

904/905 and 906/907 Titrande



Intelligent potentiometric titrators –
Karl Fischer titrators
STAT titrators

The intelligent all-rounders for the modern titration laboratory

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Highlights

- The Magic Touch – Favorites for quick titration start
- PC Control for operation via PC
- iConnect – mobile measuring input with digital data transmission
- iTrodes – intelligent sensors for automatic electrode recognition
- GLP-compliant electrode test
- Intelligent dosing elements
- Potentiometric, Karl Fischer and STAT titration
- Sample Processor control
- Client-server database with *tiamo*TM
- Parallel titration with *tiamo*TM
- Lab Link for Intranet and Internet
- Liquid handling with the unique Dosino
- Complies with GMP/GLP and FDA Regulations such as 21 CFR Part 11
- USB interfaces for sample changer, printer, PC keyboard, barcode reader...
- Wireless communication via Bluetooth for printer and balance

Reagent dosing à la carte

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Titration means dosing intelligently. The Titrand System gives you the choice. With the 905 and 907 Titrand you dose with Dosinos and Dosing Units that are attached directly onto the reagent bottle. With the 904 and 906 Titrand dosing is carried out by using Exchange Units. One of these is located on the 904 or 906 Titrand, which can control additional Dosimats with their Exchange Units. Mixed systems with Dosing and Exchange Units are possible. This means that your choice doesn't lead you down a blind alley – full flexibility is retained.

The 806 Exchange Unit – a time-proven concept with added intelligence

Since 1973 Metrohm has produced Exchange Units with automatic valve switching. The Exchange Unit has been continuously developed. The latest version is the 806 Exchange Unit. It dispenses reagents with the unique resolution of 20'000 steps per cylinder volume.

The space-saving Dosino

The patented Dosino with its Dosing Unit can be mounted directly onto the reagent bottle. This means that dosing requires no additional bench space. Thanks to adapters, any reagent bottle can be used directly. The Dosino houses the latest state-of-the-art electronics and micro-mechanics. The Dosing Unit can be exchanged within seconds. Thanks to its transparent housing any bubbles that may be present in the dosing cylinder can be seen and removed immediately and the valve position is always shown. Rinsing and preparation of the Dosing Unit can be carried out automatically; manual dismantling and rinsing are not necessary.

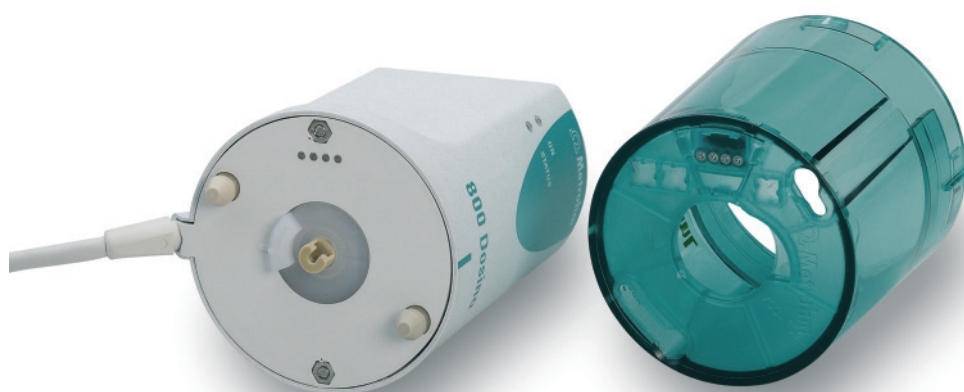


Smart dosing elements with certification

The Exchange or Dosing Units set new standards with regard to reliability. Intelligence «en miniature» in the form of an inconspicuous Data Chip makes this possible. This chip is present in every 806 Exchange unit / 807 Dosing Unit. The Titrand automatically reads from it all the data that it needs to carry out the titration properly,

i.e. type of reagent, titer, last titer determination, shelf-life data and much more. In addition, the Titrand compares the data it has obtained with the selected method and carries out a plausibility test. If the result is negative then a clear error message appears.

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Comparison of the two dosing systems

	806 Exchange Unit	807 Dosing Unit
Standard bottle thread	GL45	GL45
Adapters for bottle threads	S40, 40 mm, 32 mm, 28 mm	S40, 40 mm, 32 mm, 28 mm
Buret cylinders available	1, 5, 10, 20, 50 mL	2, 5, 10, 20, 50 mL
Surface area needed for two dosing elements	300 mm x 240 mm	150 mm x 240 mm
Flat stopcock made of	PCTFE/PTFE Ceramic as an option	ceramic
Cylinder made of	Glass	Glass for titrants ETFE for auxiliary solutions and aggressive media

854 iConnect – green, digital and mobile

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854 iConnect – Measuring input «on a chip»

The Metrohm green color has always meant leading-edge technology. Thanks to the most advanced electronics Metrohm has been able to reduce the measuring input to the size of a postage stamp. This means that the complete measuring input fits in the electrode cable head. It is automatically recognized and identified by its serial number.

