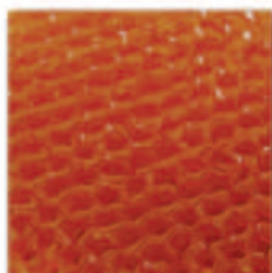


TitraLab[®] 580 and 585 Titration Workstations

**Routine Analysis:
Karl Fischer Titrations
Customised to *YOUR*
exact application**



Fast and reliable water determination in

Food & Beverage

- Edible oils
- Mayonnaise
- Honey
- Cereals
- Chocolate

Chemicals

- Potassium Nitrate
- Acetic Acid
- Acetylacetone
- Paints and Plastic
- Melamine

Pharmaceuticals

- Salicylic Acid
- Di-sodium EDTA
- Excipients for pills

Petrochemicals

- Crude oil
- Fuel oil
- Petroleum

Cosmetics

- Shampoo
- Toothpaste
- Skin cream

- when you need to be sure... -

TitraLab[®] 580 and 585 Volumetric Karl Fischer Titration Workstations -

No more wasting time setting up. If Karl Fischer is essential to your Quality Control procedure for moisture content determination, a TitraLab system with a single burette TIM580 or biburette TIM585 Titration Manager will provide all you need. Getting started couldn't be simpler:

Ensure maximum tightness

Intelligent KF cell design ensures quick sample injection

The Karl Fischer cell is easy to set up with electrodes and tubing slotting quickly and securely into place. It is specially designed to keep all atmospheric moisture out and simplify sample injection.

Press just one key

One-touch selections and preprogrammed functions make titrations easy to run

The TIM580 and TIM585 give single key access to all main routine functions, making them by far the simplest Karl Fischer titrators of their generation. Preset routines guide the operator through each step of the analysis facilitating entry of the sample quantity and alphanumeric ID. Automatic detection of sample injection together with automatic drift determination and compensation with preset shortcuts result in speed and efficiency.

Follow the display

Intuitive interface guides you at every step

The TIM580 and TIM585 prompt you with clear-text messages in a choice of languages, making it so much easier when you're doing routine work. The titration curve is easy to follow live on the large graphic display together with water determination status. Your titrator beeps each time an action is required or the final result is obtained allowing the operator to multi-task.

Get it right first time

Water content determination is fast and reliable, whether you are working with solids or liquids

The TIM580 and TIM585's titrating burettes offer unbeatable accuracy for your Karl Fischer titrations. Innovative use of PID regulation loop algorithms and dynamic continuous titrant addition allow you to end titrations extremely quickly with no risk of overshooting. AC polarisation of the electrodes guarantees precise and stable potential readings and drift determination before each sample analysis ensures accurate calculation of final results.

Stay in control

Assistant function and extensive data storage give complete confidence in your results

You can ensure your analysis stays on track thanks to an embedded assistant which guides you through operations such as calibration or reagent installation as well as graphic icons that indicate calibration status. An extensive non-volatile memory saves your current application methods and lets you check the last titrant calibrations and sample results obtained.

Plan ahead

Modular concept allows expansion to your future needs

On the TIM580 and TIM585, all interfaces are standard so you can add to your system as and when you wish. Simplify data entry by connecting a balance, a standard PS2 computer keyboard and/or a bar code reader. Obtain virtually unlimited storage capacity for your results with TitraMaster 85 Software.



Ready for immediate analysis



Ensuring the right choice for your application

At Radiometer Analytical, we put applications first. We offer you a dedicated package ready to use straightaway: instrument, electrode, specific KF glassware and accessories, maintenance solutions and, of course, methods and application notes. The only thing you have to supply is the sample!

With seventy years' experience in electrochemistry, we know your business. Visit us at www.ictsl.net to get the latest updates on customised solutions for your application.

TitraLab is a complete solution

All the elements are provided for a fully functional all-in-one workstation

- A titration manager integrating all functions of a modern volumetric Karl Fischer titrator
- One or two high-resolution burettes with a wide choice of volumes
- A dedicated KF cell for liquid and solid samples
- A dedicated KF titration stand with pump for solvent/waste and magnetic stirring
- A full set of accessories, bottle holders and cables for easily completing your workstation installation.

Technical Specifications

TitraLab®
580 and
585

Methods

- Volumetric Karl Fischer titration.

