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**Let Tecan care about your routine data calculation**

Magellan™ and i-control™ software for Tecan microplate readers

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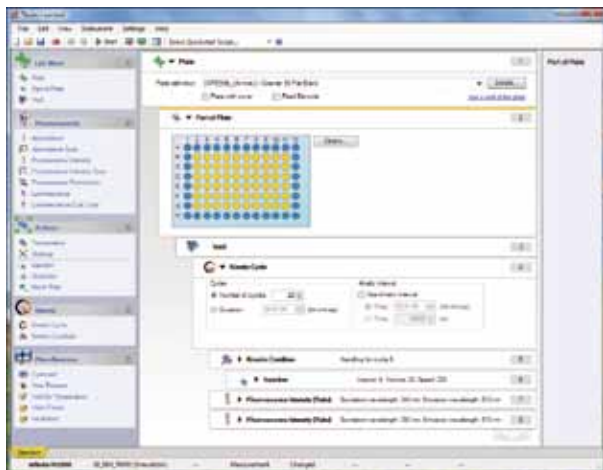
**Magellan Tracker**

 21 CFR Part 11

 98/79/EC IVD-D

## i-control & Magellan

### *From basic control to sophisticated data management*



*Workflow oriented i-control software for basic control of Tecan's Infinite series readers.*

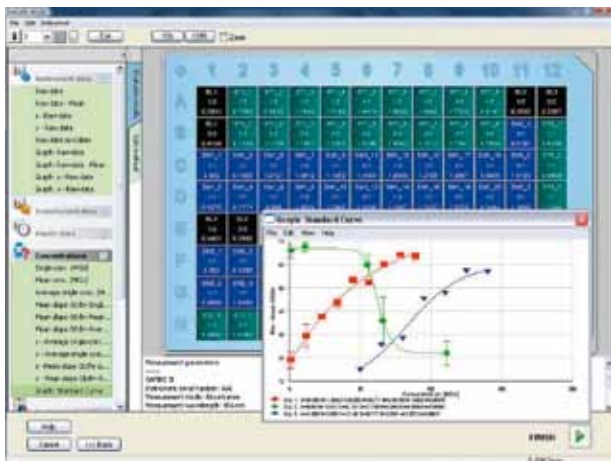


*Magellan reader control and data reduction software, showing the Magellan Tracker Wizard list.*

Tecan offers two software packages for its complete range of microplate readers – i-control and Magellan. While i-control is the operating interface for all of Tecan's Infinite® series readers, the Magellan software provides superior data reduction and data processing capabilities, and is compatible with all Tecan microplate instruments.

These packages make it possible to perform assay analysis in all major measurement modes, from absorbance to luminescence, including endpoint to kinetic, single wavelengths to spectra scanning, and ratiometric to multiplex assays. They also offer an interface to the Connect™ stacker system for batch processing and to Tecan's automated workstations.

Both software packages have been designed, tested, verified and validated according to certified quality standards, ensuring the technical compliance and integrity of the electronic data generated. Tecan's commitment to continuous improvement is demonstrated by certification of the software to the ISO 9001:2000 and ISO 13485:2003 quality system standards.



Presentation and evaluation of data from multiple experimental groups on a microplate.

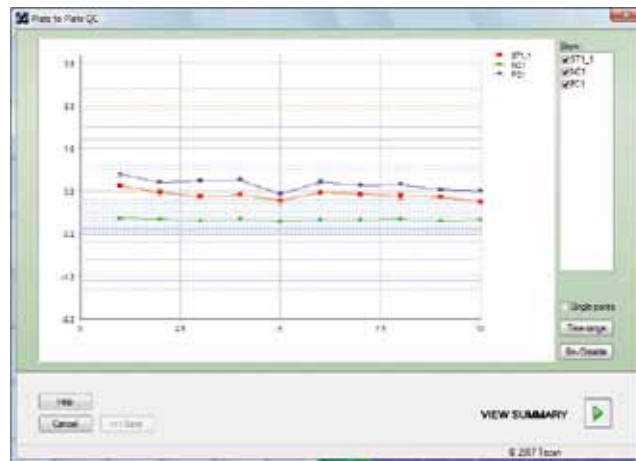


Plate to plate QC – Levy-Jennings graph displays the statistical data of FP standard of a defined data set or time frame.

Magellan, Tecan's universal data processing software, is available for our complete line of microplate readers. It offers powerful data analysis capabilities, excellent data presentation and outstanding graphical flexibility. Magellan is fully compatible with Tecan's automated Freedom EVO® and Freedom EVOlyzer® liquid handling workstations.

**The software is available in the following two versions:**

*Magellan Standard*, which is intended for research use, offers high flexibility for endpoint, kinetic and multi-label assays in drug discovery, life science research, assay development and screening experiments.