Digital data transfer

Directly in the sensor, the analog/digital converter of the latest generation in the 854 iConnect converts the analog measuring signal into binary code. Digital data transmission means that the measuring signal is no longer susceptible to electrostatic influences. Interference-free transmission can now always be guaranteed, no matter how long the electrode cable.

Just take the measuring input with you!

With the 854 iConnect the sensor and measuring input are always calibrated together and the calibration data is stored in the intelligent electrode. As the measuring input is no longer built into the instrument, the electrode and 854 iConnect can be used together with different titrators. The calibration procedure is no longer associated with a particular titrator.

The iTrodes – electrodes with brains

The iTrodes of the new intelligent electrode generation confirm Metrohm's long-standing leadership position in the field of potentiometric titration.

The electrode used for the titration is the most important component of any titration system, and until now it has been just this electrode that has formed the last gap in traceability. The Titrando with iConnect now closes this gap and therefore guarantees complete traceability of the analytical result to each component participating in the analysis.



Digital identification – no more mix-ups

The built-in memory chip allows the storage of such important sensor data as article and serial numbers, calibration data, calibration history, working life and calibration validity period.

All the sensor data is read in automatically when the iTrode is connected to the Titrand. Mix-ups or editing errors are therefore eliminated.

The electrode is identified automatically. If the type of electrode is not the same as that defined in the method then the user is informed. This means that it is not possible to use an incorrect electrode.

Storage of calibration data – outliers have no chance

Monitoring functions allow the exclusion of electrodes whose calibration data lies outside the limits or whose calibration period has already expired.

If the sensor is used with different instruments or if you wish to prevent inexperienced users from having to calibrate the electrode on their own instruments then the electrode can be calibrated on a different instrument under defined conditions. The calibration data stored in the chip makes the electrode transferable; it does not need to be recalibrated each time that it is used with a different instrument.

Compatible with all existing sensors

Despite its new digital measuring interface and intelligent sensors, the Titrand with combined analog and digital measuring input also supports conventional sensors. This means that you can continue to use all your sensors.



The Titrando System at a glance

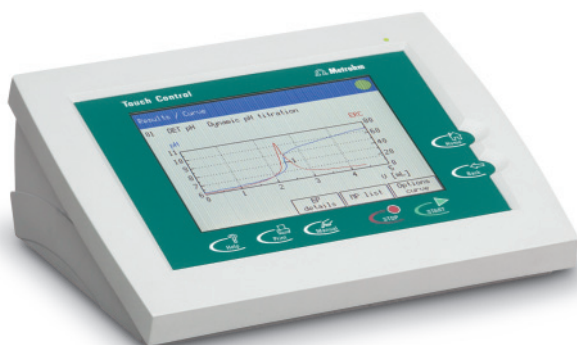
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Thanks to its modular concept the Titrando System can be optimally adapted to any application. It meets the requirements of FDA Regulation 21 CFR Part 11. Profit from its intelligence and multiple communication options!

Transparent operation – the Titrando accelerates method development and simplifies routine operation.

More intelligence: The Data Chip of the Exchange Unit and Dosing Unit contains all important titrant data. The intelligent sensor «iTrode» guarantees that no wrong or expired electrode is used.

The large color screen of the Touch Control informs you about the instrument condition and offers uniquely comfortable operator guidance, including one-touch titrations via «favourite» icons for operation via a PC the appearance is exactly the same.





iConnect and iTrodes – digital data transfer and automatic electrode recognition. The Data Chip of the intelligent sensors contains all important sensor data.

NEW: The automatic GLP-compliant electrode test allows an objective evaluation of the electrode and leaves nothing to chance. Reliable and reproducible results are therefore guaranteed.



Numerous worked-out methods and titration examples facilitate familiarization. Method templates and calculation formula templates are available for developing your own methods.



Optimal reagent handling by either Exchange Unit or Dosing Unit.

More intelligence: The Data Chip of the Exchange Unit or Dosing Unit contains all important titrant data.



Lab Link provides access to the Intranet. Print your report on a network printer, save your report on a network drive or remote control your Titrando from your office computer.



When combining **tiamo**[™] and Titrando, the user profits from a Client-Server database.

Parallel titration – with **tiamo**[™] a Titrando can work with two titration cells at the same time.



The Titrando System can be fully automated, also including sample preparation (weighing, homogenization, filtration, pipetting).

Uniquely intelligent – easy to operate

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Favorites for quick method start

Methods can be linked to a Favorite icon on the starting screen of the 840 Touch Control. Start your titration by pressing just one button.

By using our methods you can profit from our many years of experience in the titration field. All titration methods developed on Metrohm Titrinos can be converted into Titrand methods automatically using a PC.

