

aquamax KF

PRO OIL

Water determination in oil samples

Conform to Standard ASTM D 6304

Product description

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 with no interferences from the mercaptan sulphur.

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 capable of analysing over 1000 samples without changing or swapping reagent.

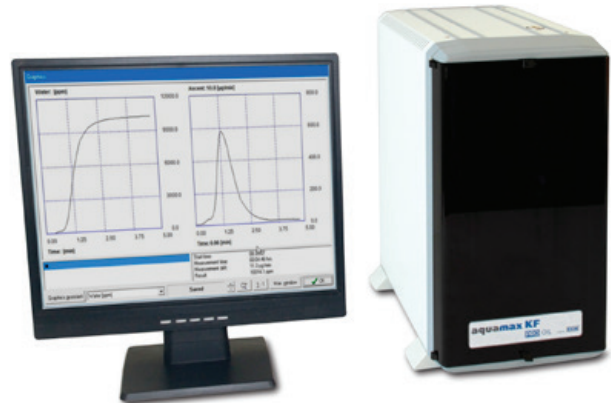
Applications

- Transformer oils
- Gasoline
- Insulating oils
- Hydraulic oils
- Diesel
- Silica oils
- Engine oils
- A1 jet fuel
- Lubricating oils
- Gear oils
- Military jet fuel
- Biopetroleum
- Crude oils
- Bio fuel
- Biological oils
- Fuel oils
- Petroleum products

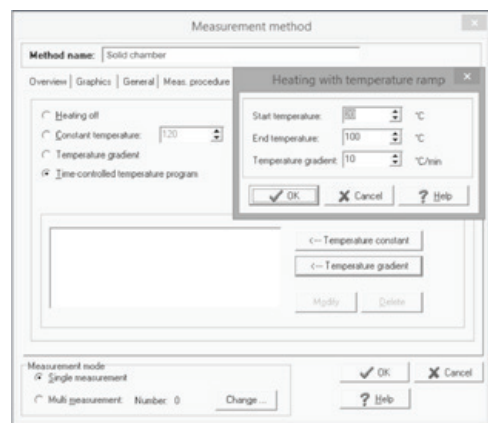
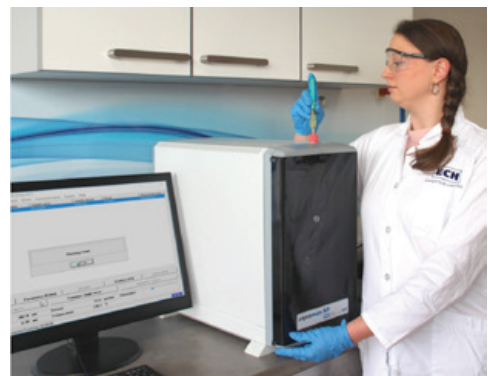
Features and Results

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



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.



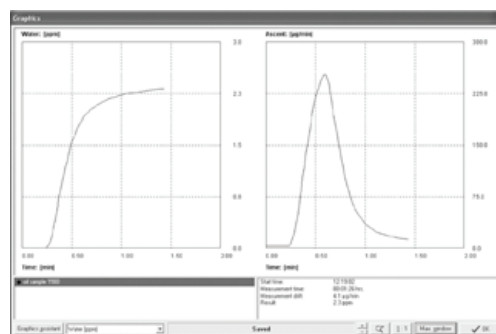
Preparation of measurement with temperature ramp

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 |

Advantages

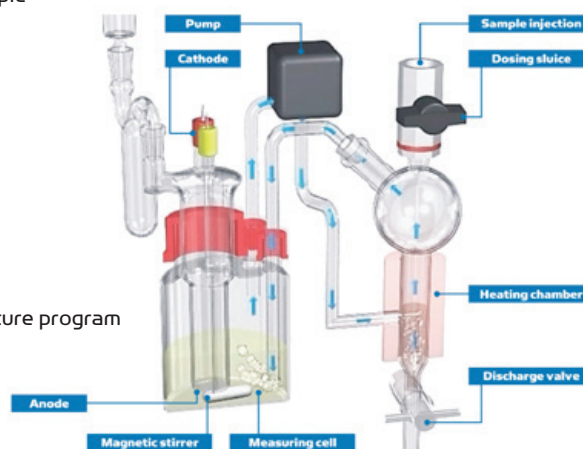
- Closed loop principle does not allow methanol to evaporate from the KF solvent
- 1000+ samples can be analyzed without changing the reagent
- Additive and Sulphur side reactions eliminated
- ECH software clearly displays both free and chemically bonded water
- Temperature ramping program allows you 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



Dual Graph Display - Shows live result and titration profile

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



Closed-loop carrier gas circulation

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