

GRScientific

Cou-Lo Aquamax KF Moisture Meter



Areas of application:

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

Cou-Lo Aquamax KF Moisture Meter

Cou-Lo Aquamax KF moisture meters 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

A screenshot of the GRS Scientific Results Manager software. The window has a blue title bar and a red header with the GRS Scientific logo and the text 'Results Manager'. Below the header is a menu bar with 'CONNECT', 'SAVE', 'LOAD', 'EXPORT', and 'PRINT'. The main area displays status information: 'Status: Disconnected', 'Model: Cou-Lo Aquamax 2.4i', 'Serial#: 71006', and 'Calibrated: 09/05/2006'. It also shows 'Date: 15 May 2006', 'Results: 4', 'Result Format: ppm', and 'Calculation Mode: V/SQ'. A table titled 'Results for Sample ID: 001' contains four rows of data. At the bottom, summary statistics are shown: 'Max: 10.5 ppm', 'Min: 10.1 ppm', 'Mean: 10.4 ppm', 'SD: 0.30', and 'CV: 2.89'.

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 built-in xd memory card system will store all results. The removable card can then be connected to our card reader to download stored data 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.



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.

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.



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
Measuring range:	
Possible	1µg - 100mg water
Typical	1µg - 10mg water
Moisture range:	1ppm - 100% water
Max. sensitivity:	0.1µg
Max. titration speed:	2.0 mg per minute
Max. current:	400 ma
Drift compensation:	Automatically controlled
Precision:	10-100µg ± 3µg, 100µg-1mg ± 5µg, above 1mg ± 0.5%
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:	English, Français, Español, Portuguese, Deutsch & Magyar; user selectable
Calendar/clock:	Analysis time & date print out
Battery low indicator:	Display & print out indication
RS232 output:	Connection to Results Manager
Removable Data storage:	XD Card
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	Cou-Lo Aquamax KF Moisture Meter
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)
71-0108	Glass syringe 1ml
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

The key personnel at G.R. Scientific are recognised experts in coulometric Karl Fischer titration technology. They have designed and manufactured coulometric titrators since the early 1980's and are widely regarded as some of the leading specialists in this technique. G.R. Scientific also manufacture KF titrators for several OEM (private label) customers.

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The Company reserves the right to change the specification or design without prior notice. Cou-Lo is a registered trademark of G.R. Scientific Ltd. ACE Control System patented technique owned by G.R. Scientific Ltd.

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technical information,
specifications, MSDS data,
user manuals, lists of distributors
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