As storage media for your methods, sample data and results there are the Titrand itself, a memory card¹ or a PC with its numerous possibilities. This allows complete storage security to be achieved, with the prevention of method and data loss, plus an increase in operational security.

Intelligence creates transparency

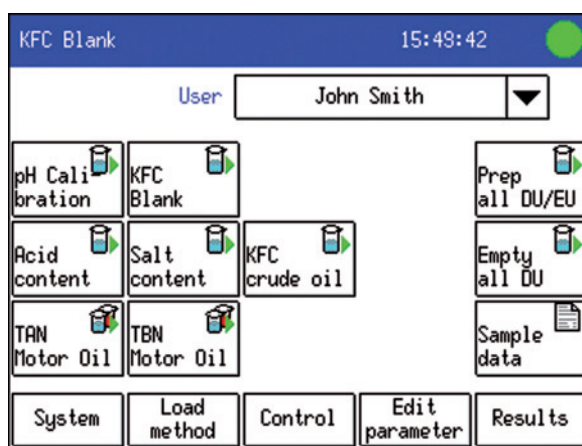
Operating the Titrand System is simple and intuitive. The operator guidance system can be regarded as exemplary. In addition, the following tools make life easier for the Titrand user:

- The «Quick Access» function (direct parameters) allows direct access the parameters required for the given application. These parameters can come from a wide range of different areas of the instrument program. This means that it is no longer necessary for you to click your way through different operating levels! «Quick Access» is invaluable for routine analysis.

- The «Help» fixed key shows a context-related help text in the display.
- The «Follow me» help function is available when working with a PC. Continuous explanations about the current surroundings are given in a separate window and further possible procedures are indicated.
- The standard user methods can be modified to suit your requirements. Method templates and calculation formula templates are available for developing your own methods. Methods can be stored under meaningful method names (32 characters) and structured directories can be used; this makes sorting, identification and searching much easier.
- Whereas in the expert dialog all settings are available, the routine dialog can be freely configured, i.e. it can be custom-made to meet the requirements of the particular user. This means that users can load their «profiles» from the personal Keycard and see only those operating elements that they actually need.

The Titrand puts an end to puzzling out the meaning of coded error messages. It tells you what is going on in clear text. Not only this; it also suggests suitable measures for remedying any faults.

¹ Commercial CompactFlash card; non-volatile, compact data memory that does not need any battery.



Routine Methods can be linked to a «Favorite» icon on the starting screen of the 840 Touch Control. Titrations are started by pressing just one button.



The Titrando in the modern laboratory

Data management is knowledge management

Data must always be available: either for direct information, for transfer to a data system, for further processing or for an audit. The data that your Titrando System provides you with can be printed out and stored in a conventional manner. However, all advanced data management functions are available, for example storage on a PCMCIA card² that is simply inserted in the Touch Control, in the PCMCIA port of the PC or an appropriate card reader.

When you work with PC Control or *tiamo*TM, you can use all the storage options offered by the PC world, for example hard drives, network drives, servers, Intranet...

On request the Titrando can produce a machine-readable PC/LIMS report. One thing is clear: As for data storage and transfer, the Titrando is a state-of-the-art instrument.

Lab Link

If you want to connect your Titrando System directly to a superior data system, there is nothing in the way: The 847 USB Lab Link opens up internal networks (Intranet, LIMS³, LAN⁴) to the Titrando, with all that this implies. Network printers can be used for printing out analysis reports. Or would you like to remote-control your Titrando? The 847 USB Lab Link provides access to your titrator from any PC.

Never has integration into your LIMS structure been so easy!

Unleash your printer!

Laboratory bench space is scarce and expensive. Most of the space required by a titration system is occupied by the printer. Its cable connection means that it has to be located near the Titrando. Wireless communication via Bluetooth now allows to place the printer at some distance (up to 10 meters) from the Titrando. This frees valuable bench space and has the additional advantage of removing the printer from the potentially hazardous effects of splash water and chemicals.

² A CompactFlash card with adapter is included in the standard accessories of the Touch Control. PCMCIA = Personal Computer Memory Card International Association

³ LIMS = Laboratory Information Management System

⁴ LAN = Local Area Network

Compatibility and traceability

GLP, GMP, 21 CFR Part 11 are becoming increasingly important in day-to-day laboratory life. The Titrand System is entirely oriented towards quality management in the laboratory and offers the following possibilities:

- Each time that it is switched on the Titrand System carries out a self-diagnosis.
- If it has been programmed accordingly then the instrument will remind you about any validation or service work that is due.
- You can enter limits for results; their observance will be checked for each determination.
- The titer of the titrant can be monitored as a function of time in both tabular form or as a graph, similar to a control card.
- The calibration history of the sensors can be called up. This means, for example, that alterations to the sensor caused by aging can be recognized before they affect the results.
- All changes to the methods are documented; traceability is guaranteed.

