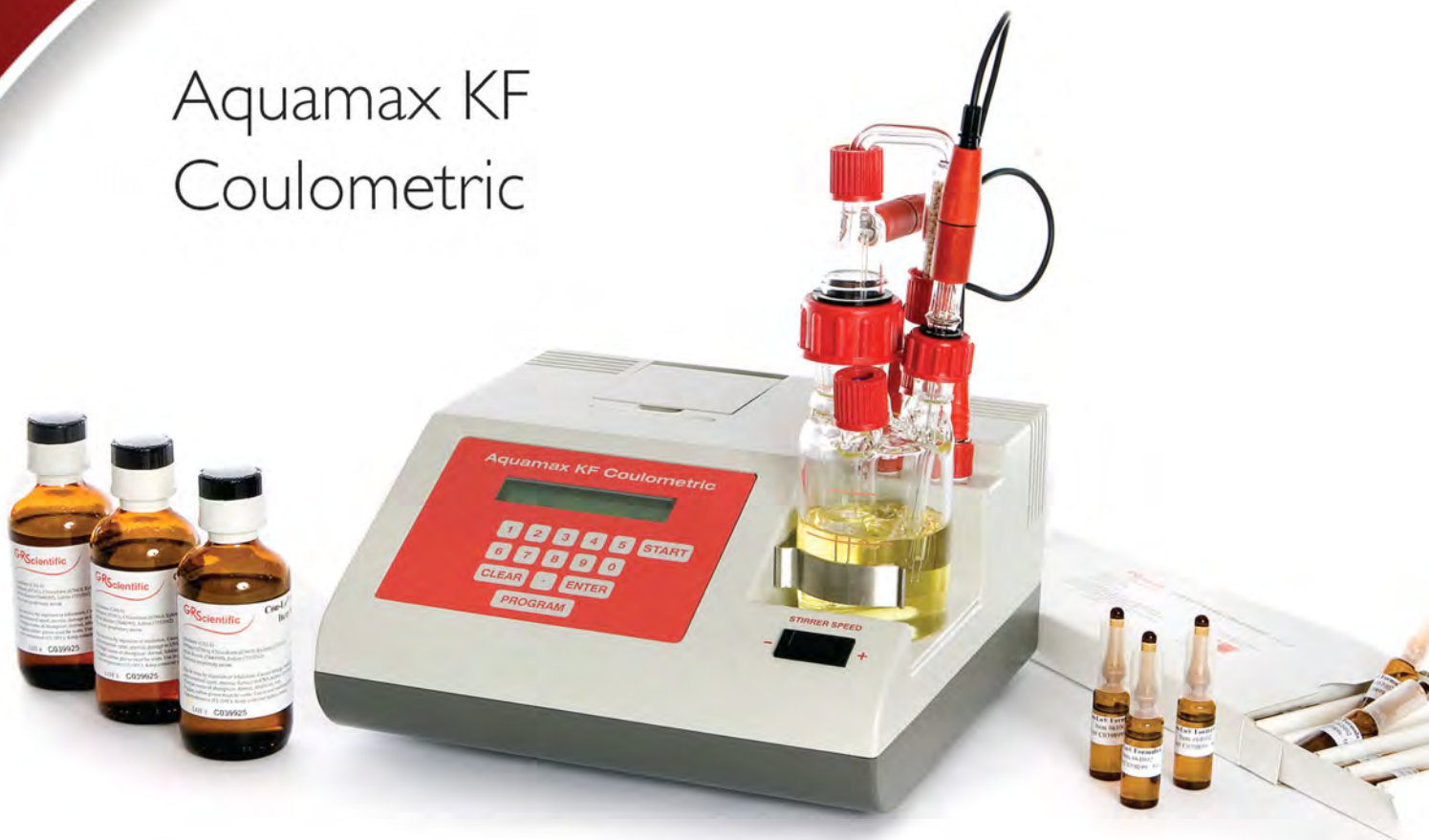


GRScientific

Aquamax KF Coulometric



Areas of application:

- Petrochemical
- Aviation
- Power (electricity)
- Chemicals
- Contract Laboratories
- Gases
- Universities
- Automotive
- Pharmaceuticals & Toiletries / Cosmetics

ima

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Aquamax KF Coulometric

Aquamax KF Coulometric titrators have been specifically designed for the determination of water content. Combining coulometry with the Karl Fischer method, Aquamax KF titrators determine the water content of samples by measuring the amount of electrolysis current necessary to produce the required iodine – this is an absolute technique which does not require the calibration of reagents.

Aquamax KF titrators have been developed in response to many suggestions and comments from our customers in routine laboratories, off-shore platforms and in the field. The built-in battery and optional carry case provide the versatility required by the laboratory and also the ease of use and portability required by the field engineer.

The Aquamax KF offers many advantages over competition. Easy to use – simple to programme so that only a single button needs to be pressed for a titration, everything else is automatic. Complete with built-in high speed printer; everything in a single footprint, small space requirement. Results can also be downloaded via the Results Manager software package onto a pc spreadsheet.



