GRScientific

Conforms to ASTM/EN/ISO Standards

Aquamax KF *Plus*

*A **Truly Versatile***
Coulometric Karl Fischer Titrator

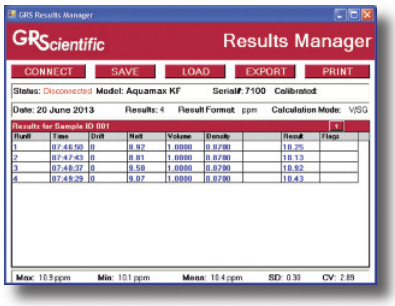
Aquamax KF *Plus*

Aquamax KF *Plus* 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.

The Aquamax KF *Plus* is a truly versatile model which includes a built-in battery and printer to enable use in areas where the power supply is irregular. Low Drift Cell twin port glassware, results manager software and accessories are supplied as standard. As well as being a stand-alone instrument, the Aquamax KF *Plus* can be combined with an Oil Evaporator or a Solids Evaporator system. Suitable for a wide range of applications the Aquamax KF *Plus* can be used to determine water contents of liquids, gases and solids.

The Aquamax KF *Plus* 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. Results can also be downloaded via the Results Manager software package onto a pc spreadsheet.

Results Manager



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
- 1ppm / 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

Glassware

The Aquamax KF *Plus* is supplied complete with a unique Low Drift Cell glassware pack comprising titration vessel, generator electrode, detector electrode, desiccant tube and all necessary leads, septa, caps & fittings. A choice of generator electrodes is available, either with or without frit. For most applications the electrode with frit, and which uses both anode and cathode reagents, is preferred, however for some applications , for example polymers, a fritless electrode and single coulometric reagent is more suitable. The LDC 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 PTFE sleeves, and provides improved baseline stability. Hassle free assembly and disassembly.

Areas of Application

Raw Materials
- Inorganic and organic salts, oxides, peroxides and carbonates

Pharmaceutical
- Tablets
- Salves and creams
- Drugs
- Vitamins

Cosmetics
- Soaps, shower gels and shampoos
- Dental Care and mouth rinse products
- Sprays

Beverages

Dairy and Meat Products

Honey, Molasses and Sugars

Tobacco products

Animal Feed

Biological
- Proteins and gelatins
- Hormones and steroids
- Dried plant material
- Vaccines

Petrochem
- Hydrocarbons
- Lubricating, motor oil and greases
- Hydraulic, insulating and transformer oils
- Mineral oils
- Crude oils,
- Petroleum products,
- Organic liquids,
- Surface active agents,
- L.N.G.,
- L.P.G.
- Refrigerant gas.

Plastics

Surfactants

Paints, lacquers and solvents

Leather, paper and textiles

Agriculture

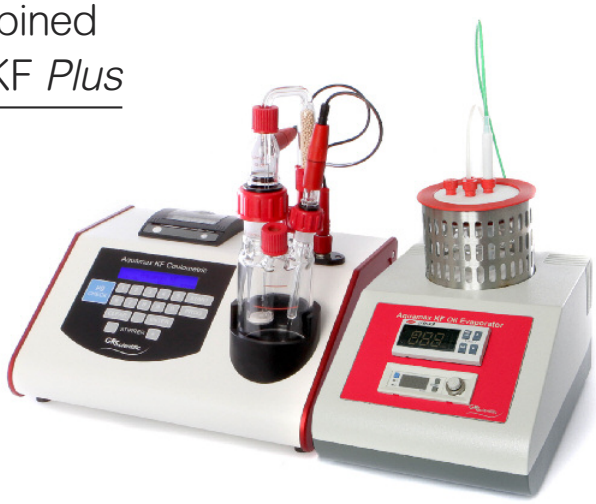
Optional accessories for combined operation with the Aquamax KF *Plus*

Aquamax KF Oil Evaporator

For water content determination of additives, lube oils, base oils, automatic transmission fluids, hydrocarbon solvents, and other petroleum products.

Aquamax KF Solids Evaporator

For water content determination of solids such as plastics, nylons, paper, powders, etc.



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 1µg - 200mg water
Typical 1µg - 10mg water
Moisture range: 1ppm - 100% water
Max. sensitivity: 0.1µg
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

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.

Ordering Information

Part No.	Product
710003	Aquamax KF *Plus* Coulometric Tritrator
101005	Results Manager Software Package
401511	Power Adaptor
503073	Paper Roll (Thermal) Single
503063	Gas Tight 1.0ml Syringe
503053	Titration Vessel LDC
503054	Detector Electrode LDC
503055/ 503056	Generator Electrode ± frit LDC
503057	Electrode Lead
503058	Desiccant Tube LDC & Cap
503059	Pack Injection Septa (10 pack)
503070	Molecular Sieve
503071	Stirrer Bar
503156	Polypropylene Funnel
503164	Luer Needle 19 Gauge (Screw Fit)

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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