The Titrand allows strict control of rights of access using login and password. The requirements defined in FDA Regulation 21 CFR Part 11 regarding «electronic signature» and «electronic record» are fulfilled in the stand-alone system using Touch Control as well as in the version controlled via PC. This also applies to the other points contained in this regulation, namely the protection of electronic records against accidental or intentional alteration and the complete traceability. The Titrand with Touch Control is the only stand-alone titration system with Audit Trail.

Quality management at Metrohm

Quality has always been extremely important for Metrohm. On 5 November 1993 our company achieved the ISO 9001 certificate of quality. The Metrohm quality management system is continually being perfected and checked by both internal and external audits.

Integrated Automation

Perfect modularity

The possibilities for upgrading the Titrand System are nothing short of amazing. First the bare figures: The basic unit consists of a Titrand with one measuring interface. This basic unit can be extended to form a super-titrator that controls 12 burets and boasts 6 galvanically separated measuring interfaces. Between these two extremes lies the whole spectrum of Titrand possibilities. Among them you will certainly find a Titrand System that can solve your particular application problem in an optimal way. At the same time you have the certainty that your Titrand System will master all your future applications as it is fully upgradable. As a result you can view the future with confidence.

Automation pays dividends!

Increasing sample numbers, time-consuming sample preparation steps and unattended overnight operation are good reasons for using sample changers. The Titrand has the necessary intelligence to control sample changers and offers – together with the 814 USB Sample Processor and 815 Robotic USB Sample Processor XL – a high degree of automation at low investment costs.

It's so simple

You connect the sample changer to the Titrand's USB port and the world of automation opens up to you.



Water determination with the Titrando

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Karl Fischer titration with the Titrando

The Karl Fischer water determination is one of the most frequently applied laboratory methods. In contrast to other water determination methods it is specific as well as rapid and requires no expensive equipment. With an application range of 0.1% to 100% water the volumetric Karl Fischer titration is used in a wide variety of fields. No matter whether you determine the water content in food, cosmetics or pharmaceutical products, the Titrando is always the right instrument.

In addition to the potentiometric titration modes SET, DET and MET, the 906/907 Titrandos come with a special Karl Fischer mode whose sophisticated control algorithm, combined with the precision of our intelligent Exchange Units or Dosing Units, guarantees highly precise results.

Like the other modes, the KF mode excels with easy and intuitive user guidance. Just one example: The KF icons show you at a glance whether the instrument is still busy conditioning or whether you can start the water determination.



The iodine drop indicates the KF reagent addition during conditioning.



Conditioning is finished and the sample can be added.

The electrode test and the newly created parameter «safety stop» prevent cell run-over during conditioning. If, for example, the electrode is not connected correctly or the titration cell is very humid, conditioning is stopped after a given time or a given volume of KF reagent added. This new feature increases work safety in your laboratory.

The 803 KF Titration Stand

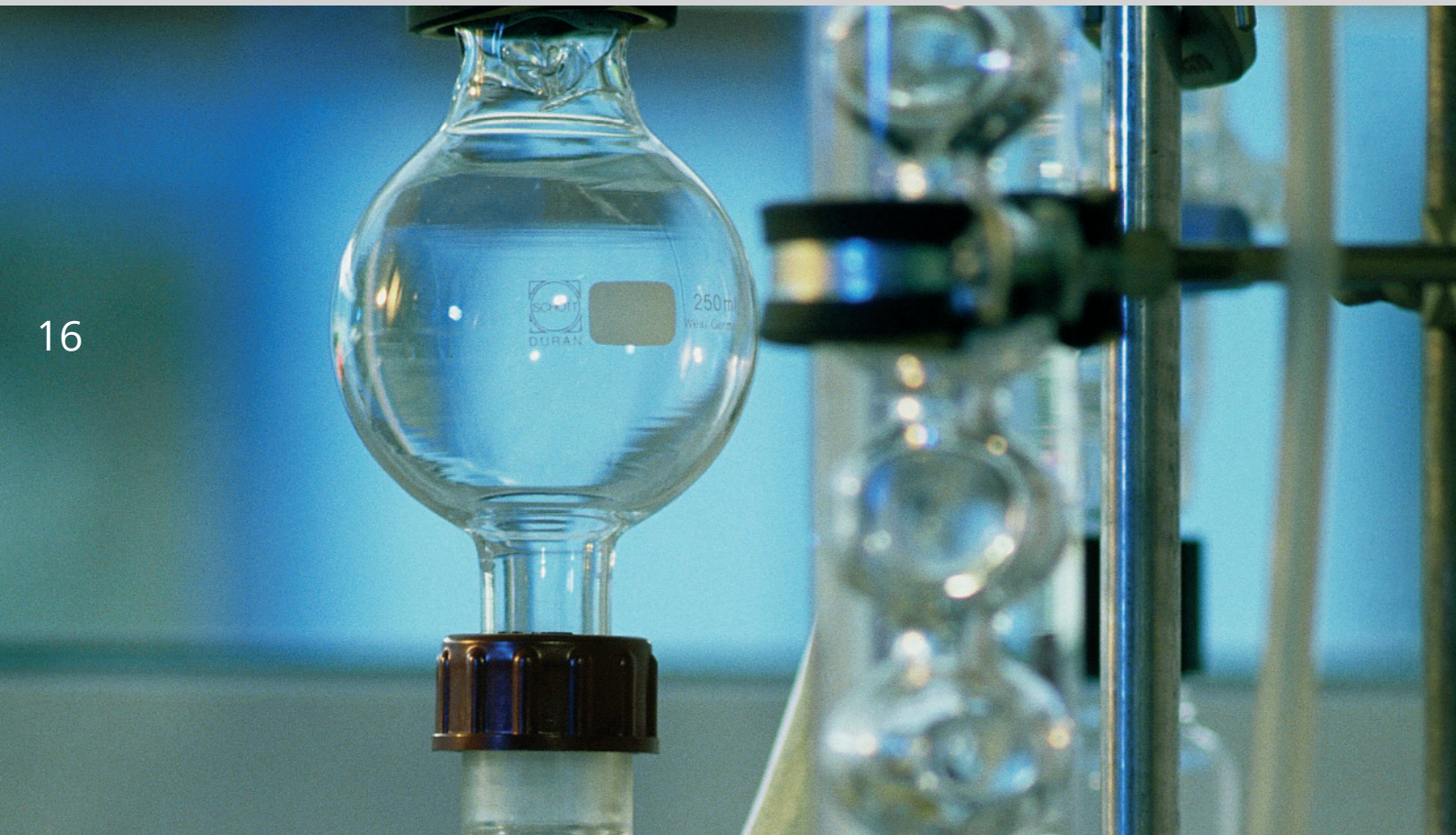
Use the 803 KF Titration Stand for stirring and manually exchanging the spent titration vessel contents. With the integrated membrane pump, solvent can be aspirated or added without the cell having to be opened. This translates into vastly reduced conditioning times.