Results Manager

The screenshot shows the 'Results Manager' software window. At the top, there are buttons for 'CONNECT', 'SAVE', 'LOAD', 'EXPORT', and 'PRINT'. Below these, it displays 'Status: Disconnected', 'Model: Coo-La Aquamax 2.4', 'Serial#: 71006', and 'Calibrated: 08/05/2006'. The date is '15 May 2006', 'Results: 4', 'Result Format: ppm', and 'Calculation Mode: V/SO'. A table titled 'Results for Sample 10 001' is shown with columns: 'Inpt', 'Time', 'Unit', 'Net', 'Volume', 'Density', 'Result', and 'Flag'. The table contains four rows of data. At the bottom, summary statistics are displayed: 'Max: 10.8 ppm', 'Min: 10.1 ppm', 'Mean: 10.4 ppm', 'SD: 0.30', and 'CV: 2.85'.

Inpt	Time	Unit	Net	Volume	Density	Result	Flag
1	07:48:20	g	0.97	1.0000	0.9700	10.25	
2	07:47:42	g	0.91	1.0000	0.9700	10.13	
3	07:48:37	g	0.98	1.0000	0.9700	10.92	
4	07:49:29	g	0.97	1.0000	0.9700	10.43	

This is a windows application that allows you to view and print sets of results created by the Aquamax KF Coulometric. It can download results directly from the titrator through a serial port connection, or open result files

previously saved to disk. The Results Manager package contains all necessary cables, connections, installation cd and user manual.

For those who need to use the titrator outside of the laboratory and do not have a pc or laptop with them, our removable flash drive (memory stick) will store all the results. This flash drive can then be connected to a pc and results downloaded through Results Manager when returning to the laboratory.

The Results Manager Software is supplied as a standard item included with the Aquamax KF.

Key Features

- Simple operation
- 10 user programmable methods
- 1 ppm / 100%
- Results in ppm, mg/kg, % & µg water
- Multi language display & print out
- Small footprint
- Integral high speed printer
- Fully portable
- Low drift cell design
- Automatically compensated errors (patented technique)
- Results Manager software
- Optional carry case
- Conforms to ASTM D1533, D4928, D6304, IP386, IP438, API MPMS Chapter 10.9, IEC60814, ISO 10101-3, 10337 & 12937



Coulometric Reagents

Cou-Lo Formula reagents offer optimum performance with Aquamax KF titrators. Our packaging concept has been based on advice from the HSE (Health & Safety Executive) to enable non laboratory personnel to work more safely. Cou-Lo Formula reagents are safer to use and safer to store.

Cou-Lo Formula "A" anode reagent is suitable for most routine applications and is especially useful for water content determination of oil samples, e.g. transformer oils, crude oils, etc. The anode reagent is supplied in "single shot" bottles of 100ml, no volume measurement or mixing with other solvents is required. Cathode reagent, Formula "C", is supplied in "single shot" 5ml ampoules which have "safety snappers" pre-fitted thereby reducing risk to the operator.

Each pack contains 8 x 100ml bottles of anode reagent plus 8 x 5ml ampoules of cathode reagent plus two water standards. Weighing only 3 kilo, the total pack volume is less than one litre so they can be shipped as limited quantity. Full MSDS information can be downloaded from our website.

Glassware

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



Carry Case

The optional carry case, complete with internal storage compartment, allows the titrator to be transported with the glassware already assembled and charged with reagents. Ready for immediate operation on arrival.



Technical Specifications

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 - 200mg water
Typical 1 µg - 10mg water

Moisture range: 1ppm - 100% water

Max. sensitivity: 0.1 µg

Max. titration speed: 2.24 mg per minute

Max. current: 400 ma

Drift compensation: Automatically controlled

Precision: 10-100µg ± 3µg, 100µg-1mg ±3µg, above 1mg ±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

Data outputs: USB and RS232 ports

Removable Data storage: Flash drive (memory stick)

Data Entry: 15 key touchpad

Display: 40 character alphanumeric backlit LCD

Printer: 42 character high speed thermal printer

Power supply: 90-264V AC, 47-63 Hz.

12V DC car adapter/internal battery

Dimensions: 250 x 245 x 120 mm

Weight: 3.5 kg

Ordering Information

Part No.	Product
71000	Aquamax KF Coulometric - Bench Top
71000P	Aquamax KF Coulometric - Portable (with carry case)
Supplied Accessories (also available as spare items)	
71-0102	Titration Vessel
71-0103	Detector electrode
71-0104	Generator electrode (with frit)
71-0106	Desiccant tube & cap
71-0107	Injection septa (pack 10)
71-0108GTI	Gas Tight 1ml syringe
71-0109	Luer needle
71-0119	Thermal paper roll
101005	Results Manager software package
Optional Accessories	
201109	Carry Case
61000	Cou-Lo Formula reagents pack

About G.R. Scientific

Key personnel at G.R. Scientific are recognised experts in titration technology and electrochemistry. They have designed and manufactured titrators since the early 1980's and are widely regarded as some of the leading specialists in this technology.

Certificates

All Aquamax KF Coulometric titrators are supplied with a calibration certificate traceable to national standards.

For additional technical information, specifications, MSDS data, user manuals, and exhibition news, visit our website at:

www.grscientific.com



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