

Titration Has Never Been This Simple

Hach's AT1000
Titrator Series
delivers accurate
results for your
products' quality
control and is the
best alternative to
manual titration



Be Right™

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
- With the AS1000 Sample Changer, multi-parameter automation solutions free up your time to release operators' time from cumbersome repetitive analyses. Available in different capacities.



Icon-based intuitive user interface

Reliable and accurate results

- Pre-programmed and optimised methods for Food & Beverage products
- 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
- No use of colour indicator which can be dangerous for health (e.g. Phenolphthalein)
- Automated routine titration ensures higher reliability of results



Recognises INTELLICAL probes for routine and challenging samples



Pre-programmed food and beverage application examples

Perform direct measurements (pH, conductivity) and automatic titrations with the same instrument.

pH/Total Acidity

Total acidity corresponds to the sum of titratable acidities. The method rests on a weak acid titration by a strong base (NaOH). This titration uses a high performance pH probe adapted to food samples (PHC725) which avoids coating and is easy to clean. AT1000 offers several pre-programmed and optimised methods for liquid or solids samples (Total Acidity in milk, fruit juices, soft drink, kombuacha, beer, wine, tomato sauces...) which follow norms or international recommendations (OIV, AOAC,...). Results can be expressed in different acid types (Lactic, citric, tartaric, acetic...) or specific units (° Dornic, ° S-H).

With AT1000 you don't need to use a dangerous colour indicator like Phenolphthalein!

Sulphur Dioxide

The AT1000 directly measures Free and Total SO₂ according to the Ripper method, with iodine as a titrant and a double platinum probe. The AT1000 uses pre-programmed and optimised methods for the determination of Free & Total SO₂ in wines. For safe use, sulfuric acid and sodium hydroxide are automatically added by the AT1000 thanks to its 2 embedded pumps. To save time, a specific preparation method allows preparation of a serial of samples (NaOH addition) before the Total SO₂ measurements. Thanks to the pipetting feature, the user doesn't need to precisely measure the volume of the samples, the AT1000 will do this automatically.

For large series of samples, save time and money by automating measurements with the AS1000 sample changers.

Salt (Chlorides)

Determination of salt uses a titration with silver nitrate in an acidified environment and by using a combined silver probe. AT1000 pre-programmed and optimised methods for liquid and solids samples follow international standards (ISO 1738.1997 and ISO 1841-2). For safe use, the sample acidification by HNO₃ before titration is automatically done by the AT1000 thanks to an embedded pump. Results are expressed in % or g/l of NaCl.

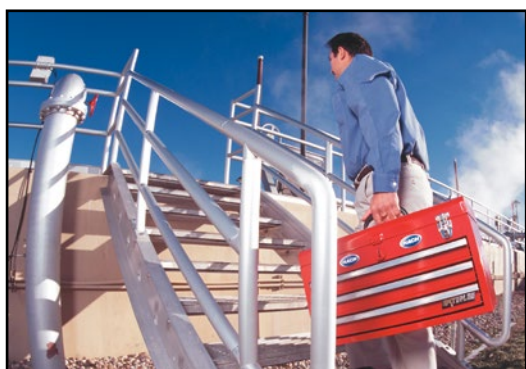
No more uncertainty on visual colour change which is very user dependent!

Karl Fischer

Karl Fischer titration is an easy, fast and accurate method to measure water content in different kinds of samples. The KF1000 is a dedicated volumetric Karl Fischer titrator for measuring common food samples like dehydrated food and instant coffee. With its 2 embedded pumps which fill and automatically empty the measuring cell, this prevents direct contact of reagents by users. The KF1000 is a polyvalent titrator which is able to use all Karl Fischer reagent families (mono or bi-components) thanks to pre-programmed and optimised methods. KF1000 is able to precisely measure down to 1 mgr of water.

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, Photocolourimetric
Burette motor resolution	20,000 steps with electronic μ stepping technology (128 μ steps/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 Service:

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

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