Automatic reagent change – so very easy!

An even more comfortable option is the automatic reagent change with the Dosino. You simply trigger the change, which is then carried out automatically by the instrument.







STAT titration

The determination of enzyme activity (lipase, trypsin, etc.) or the release kinetics of antacid tablets require a titrator that rapidly adjusts to a preset pH value and keeps it constant for a long period. The controller of the Titrande has been optimized for this task and is one of the best on the market. It can also be used to determine the kinetics of acid-base or redox reactions.

Tandem dosing

Tandem dosing is a feature that prevents dosing interruptions when the buret is refilled during the titration – a second buret immediately takes over. In this way rapid reactions with a high reagent consumption can be monitored with maximum accuracy. Tandem dosing is also available for simple and monitored dosing.

The Titrand in the synthesis laboratory

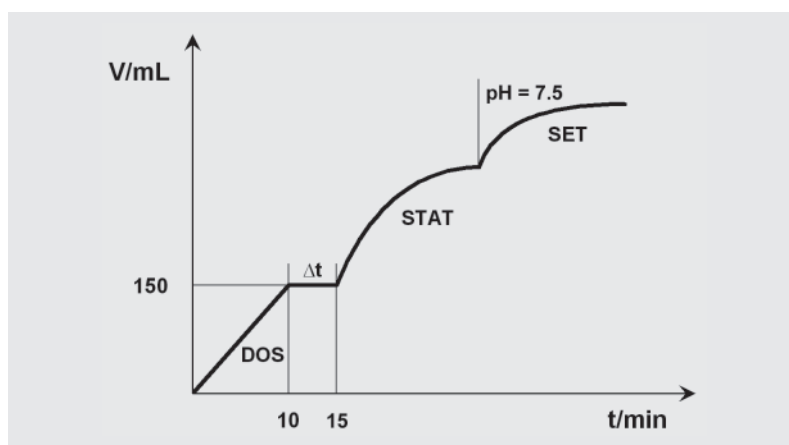
In the synthesis laboratory different problems are faced to those encountered in titration. Here a particular pH value must be kept constant or multiple dosing has to be carried out under exactly defined conditions. This means that a certain volume of a solution must be added within a fixed time. In addition to controlled dosing, the parameters pH (or potential) and temperature have to be continuously recorded, thus providing complete documentation of the synthesis procedure.

Everything under control

If a monitored parameter should infringe the set limits, the user can decide whether dosing should be continued or interrupted and then continued manually or automatically, again observing the limits.

Controller

As an innovation the Titrand can perform control tasks. External devices can be controlled with the aid of freely programmable TTL signals or communication via RS 232. This means that it is possible to run the external heating and cooling devices, pumps or similar equipment by remote control.



Example of a neutralization process:

1. DOS Addition of 150 mL reagent in 10 min with temperature monitoring
2. Pause 5 min under stirring
3. STAT Adjust pH = 7.5 with temperature monitoring
4. SET Post reaction, for example, during 10 min; endpoint pH = 7.5

*tiamo*TM – titration and more!

