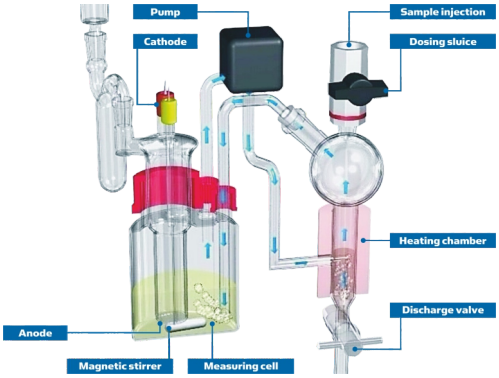
aquamax KF Online

Online water determination in petroleum products

Product description

The gas extraction is the ideal method to detect moisture in oil samples and viscous substances. The Aquamax KF Online is suitable for the continuous analysis of water in oil samples.
Trace amounts of water can be measured with the special heating chamber for oils. The sample has no contact with the reagent. Therefore the consumption of reagent is low and the detection sensitivity is high.
The oil sample is transferred automatically from sampling point of running process by using the pump module. The sample is injected into heating oven without any contamination. Oil sample volumes can be used in a range from 0.01 up to 20 mL depending on water content.
The sample can be heated out with temperature program or isothermal heating. The measurement is carried out in the measuring cell with titration method according to Karl Fischer. After analysis, the used oil sample flows out through a valve or returns to the running process.
With closed-loop carrier gas circulation, any additional gas drying is no longer necessary: the carrier gas is continually titrated to dryness within the closed loop. The total dryness of the gas enhances the moisture desorption from the sample. Moreover, sensitive samples can be heated out very gently. Degradations and side reactions are eliminated.

Aquamax KF Online for online water determination



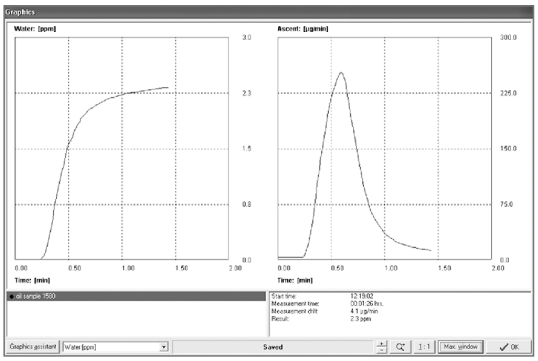
Closed-loop carrier gas circulation

Applications

- Transformer oil regeneration
- Oil treatment plant
- Refineries
- Pipelines
- Crude petroleum monitoring

Advantages

- Closed-loop carrier gas circulation
- No contact of sample with the reagent
- Low consumption of reagent
- Water determination down to 0.1 ppm
- Absolute measurement without calibration or titer determination
- No sample preparation
- For sample amounts from 0.01 up to 20 mL
- Short measuring time
- No blank value, low drift
- Freely selectable heating temperature
- Return of oil sample into system possible
- Applicable for monitoring over long period



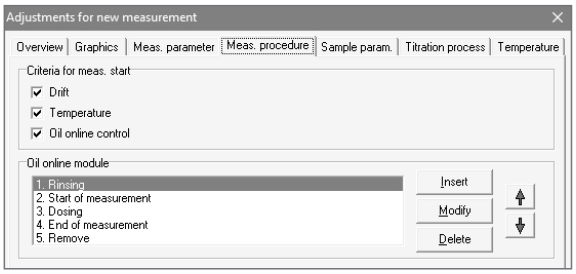
Measurement of mineral oil

Features and Results

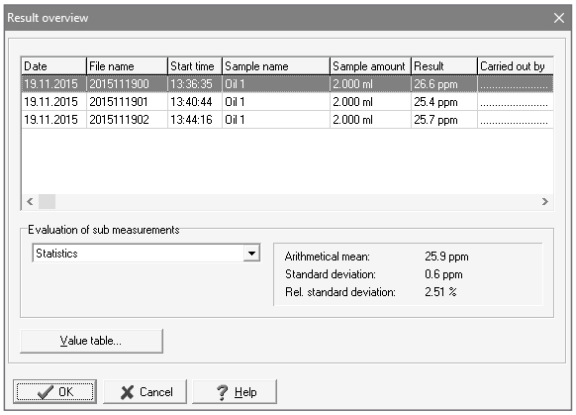
The sample ways are coupled directly with monitoring process. Thereby the oil sample is transferred into the Aquamax KF Online without any contamination. The sample transfer can be adjusted to an automatic procedure.

The control system is adjustable for various parameters:

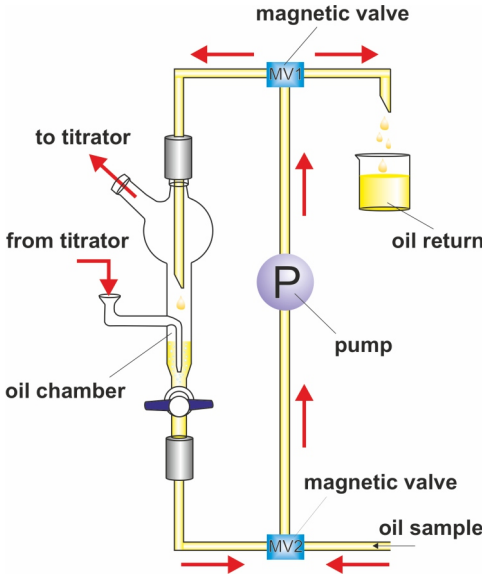
- Delivery rate of dosing pump
- Rinsing steps
- Emptying of oil chamber



Preparation of measurement procedure



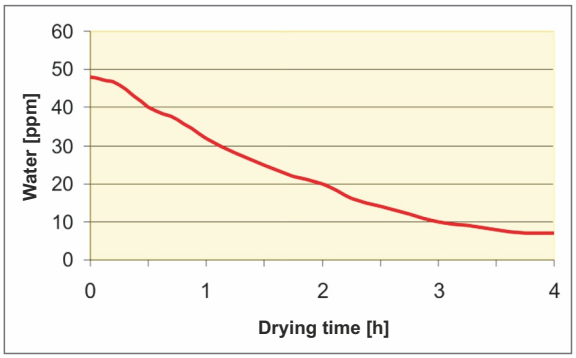
Result overview



Principle of automatic sampling and circulation

Technical specifications

Sample administration:	Automatically with high resolving ceramic dosing pump
Sample amount:	0.01 ... 20 mL
Heating temperature:	35 ... 150 °C
Measuring range:	> 0.1 ppm
Type of result:	µg, µg/L, mg/L, mg/kg, ppm, %, by using the formula generator
Power supply:	230 V/50 Hz; 115 V/60 Hz
Dimensions :	Approx. 600 x 720 x 370 mm (W x H x D)
Weight:	Approx. 53 kg



Drying process of oil treatment plant

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