Operating characteristics

- KF titrant titre: Entered or Calibrated.
- Blank determination.
- Standby mode: KF cell always ready for sample injection.
- Automatic drift calculation before each sample analysis.
- Direct and double weighing techniques.
- Sample quantity entry at any time after sample injection even while titration in progress.
- Sample quantity correction in event of error according to GLP.
- Alphanumeric sample ID.
- Global password protection for programming access.
- Titrant calibration and QC sample intervals.
- Result acceptance limits.

Display

- Graphic backlit 128x128 dot LCD.
- Choice of live curve display:
 - . Titrant volume vs. Time
 - . Polarisation Potential vs. Time.

Measuring ranges

- 0.1% to 100% w/w water content.
- Min. recommended sample injection: equivalent to 1 mg of water.
- Max. recommended sample injection: approx. 20 g.

Printout

- Automatic, GLP compliant.
- Selectable: no, 80 columns.
- 3 levels of detail defined by method.
- Printed data can be sent as a single character string for LIMS connection (XML).

Results

- In each method, automatic calculation of up to 4 results using standard units and 2 user-defined equations.
- Standard units:
 - . ml (titrant)
 - . mg/ml, µg/ml, g/l, mg/l, g, mg, µg, %, g/kg, mg/kg, mg/g, µg/g, ppm (H₂O).
- User-defined result units with equations.
- Alphanumeric result ID.
- Automatic subtraction of the blank.
- Automatic sample dilution calculations.
- Automatic statistical calculations: mean and standard deviation on sample, titrant and blank results.

Storage capacity

- Non-volatile memory for the last 200 results and last 100 titrant calibrations.
- User programmable: 50 methods including 6 pre-programmed.
- Libraries for 15 reagents with pre-identified titrant ID and type to help programming.
- Entry of installed electrode ID and serial number.

KF stand - stirring

- Magnetic stirrer, 22 reproducible speeds (0 to 1100 rpm) in 50 rpm steps.

KF Stand - cell

- Min. volume: 35 ml ± 5 ml.
- Max. volume: 150 ml ± 5 ml.
- Min. needle length: 115 mm.
- Screw type glass beaker, clear or brown, standard or thermostated.
- Solvent addition and cell emptying in only a few seconds.
- Easy pump module dismounting for maintenance.

Burette

- 1 embedded burette stand – TIM580.
- 2 embedded burette stands – TIM585.
- Burette volumes available: 1, 5, 10, 25, 50 ml.
- Burette motor resolution: 18000 steps.
- Complies with ISO 8655-3.
- UV-protected encapsulated glass syringe.
- Embedded operating procedures for burette exchange, air bubble removal (Flush).
- Fill, Empty, Rinse functions.

Inputs/outputs

- 1 polarised input from -1 mA to 1 mA in 1 µA steps, DC or AC.
- 2 TTL outputs: titrator can start external peripherals.
- 1 TTL input: titration can start when signal input received.
- Serial connections for printer/PC, balance, additional titrator for use with TitraMaster 85 Software and sample changer.
- PS/2 port for PC keyboard and/or barcode reader.

General specifications

Languages: English, German, Danish, French, Italian, Spanish and Swedish.

Casing: Fully splashproof chemical resistant latene®.

Display 128x128 dot LCD protected from spillages with TPX® cover.

Soft-touch alphanumeric keypad (silicone).



Dimensions (H x W x D) and Weight:
380 x 230 x 450 mm (excl. tubing).
5 kg (excluding reagent bottles).

International standards (TIM580 and 585):
CE marking: complies with EMC directive 89/336/EEC and LV directive 73/23/EEC.
cETLus certification issued by ITS/SEMKO
UL Standard 61010A-1.
CSA Standard C22 2 No. 1010.1-92.

Power requirements:

47.5 – 63 Hz
115/230 Vac +15 -18%.

Environmental operating conditions:

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

Ordering information

TitraLab systems

The TitraLab 580/xx or TitraLab 585/xx-xx Volumetric Karl Fischer Titration Workstation consists of the TIM580,NB KF Titrator, monoburette or the TIM585,NB KF Titrator, biburette with a full set of connecting cables, KF cell accessories and one or two of the following burette volumes: 1, 5, 10, 25 and 50 ml.

Metrology

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