9 | 6 - 8 | 100 |
| Engine oil (used) | 0.5 - 1 | 1826 ± 9 | 8 - 12 | 120 |
| Linseed oil | 1 - 2 | 856 ± 3 | 7 - 10 | 60 |




Dual Graph Display - Shows live result and titration profile

## Advantages

- Closed loop principle does not allow methanol to evaporate from the KF solvent
- Reagent capacity is used completely
- Additive and Sulphur side reactions minimized
- By using of temperature programs it is possible to separate free and chemically bonded water
- Temperature ramping program allows you to distinguish between various types of bonded water
- No blank value meaning true ppm accuracy
- Aquamax KF PRO Oil can be used in the laboratory or used as part of a mobile lab when taking a measurement from the sample point is critical
- Compact and rugged device



Closed-loop carrier gas circulation

## Specifications

| | |
|---|---|
| Measurement method: | Coulometric Karl Fischer titration |
| Sample administration: | Manually with syringe |
| Sample amount: | 0.01 ... 20 mL |
| Heating temperature: | 35 ... 250 °C, isothermal or with temperature program |
| Blank value: | 0 µg |
| Measuring range: | 0.0001 ... 100 % |
| Power supply: | 230 V/50 Hz; 115 V/60 Hz |
| Dimensions: | 33 x 39 x 48 cm (W x D x H) |
| Weight: | 17 kg |
| Device control: | PC software (PC not included in the scope of delivery) |

## We are here for you

**Headquarters in Germany**
ECH Elektrochemie Halle GmbH
Otto-Eissfeldt-Str. 8
D-06120 Halle (Saale)
Germany
Tel.: +49 345 279570-0
Fax: +49 345 279570-99
E-mail: info@ech.de
Website: www.ech.de



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