ION570 Ion Analyser

High-performance ISE meter

- Built-in burette for automated ISE standard additions & electrode calibration
- Graphical view of ISE calibrations and standard additions
- pH and Conductivity measurements in the same beaker
- Built-in sample stand with magnetic stirring
- QC management with GLP functions
- Automatic method sequencing in sample series

Automated Ion Selective measurements save time and space

The ION570 determines and adds the volume of standard required to ensure accurate and reliable results thanks to its highprecision burette and intelligent software. ISE calibrations or standard additions are handled automatically for each sample. You can select pH, conductivity or ion selective measurements according to your needs, linking calibrations and methods as you wish.

Intelligent design ensures effortless set-up and maintenance

All electrodes and tubing slot securely in place in one easy movement thanks to our unique bayonet concept. For convenient installation and maintenance, the monobloc burette is mounted in no time.

Intuitive interface guides you through every step

Clear-text prompts in a choice of languages make routine work so much simpler. Graphical view of ISE calibrations and easyto-review GLP archives mean you can always be sure of the quality of results.

Complete automation frees up your time

The ION570 comes complete with interfaces for sample changers, additional burette stations, printers and PC so you can automate pH, conductivity and ion measurements in the same beaker - sample after sample.

Full traceability and control give you confidence in your results

Comprehensive GLP archives and the ability to add QC samples to your sample runs ensure you can count on your results. Optional Supervisor and User levels ensure that methods are protected and set procedures systematically followed.

Comprehensive support from our experts

Free application notes and software updates are permanently available from our Internet Resource Centre. All you need to provide is the sample!



Technical Specifications

Ion Selective Method (ISE)

ISE measurements using standard additions or direct measurements with recording on stable reading. Standard additions or manual calibra-

tion with up to 9 points.

Automatic electrode calibration up to 4 points.

Curves fitted using non-linear regression with $C_{\rm p}$ detection limit determination according to IUPAC.

Automatic standard additions: volumes programmed or automatically determined.

Curve plotting: GRAN plot vs. Volume for standard additions, mV = f(pC) for ISE calibration.

Potentiometric methods

pH electrode calibration: up to 5 points using IUPAC standards or 4-7-10 Series buffers with error recognition on buffer used.

Possibility to work with user-defined buffer values using the Free buffer mode. pH with temperature-compensated reading: probe, entered or fixed at 25°C. Direct pH/mV measurements with recording on stable reading.

Reagent addition: up to 3 simultaneous or consecutive additions.

Sequencing of up to 10 methods, including electrode calibrations.

Coupling of 2 to 6 methods in one beaker, including direct ISE and EC measurements.

Conductivity method (EC)

Direct conductivity measurements with recording on stable reading. Conductivity with temperature-corrected display: none, natural water (ISO 7888), linear.

Conductivity cell cable resistance compensation.

Conductivity cell calibration: manual or automatic cell constant determination using free standards or 1, 0.1, 0.01 Demal KCl standards, NaCl 0.05% and 25 µS/cm @ 25°C low conductivity standard, 0.1, 0.01 and 0.001 M KCl standards.

Measuring ranges 📮 Resolution

-9 to 23 pH	Ha 100.0
±2000 mV	0.1 mV
4 uS, 40 uS, 400 uS,	1/4000
4 mS, 40 mS, 400 mS	of scale
-10°C to +100°C	0.1°C

Printout

Automatic. GLP compliant. Selectable: no, 80 columns, continuous, page to page. 3 levels of detail. Laser or dot matrix printer.

Results

QC check on results with visual warning. Statistical calculations. Sample quantity recalculation before archiving. Result recalculation.

- Units

All standard units for samples/results. Conductivity: µS/cm or mS/cm. User-defined result units.

Storage capacity

Global password protection for programming access. Non-volatile memory. User programmable: 50 methods. Libraries for 30 electrodes and 30 reagents: more than 30 electrodes and 20 reagents pre-identified with ID and type to help programming. Storage of 200 results. Stored parameters characterised by own ID, location and calibration data. Embedded operating procedures for electrode and reagent exchange. Automatic electrode and QC prompt.

Sample list

Up to 126 data with alphanumeric ID. QC sample definition.

Electrode stand - stirring

Magnetic stirrer, 22 reproducible speeds (0 to 1100 rpm) in 50 rpm steps. Propeller connection. Beaker volume: 5 to 400 ml.

Burette

1 embedded burette stand. Volumes available: 1, 5, 10, 25, 50 ml. Burette motor: 18000 steps. Complies with ISO 8655-3. Burette extension: 4 (with ABU52). UV-protected encapsulated glass syringe. Embedded operating procedures for burette exchange, air bubble removal. Rinse, Fill, Empty function.

Inputs/outputs

2 indicator & 1 reference electrode input.
1 ground input for differential measurement.
1 temperature input.
2-/4 pole conductivity cell input.
0-5 V and 0-12 V TTL output.
0-5 V TTL input.
Serial connections for printer/PC and additional ion analyser.
Burette and electrode input extension with ABU52.
Serial connection for sample changer fitted with 10 to 126-position tray.
PS/2 port for PC keyboard and/or barcode reader.



📮 Languages

English, German, Danish, French, Italian, Spanish, Swedish.

Casing

Fully splashproof chemical resistant latene®. Graphic 128x128 dot LCD protected from spillages with TPX® cover. Soft-touch alphanumeric keypad (silicone).

Dimensions (H x W x D) & Weight

380 x 230 x 450 mm (excl. tubing). 5 kg (excluding reagent bottles).

Power requirements

47.5 - 63 Hz 115/230 Vac +15 -18%.

Environmental conditions

5 to 40°C temperature. 20 to 80% relative humidity.

International standards

CE marking: complies with EMC directive 89/336/EEC, LV directive 73/23/EEC. cETLus certification issued by ITS/ SEMKO. UL standard 61010A-1. CSA standard C22 2 No.1010.1-92.

Ordering information

ION570 system

The ION570 Ion Analyser includes a full set of connecting cables, sample stand accessories and one burette from a choice of 1, 5, 10, 25 and 50 ml stands.

Metrology

To comply with ISO 9001 and ISO 17025 requirements, our metrology department can supply calibration and verification certificates.



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