*tiamo*TM is a control and database software for titrators, dosing devices and sample changers that allows complete laboratory automation. This is why the name *tiamo*TM stands for «titration and more» – *tiamo*TM can do much more than just titrate.

Easy to use

The modern user interface makes it easy for users to familiarize them-selves quickly with *tiamo*TM. All commands and controls are to be found exactly where you expect them to be. The layout manager can be used to configure the screen view individually for each user. This means that the users see only those windows or buttons that are required for their work. This shortens the familiarization period for routine users to a minimum.

Parallel titration

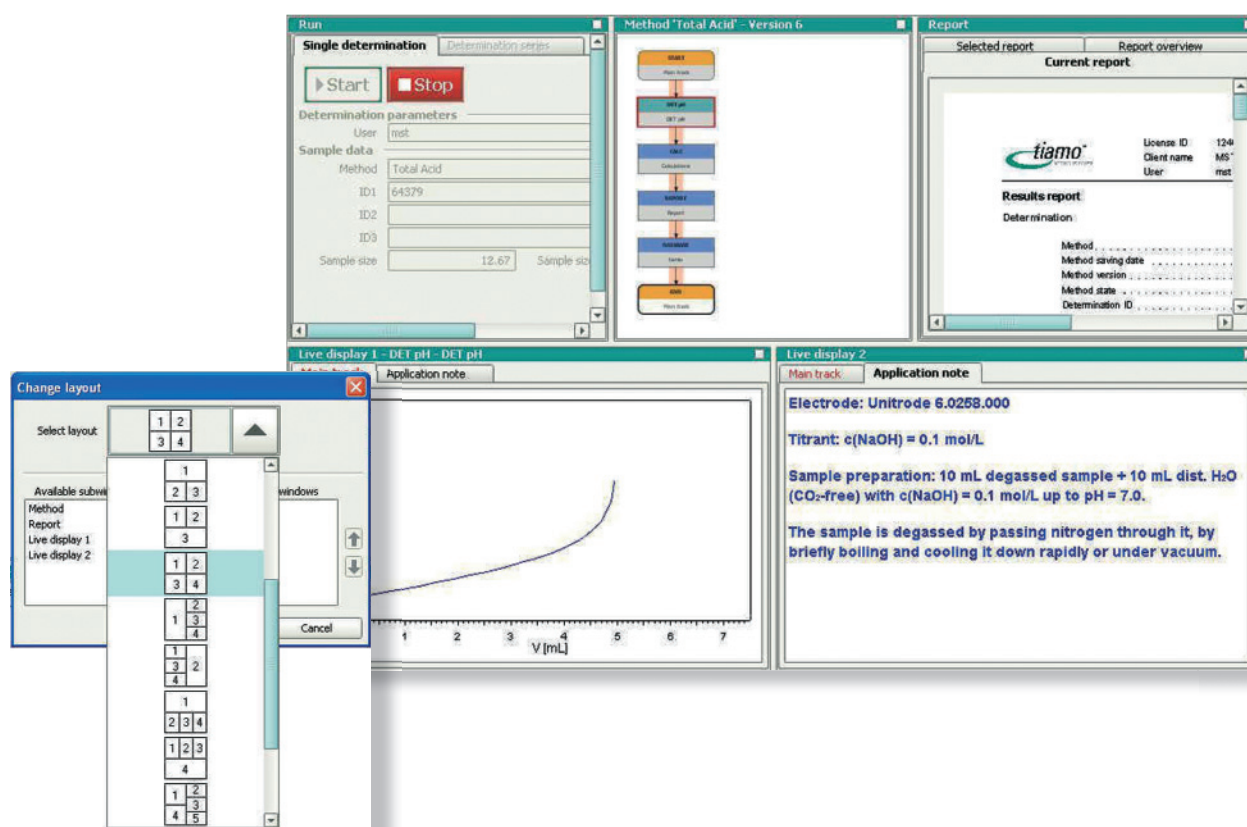
Both measuring inputs and all the Dosinos connected to a Titrando can be controlled independently of each other. In combination with *tiamo*TM this allows the parallel titration of two identical or two different samples with one single titrator.

Overcomes limits

The *tiamo*TM database provides all the important tools for the management, searching and grouping of results. Quick filters allow the user to search through thousands of results in a matter of seconds and show the searched-for information in a clear way. Chart plots provide a rapid overview of the chronological sequence of results. The user can utilize all the possibilities for re-calculation and re-evaluation.

LIMS & Co.