*Magellan Tracker* offers the same functionality but with obligated user administration, audit trail and electronic signatures. It is therefore designed to meet the requirements for GxP-critical environments and the FDA regulation 21 CFR part 11 for electronic records and signatures, as well as the European Directive 98/79/EC for in vitro diagnostics (IVD-D).

**Easy to learn**

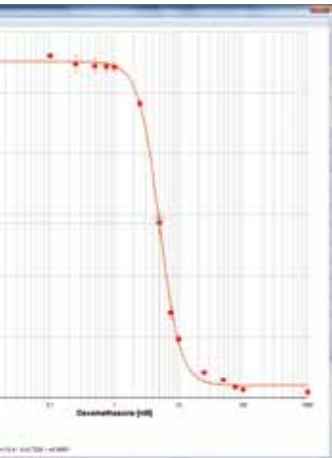
A number of video-based tutorials are provided with the Magellan package for immediate access to the software's broad capabilities. A wizard-based user interface guides you through the software, step by step, putting you in complete control from the start. The software has a variety of example files available for different application-related data functions, such as dilution series, transformations and standard curves.

**Secure data handling and process control**

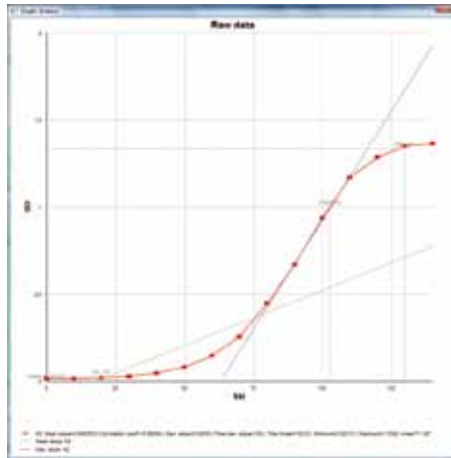
Magellan complies with ISO 13485:2003 requirements, meeting industry standards for its use, data integrity and security. Multilevel user management with password protection is optional for the Standard version, but obligatory in Magellan Tracker. Changes made in the software form part of the audit trail records and cannot be overwritten, therefore assuring full traceability, data security and integrity at any time.

**Sophisticated functions of Magellan**

- Performs full qualitative and quantitative EIA analysis.
- All major curve fittings are provided – point to point, linear regression, non-linear regression, polynomial, cubic spline, Akima, LogitLog, four- and five-parameter fit.
- Convenient handling of dilution series and IC<sub>x</sub> calculation.
- General data import and export options as well as automated import of sample ID lists.
- Kinetic data analysis with calculation of slopes, onsets and enzyme kinetics; calculation of Michaelis-Menten constant according to Lineweaver-Burk, Eadie-Hofstee and Hanes equations.
- Spectra calculation provides rapid background correction, curve smoothing, wavelength selection, peak identification and 3D scanning tools.
- Plate definition editor allows creation of customized plate geometry files.



curve with IC<sub>50</sub>.



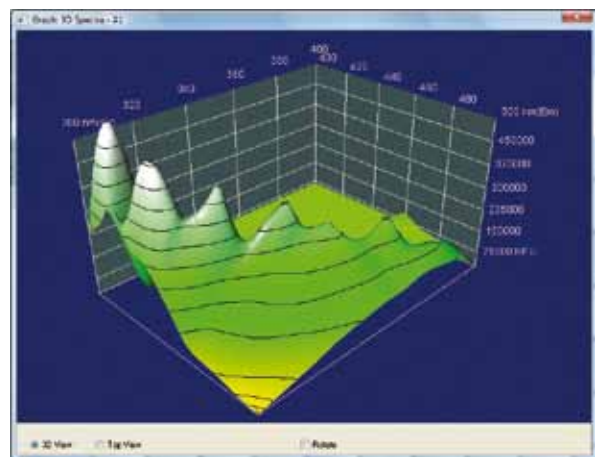
Example for kinetic data reduction.



Example of a kinetic measurement.

Magellan also includes a plate-to-plate quality control tool to track and store quality values and calibration curve data. Based on the Westgard multirule, where control results are compared against the expected mean and standard deviation, you can easily judge the acceptability of an analytical result.

