In-lab ppm water content

Water determination according to standards of ASTM, API, BS, DIN, EI/IP, EN, IEC, ISO, Ph. Eur.

aquamax KF Plus

made by ECH

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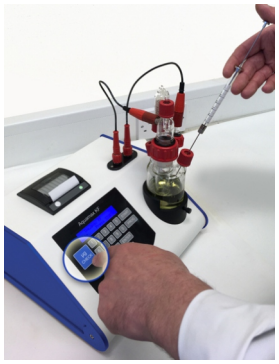
Product description

Aquamax KF Plus titrators have been specifically designed for the determination of water content, combining coulometry with the Karl Fischer method. The versatile Aquamax KF Plus is suitable for a wide range of applications and offers many advantages including a tough measuring vessel, a ‘press go’ keypad and built-in printer.

Small footprint - enclosed parts

The Aquamax KF Plus and Aquamax KF Portable are both small footprint instruments with all parts enclosed, designed to save lab space and allow for easy transportation from the lab to the sampling point. The instruments built in battery allows for use outside of the laboratory, the back of the truck or mobile lab, or in areas where electrical mains stability is not available.



Water check button and syringe

Water check

The µg check button allows the operator to simply press go, inject 1 µL or maybe 10 µL of distilled water (as required by some ASTM methods) and verify if the instrument and reagent are working with in their required specification. The µg check overrides the programmed calculation and displays/prints out a report of the verification check. The coulometer then automatically reverts to the pre-programmed setting.

Features

- Simple operation
- 10 user programmable methods
- 1 ppm/100 %
- Results in ppm, mg/kg, %, µg (absolute water content)
- Multi language display & printout
- Small footprint
- Integral high speed printer
- Integral battery
- Fully portable
- Low drift cell design
- Automatically compensated errors (patented technique)

Tough measuring vessel

The unique LDC glassware design is by far the easiest to use and the most robust. The electrode locking system allows the joints to seal completely, without the use of grease or PTFE sleeves, and provides improved baseline stability. Hassle free assembly and disassembly.

Gas tight sampling syringes

Each Aquamax KF is supplied with a white lettered gas tight sampling syringe and luer needle which has been designed specifically for accurate sampling of oils and fuels.

Where do you need an Aquamax KF

From raw materials to finished products, to preventive maintenance programs, you will find Aquamax KF in the labs, the back of mobile rigs and even on-line as part of an industrial process. If you are testing any of the following processes and samples you may need an Aquamax KF instrument to test your water content!

- Exploration and production of crude oil and natural gases
- Refining of petroleum products like bitumen, fuel oil, lubricating oils, waxes, polishes, diesel fuel, jet fuel, paraffin, petrochemicals, gasoline and bottled gas (LPG)
- Pipeline and transportation of oils, fuels and petrochemicals
- Biofuels
- Liquid plastic and polymer components
- Pharmaceutical products
- Extracts like cannabis oil and vaping fluids

Method Conformity

The coulometric Karl Fischer titrators Aquamax KF Plus/Portable can be used for the following standard methods:

ASTM	D 1364	Volatile solvents
ASTM	D 1533	Insulating liquids
ASTM	D 3401	Halogenated organic solvents
ASTM	D 4928	Crude oils
ASTM	D 6304	Petroleum products, lubricating oils, additives
ASTM	D 7995	Total Water in Liquid Butane
ASTM	E 1064	Organic liquids
API	Ch. 10.9	Crude oil
BS	6829:1.5	Surface active agents
DIN	51777	Petroleum products
DIN EN	60814	Insulating liquids - Oil-impregnated paper and pressboard
DIN EN ISO	12937	Petroleum products
EI / IP	386	Crude petroleum
EI / IP	438	Petroleum products
ISO	TC 158/SC	Natural gas and gas substitutes
ISO	10101-1	Natural gas
ISO	10101-3	Natural gas
ISO	10337	Crude petroleum

Pharmacopeia (Ph. Eur.)

Single shot Karl Fischer Reagent

Aquamax KF Reagent A is a general coulometric KF anolyte for use with generator electrodes which incorporate a frit or diaphragm to separate the anode and cathode chambers. Used in conjunction with Reagent C this formulation is supplied in a pack of 8 x 100 mL bottles, 8 x 5 mL cathode vials, all conveniently located in a single carton. To conform to ASTM, API, EI, ISO (plus others) methodology for water content determination of oil and petroleum products, the anode reagent must be modified with xylene to improve sample solubility and miscibility. Aquamax KF Reagent is pre-mixed with xylene, and other solubilizers to eliminate side reactions, so that the operator does not have to store or mix chemicals.

aquamax KF Plus

Technical specifications of Aquamax KF Plus

Titration method:	Coulometric Karl Fischer titration
Electrolysis control:	Patented “ACE” control system Gb2370641
End point detection:	AC polarisation
End point indication:	Visual display/print out/acoustic beep
Titration vessel:	Low Drift Cell design, no grease or PTFE sleeves required
Measuring range:	Possible 1 µg - 200 mg water Typical 1 µg - 10 mg water
Water content:	1 ppm - 100 % water
Max. sensitivity:	0.1 µg
Max. titration speed:	2 mg per minute
Max. current:	350 mA
Drift compensation:	Automatically controlled
Precision:	10 - 100 µg ± 3 µg; 100 µg - 1 mg ± 3 µg, above 1 mg ± 0.3 %
Start delay time:	0 - 30 minutes, user selectable
End delay time:	0 - 30 minutes, user selectable
Calculation modes:	Weight/weight (W/w) (user programmable), Weight/dilution ratio (W/K) Volume/density (V/SG) Volume/volume (V/v)
Display format:	µg, mg/kg, ppm, %
Print format:	µg, mg/kg, ppm, %
Statistics:	max, mean, min values up to 99 runs
Method storage:	10 user programmable methods
Sample ID number:	User programmable
Stirrer speed:	Microprocessor controlled
Languages:	Multi languages – user selectable
Calendar/clock:	Analysis time & date print out
Battery low indicator:	Display & print out indication
Removable data storage:	Flash drive (memory stick) - optional
Data entry:	15 key touchpad
Display:	40 character alphanumeric backlight LCD
Printer:	42 character high speed thermal printer
Power supply:	120 V, 60 Hz; 230 V, 50 Hz
Internal power supply:	18 V DC
Power input:	40 W
Dimensions:	290 x 255 x 130 mm
Weight:	3.0 kg

Certificates

All Aquamax KF coulometric titrators are supplied with a calibration certificate traceable to national standards. For additional technical information, specifications, user manuals, and exhibition news email us at info@echscientific.com

Book your online demo in the ECH Studio

ECH Scientific have a state of the art laboratory fitted with online presentation capabilities, allowing us to bring product demonstrations live and in full HD, with multiple camera angles and software sharing capabilities enabling us to deliver a full demo experience remotely. Please contact info@echscientific.com to book your session.

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the ECH advantage

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