The acceptance of PC-controlled analytical systems depends largely on the possibility of simple and favorably priced integration in existing laboratory information systems, central databases and long-term archiving systems. Data generated in *tiamo*TM is exported in CSV or XML format. This makes possible the simple connection to all the usual LIMS products found on the market. Analysis reports can be generated simply and flexibly with the new report generator, which allows the free definition of report templates. In this way one or more determinations can be shown at any time with a freely selectable layout in pdf format or as a paper printout.



tiamo increases efficiency

The graphical method editor gets more out of your titration system. Methods can be drawn up easily and quickly by using the numerous templates. You can program and link actions that are to be carried out at the same time. *tiamo*TM is flexible and adapts itself to your analytical sequences – not vice versa.

Comfortable conformity

*tiamo*TM also sets new standards with respect to complying with GMP, GLP and FDA requirements. *tiamo*TM has been consistently oriented to comply with FDA Regulation 21 CFR Part 11 and its customer-specific interpretations.

The screenshot displays the *tiamo* software interface, which is divided into several functional areas:

- Method Editor:** Shows a flowchart for 'Method Total Acid - Version 2' with steps like 'Start', 'Add', 'Stop', and 'Print'.
- Run Panel:** Contains 'Start' and 'Stop' buttons, a 'Status' indicator (initially 'READY', later 'BUSY'), and fields for 'Determination parameters' (User: mst), 'Sample data' (Method: Total Acid, Batch: 64379, Sample no: 2, Sample size: 10, Sample size unit: mL), and 'Determination series'.
- Report Panel:** Displays a 'Results report' with fields for License ID (124049905), Client name (MST-NB), User (mst), Method, Method saving date (2004-11-26), Method state, Determination ID (6b99a0-1c), and Determination start (2004-11-26).
- Live display:** Shows a 'Main track' with a graph of pH versus Volume (V [mL]). The curve shows a typical titration endpoint around 4.5 mL. An 'Application note' box is visible, containing the text: '(NaOH) = 0.1 mol/L up to pH = 7.0. cooling it down rapidly or under vacuum.'

The interface also includes a sidebar with icons for 'Workplace', 'Database', 'Method', and 'Configuration', and a footer with the *tiamo* logo and the text 'Press F1 for help'.

Technical specifications

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	904 Titrand	905 Titrand	906 Titrand	907 Titrand
Dosing elements	1 integrated Dosimat with 806 Exchange Unit	Space for two 800 Dosinos with 807 Dosing Unit	1 integrated Dosimat with 806 Exchange Unit	Space for two 800 Dosinos with 807 Dosing Unit
Attachment of additional dosing elements	Up to 9 x 805 Dosimat with 806 Exchange Unit Up to 12 x 800 Dosino with 807 Dosing Unit			
Intelligent Exchange Unit/Dosing Unit with integral Data Chip	yes			
Dosing steps per cylinder volume (resolution)	904 Titrand with 805 Dosimat: 20'000	905 Titrand with 800 Dosino: 10'000	906 Titrand with 805 Dosimat: 20'000	907 Titrand with 800 Dosino: 10'000
Operation, dialog	Touch Control or PC Control / tiamo TM			
Stirrers, titration stand	4 x 801 Magnetic Stirrer or 4 x 802 Rod Stirrer with 804 Titration Stand or 803 KF Titration Stand			
Attachment of Dosimats, Dosinos, stirrers	4 MSB connectors (Metrohm Serial Bus, Daisy Chain)			
Sample Changer attachment	1 sample changer via USB			
Attachment of balances, printer, PC, PC keyboard, barcode reader and/or Lab Link	Via 2 USB Slave Ports, RS-232/USB Box (option)			
Attachment of additional measuring modules (867 pH Module or 856 Conductivity Module)	yes			
PCMCIA memory-card port for methods, results, Keycard (user identification), backup	yes			
CompactFlash Card with a large number of user methods	yes			
Temperature sensor	Pt 1000 or NTC			
Differential amplifier	Option			
Real-time curve display on Touch Control (90 mm x 120 mm color graphics LCD) or PC screen	yes			
DET Dynamic Equivalence-point Titration	yes			
MET Monotonic Equivalence-point Titration	yes			
SET Titration to a preset end-point with automatic conditioning	yes			
KF Volumetric Karl Fischer titration with automatic conditioning	no		yes	
STAT Titration to a preset control point and maintaining the corresponding measured value	no		yes	
MEAS Measuring mode for pH, U/mV, T/°C	Resolution: 0.001 pH, 0.1 mV, 0.1 °C; Measuring interval: 100 ms			
MEAS CONC Direct measurement using ISE and calculation of concentration	yes			
CAL Calibration with automatic buffer recognition	yes			

	904 Titrand	905 Titrand	906 Titrand	907 Titrand
Second, galvanically separated measuring interface for pH, U/mV, T/°C			Option	
I_{pol} & U_{pol} – integrated programmable Polarizer			yes	
Additional possibilities of titration-curve evaluation: fixed endpoints, pK values (HNP), minimum/maximum, break point (photometry or conductometry)			yes	
Sequences can be freely programmed by the user			yes	
Method and sample data memory, result memory, data base			yes	
Dialog languages: English and German; additional languages can easily be added			yes	
Comprehensive GLP functions; meets requirements of FDA 21 CFR Part 11			yes	
Intelligent dosing devices			yes	
Intelligent electrodes «iTrodes»			yes	
GLP-compliant electrode test			yes	
Check for result limits			yes	
Access control by means of login with password protection; Electronic Signature			yes	
Liquid handling with expanded dosing instructions for the 800 Dosino			yes	