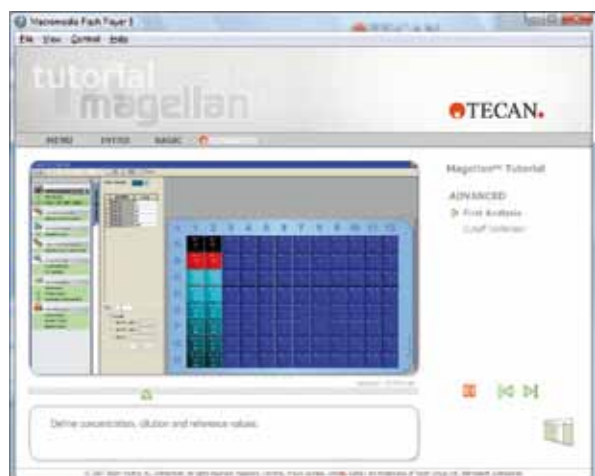
Get your free 30 days trial version at [www.tecan.com/magellan!](http://www.tecan.com/magellan!)



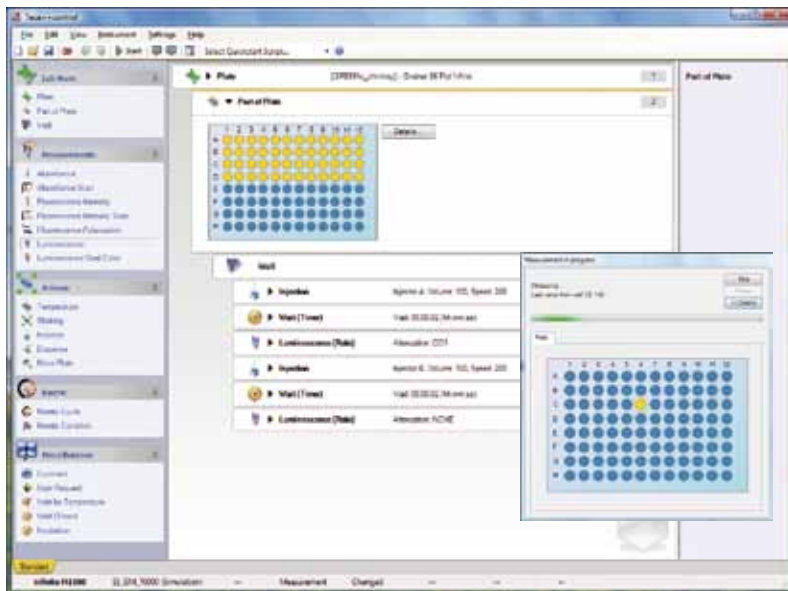
3D scanning feature for Infinite M1000 enables characterization of unknown samples.

#### Key highlights of Magellan

- **Ideal for many different microplate-based applications** – such as ELISAs, endpoint assays, kinetic assays, ratiometric measurements, multi-label measurements and scanning.
- **Provides fast analysis capabilities** – from data reduction and curve fitting to calculation of kinetic parameters, such as the Michaelis-Menten constant.
- **Quality validated** – complies with ISO 13485:2003 requirements and meets industry standards for its use, data integrity and security.
- **Optional extra** – can be supplied as the Standard or Tracker version for all Tecan readers.
- **Data security** – Magellan Tracker (FDA 21 CFR Part 11 and 98/79/EC IVD-D compliant) provides audit trail, electronic signatures, electronic records and user administration.
- **Getting started** – learning tutorials, example files and different languages are available.
- **Convenient automation** – adds full data analysis capacity to Tecan's automated Freedom EVO and Freedom EVOlyzer processing systems.
- **Fully backwards compatible** – suitable for all Tecan microplate readers.



A number of video-based tutorials are provided with the Magellan software package.

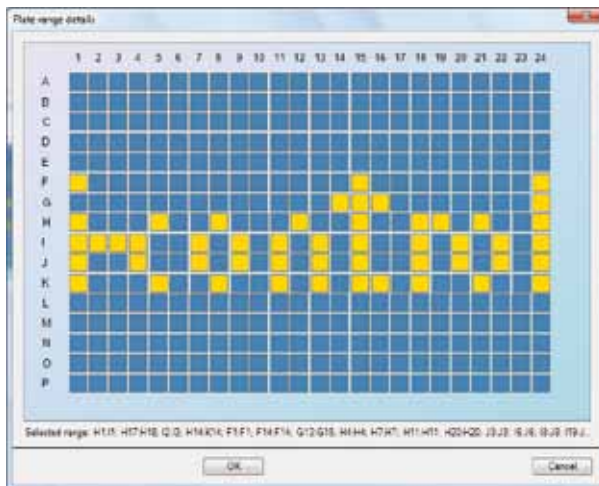


Typical workflow in i-control for luminescence measurements with injectors.

