

TITRATION HAS NEVER BEEN THIS SIMPLE.

HACH LANGE's AT1000 Titrator Series delivers accurate results for your drinking water treatment process and is the best alternative to manual titration.



- Alkalinity
- Hardness
- Chloride
- Chlorine Dioxide and Chlorite

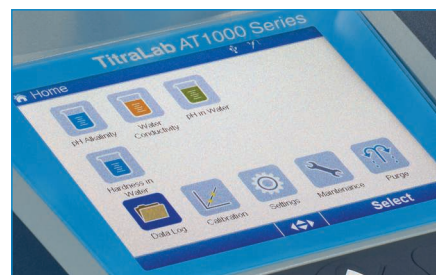
AT1000 Titrator Series



Simple, automatic titration is safer and more accurate than manual titration.

Easy to use

- Intuitive user interface with a large coloured display (5.7")
- Saves time with embedded peristaltic pumps for automatic sample preparation
- Simplified handling with automatic recognition of digital INTELLICAL probes. Plug and play applications – no programming required



Icon-based intuitive user interface

Reliable and accurate results

- Pre-programmed and optimised methods for drinking water
- Best accuracy and minimal reagent waste with high resolution burette for precise titration
- Repeatable results with automatic end point detection. Eliminate systematic error introduced by human interpretation of colour end point



1 external and 2 embedded peristaltic pumps

Safer than manual titration

- Safe handling due to no direct contact with reagents
- Compact and all-in-one design for fast and secure handling
- Automated routine titration ensures higher reliability of results



Recognises INTELLICAL probes for routine and challenging samples



Pre-programmed drinking water application examples

Perform pH-measurement, conductivity measurement and alkalinity titration automatically in ONE sample.

Alkalinity

To monitor the balance between lime and carbonic acid that prevents scaling and corrosion problems in the drinking water distribution network.

The alkalinity application is based on ISO standard 9963-1:1994 (determination of total and composite alkalinity). This application uses acid titration with a determination of two equivalent points by means of pH electrode.

Hardness

To monitor the concentration of Ca^{2+} and Mg^{2+} ions which can form lime and carbonate precipitates that can attack or block tubes/pipes.

The hardness application is based on ISO standard 6059:1984. This application uses EDTA titration with a potentiometric determination of the equivalent points (Ca^{2+} / Mg^{2+}) by means of a Calcium ion-selective electrode (ISE).

Chloride

To comply with local drinking water regulations and prevent corrosion problems in the water distribution network.

The chloride application is based on ISO standard 9297:2000 (Mohr method). This application uses silver nitrate titration in acidic solution, with a potentiometric determination of the equivalent point by means of a Silver electrode.

Chlorine Dioxide and Chlorite

To monitor levels of chlorine dioxide in the clear well and into the water distribution network.

Monitoring of chlorine dioxide is regulated by EU norms (European Drinking Water Directive 98/83/EC and Water Supply and Sanitation (WSS) in the EU). It is measured with amperometric titration by means of a double platinum electrode.

Technical Data

Titration types	Potentiometric (zero & imposed current), Amperometric, Colorimetric.
Measurement mode	mV/pH, Conductivity, Temperature (°C or °F)
Sample stand	Integrated, Magnetic stirring, Beakers up to 250mL.
Supported electrodes	INTELLICAL ("Plug & Play" Digital), Analogue, Photocolorimetric
Burette motor resolution	20,000 steps with electronic µstepping technology (128 µsteps/step)
Calibration	Titrant & Electrode (Up to 5 Buffers in mode Auto, Fixed & User defined)
Internal data storage	Last 100 Samples, QC & Blank analyses, Last 10 Calibrations
Export result data	On USB Key, CSV type, Excel compatible
Display type	5,7"; Graphic colour; VGA
Supported peripherals	Printer, PC Software, Balance, Sample changer, Keyboard, Mouse, Bar code reader, Sampling Pump, Propeller Stirrer
Traceability features	Date, time, operator IDs, sample IDs
User maintenance	Yes, user defined period
Password protection	Yes, user defined
Communications	Electrode ports (x2), USB (x2), Serial (x1), Ethernet (x1)
Dimensions (WxDxH)	22 x 40 x 36 cm (8.7 x 15.7 x 14.2 in.)



Peace of mind with HACH LANGE Service:

- Maximum instrument uptime
- Warranty extension options
- Predictable operating and maintenance costs
- Confidence in regulatory compliance

Get access to value added content for drinking water applications.

We have a dedicated team of industry experts specialising in drinking water and they will provide you with various application notes, interactive tools, videos and webinars!

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