Ordering information

904 Titrande

- 2.904.0010** 904 Titrande with built-in buret drive and one combined analog/digital measuring input; delivery includes one 854 iConnect plus one «iEcotrode plus» combined pH electrode
- 2.904.0020** 904 Titrande with built-in buret drive and two combined analog/digital measuring inputs; delivery includes one 854 iConnect plus one «iEcotrode plus» combined pH electrode

905 Titrande

- 2.905.0010** 905 Titrande with one combined analog/digital measuring input; delivery includes one 854 iConnect plus one «iEcotrode plus» combined pH electrode
- 2.905.0020** 905 Titrande with two combined analog/digital measuring inputs; delivery includes one 854 iConnect plus one «iEcotrode plus» combined pH electrode

906 Titrande

- 2.906.0010** 906 Titrande with built-in buret drive and one combined analog/digital measuring input; delivery includes one 854 iConnect plus one «iEcotrode plus» combined pH electrode
- 2.906.0020** 906 Titrande with built-in buret drive and two combined analog/digital measuring inputs; delivery includes one 854 iConnect plus one «iEcotrode plus» combined pH electrode

907 Titrande

- 2.907.0010** 907 Titrande with one combined analog/digital measuring input; delivery includes one 854 iConnect plus one «iEcotrode plus» combined pH electrode
- 2.907.0020** 907 Titrande with two combined analog/digital measuring inputs; delivery includes one 854 iConnect plus one «iEcotrode plus» combined pH electrode

Options

- 2.840.0100** Touch Control Titrande
- 6.6050.100** PC Control software Titrande, including Hardware Dongle
- 2.800.0010** 800 Dosino for 905 and 907 Titrande and as additional dosing device for 904 and 906 Titrande
- 2.801.0040** 801 Magnetic Stirrer
- 2.802.0010** 802 Rod Stirrer
- 2.803.0010** 803 KF Titration Stand
- 2.804.0040** 804 Ti Stand
- 2.805.0010** 805 Dosimat as additional dosing device for 904 and 906 Titrande (and 905 and 907 Titrande)
- 2.847.0010** 847 USB Lab Link
- 2.854.0010** 854 iConnect for connection of intelligent electrodes «iTrodes»

- 6.2051.030 Holder for 840 Touch Control
- 6.2834.030 Foils for 840 Touch Control, 3 pieces
- 6.2133.010 Batteries 1.5 V LR6 for Touch Control, 2 pieces
- 6.2247.000 Adapter CompactFlash Card – PCMCIA port (included in the standard accessories)
- 6.2247.010 CompactFlash Card (empty; the standard accessories include a card with user methods)
- 6.2148.010 Remote Box MSB
- 6.2148.020 RS-232/USB Box
- 6.2151.000 Cable USB A plug – Mini-DIN plug, 8 pins
- 6.2151.010 Extension cable Mini-DIN socket – Mini-DIN plug, length 2 m
- 6.2151.020 Cable USB A plug – USB B plug, length 1.8 m
- 6.2151.030 Cable USB A plug – USB B plug, length 30 cm
- 6.5104.030 Differential amplifier equipment with line adapter 230 V, EU plug
- 6.5104.040 Differential amplifier equipment with line adapter 115 V, US plug
- 6.2061.010 Reagent Organizer, holds two 1 L bottles; for dosing with Dosinos and Dosing Units

Intelligent 807 Dosing Units equipped with Data Chip; with glass cylinder for 800 Dosino, including accessories and two buret tips, one of them with micro outlet valve

- 6.3032.120 Buret volume 2 mL
- 6.3032.150 Buret volume 5 mL
- 6.3032.210 Buret volume 10 mL
- 6.3032.220 Buret volume 20 mL
- 6.3032.250 Buret volume 50 mL

Intelligent 806 Exchange Units equipped with Data Chip; with glass cylinder and flat PCTFE/PTFE stopcock

- 6.3026.110 1 mL Exchange Unit with one tip each for titration and dosing
- 6.3026.150 5 mL Exchange Unit with one tip each for titration and dosing
- 6.3026.210 10 mL Exchange Unit with one tip each for titration and dosing
- 6.3026.220 20 mL Exchange Unit with one tip each for titration and dosing
- 6.3026.250 50 mL Exchange Unit with one tip each for titration and dosing
- 6.1542.010 Flat ceramic stopcock for 6.3026.XX0 Exchange Units
- 6.1542.020 Replacement stopcock, PCTFE/PTFE, for 6.3026.XX0 Exchange Units

www.metrohm.com