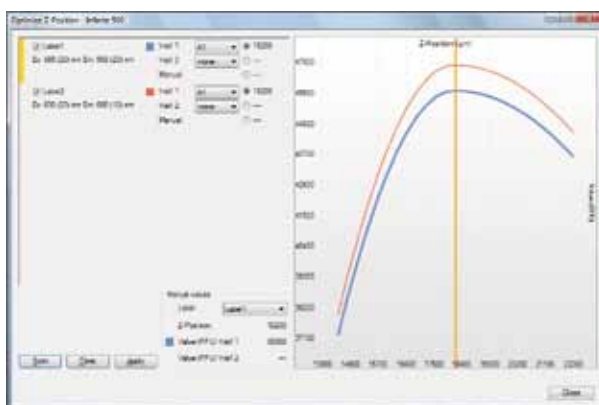
i-control software comes as standard with all Infinite microplate readers for quick and easy instrument operation. Its simple, flexible user interface allows you to choose and create application-oriented measurement scripts for whatever combination of processing steps you require. The workflow is clearly visible to the user and can be saved for future use. All data are exported to Windows®-compatible formats (Excel®).

**Key highlights of i-control**

- **Workflow-oriented flexibility** – allows you to compile your own application workflow using simple 'drag and drop' to build your command sequence.
- **Online data presentation** – provides immediate review and analysis of your measurement data.
- **Supports all integrated detection techniques** – including absorbance, luminescence and fluorescence (eg. TRF, FP, HTRF®).
- **Quality validated** – complies with ISO 13485:2003 requirements and meets industry standards for its use, data integrity and security.
- **Compatible with automated workstations** – allows the reader to be incorporated within Tecan's liquid handling platforms.



Free selection of measurement areas on the plate.



Optimize z-position in i-control connected to an Infinite F500.

# i-control & Magellan

## Comparison of software features

	i-control	Magellan Standard	Magellan Tracker
<b>Data generation / instrument control</b>			
Infinite 200	✓	✓	✓
Infinite F500	✓	✓	✓
Infinite M1000	✓	✓	✓
Sunrise		✓	✓
<b>Data analysis features</b>			
<i>Standard curve types</i>			
Point to point		✓	✓
Linear regression		✓	✓
Non-linear regression		✓	✓
Polynomial		✓	✓
Cubic spline		✓	✓
Akima		✓	✓
LogitLog		✓	✓
Four/five parameters – Marquardt		✓	✓
<i>Standard curve analysis</i>			
IC <sub>x</sub> calculation		✓	✓
Extrapolation		✓	✓
<i>General calculation features</i>			
Formula editor with basic functions		✓	✓
Logical functions		✓	✓
Numeric functions		✓	✓
Statistical functions		✓	✓
Eliminate functions		✓	✓
Definition of constants		✓	✓
Definition of cut-offs		✓	✓
QC validation		✓	✓
Plate-to-plate QC – Levy-Jennings graph		✓	✓
<i>Spectra data reduction</i>			
Blank reduction		✓	✓
Smoothing		✓	✓
Wavelength pick		✓	✓
Peak characterization		✓	✓
Spectra normalization		✓	✓
Custom formulae		✓	✓
<i>Polarization data reduction</i>			
G-factor calibration	✓	✓	✓
Blank reduction	✓	✓	✓
Calculation of polarization, anisotropy, total intensity values	✓	✓	✓

	i-control	Magellan Standard	Magellan Tracker
<b>Data analysis features</b>			
<i>Kinetic data reduction</i>			
Mean and maximum slope		✓	✓
Correlation coefficient		✓	✓
Time to onset		✓	✓
Minimum, maximum area		✓	✓
Cycle subtraction		✓	✓
Enzyme kinetics: Km and Vmax according to Hanes, Eadie-Hofstee, Lineweaver-Burk		✓	✓
<i>Data import</i>			
Import of raw data		✓	✓
Sample ID lists		✓	✓
esy-, tpl-, dd1-, pro-, ape-, csv-, txt-files		✓	✓
<i>Data export</i>			
Excel	✓	✓	✓
ASCII		✓	✓
XML	✓		
<i>FDA 21 CFR part 11 / 98/79/EC IVD-D compliance</i>			
User administration		✓*	✓
Authority checks of users (login and password)		✓*	✓
Add/modify users and groups		✓*	✓
User rights		✓*	✓
Password expiry			✓
Electronic signatures			✓
Electronic records: audit trail for methods, data, standard curves, user administration			✓
Calculations referenced to MatLab® and Excel		✓	✓
Full backwards compatibility		✓	✓
Converting files		✓	✓
Archive files		✓	✓
IVD validated			✓
<i>General features</i>			
General view settings	✓	✓	✓
Demo modus	✓	✓	✓
Data report: list and matrix		✓	✓
Password protection of methods		✓	✓
Plate definition editor	✓	✓	✓
<i>Interfaces</i>			
Robotic interface	✓	✓	✓
<i>Miscellaneous</i>			
Example files		✓	
Tutorials		✓	✓
Customization	✓	✓	✓
Languages	✓	✓	✓

\*optional

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