



Infinite® 200 PRO – New Horizon in Microplate Detection

Technical details and descriptions of applied features

Innovation and smart design to boost your research

The Infinite 200 PRO series is an easy-to-use and affordable instrument, available with a Quad4 Monochromator™ or a filter system. It offers the choice of different detection modes to suit individual needs and is designed with a modular concept, which allows later upgrades and integration with other systems. Based on its advanced set of functionalities the Infinite 200 PRO detection platform provides an excellent solution for a broad range of applications requiring high sensitivity, multiplexing capability and greater format flexibility.

Resulting from a more than 10 year history of monochromator experience, Tecan has developed and designed a cost-effective and powerful multimode reader to make this sophisticated technology also available for basic research and life science based applications.

In combination with the Infinite 200 NanoQuant technology, the Infinite M200 PRO represents one of the most accurate and reproducible monochromator multimode instruments on

the market for absorbance nucleic acid measurements. It is compatible with Tecan's patent pending NanoQuant Plate™, a quartz-based tool that can measure up to 16 samples simultaneously from sample volumes as low as 2 µl.

The Infinite F200 PRO uses a patented and intelligent filter slide system, with integrated lifetime monitoring of the filters. The optimized filter sets offer a cost-efficient alternative for routine applications at fixed wavelengths, and its fluorescence polarization module is perfectly equipped for binding studies in homogeneous mix and read assays.

System Architecture

- **Dedicated optical solutions for each measuring mode** provide uncompromising performance. These are integrated into the system architecture, firmware and software in such a way that you do not need to select and switch between energy sources, monochromators or filters as the instruments use only one: "the best" modality for each system.

- You **do not need to open the instrument cover** at any time, not for cleaning, transportation unlocking nor any other reason. This eliminates potential harm to personnel or damage to the instrument.
- The instrument's **power supply is integrated** into the instrument. As the instrument is typically placed in a wet-lab on a bench, this precaution is taken to prevent any potential electrical short-circuits through spillage of reagents.
- The Infinite 200 series was designed to **minimize the operating noise level**, which also makes it possible to work comfortably beside the instrument.
- The Xenon flash lamp is integrated in such a way that no light leaks out below the plate carrier. The instrument does not use any additional Tungsten lamps in order to avoid further maintenance costs due to its short lifetime (as compared to Xenon flash lamps).
- Plate in/out: The instrument has an on-board button for transporting the plate into and out of the instrument. In addition, you can easily program plate movement into your measurement script to perform manual steps at appropriate times. Please be aware that **the instrument will not move the plate out automatically after each measurement**, as this can hamper measurement speed or compromise results in certain measurement modes such as luminescence.

Uncompromised Performance in all Detection Modes

- **Scanning:** You can run absorbance, fluorescence excitation and fluorescence emission scans from the top as well from the bottom to first check unknown compounds, dyes, etc. for their peak profiles in the spectrum.
- **High flexibility of Infinite M200 PRO:** The Infinite M200 series is well-established in the life science field and is continuously undergoing improvement such as the current enhancements to the Infinite 200 PRO. In one of the recent developments, the instrument has been optimized for its monochromator speed and accuracy and is therefore the ideal solution for a broad range of applications for measuring DNA- or RNA-quantification, for quality control and labeling efficiency. For uncompromised performance in all detection modes the Infinite 200 series uses three sets of advanced optics, as well as three high-performance detectors optimized for the requirements of fluorescence reading, luminescence reading and absorbance reading.
- **Enhanced shaking:** The Infinite 200 PRO provides two different shaking modes, linear and orbital shaking, where amplitude, in conjunction with frequency and duration can be individually set by the user. In regards to its uncompromised performance in absorbance, fluorescence and luminescence, the Infinite 200 PRO is perfectly equipped for enzymatic, bacterial and cell-based assays.
- **Enhanced fluorescence bottom reading:** The enhanced FI Bottom reading option with its special OR (Optimal Read) function was designed to optimize and improve cell based measurements. With enhanced bottom reading and its associated OR feature very low CVs, high intra and inter well reproducibility and subsequent increased sensitivity can be achieved when measuring adherent cells in microplates. This delivers more reliable data and makes experiments more comparable.
- **TR-FRET (HTRF®):** A sophisticated and ingenious mirror system in the Infinite F200 PRO offers an attractive and cost effective system for demanding and high discerning TR-FRET applications like HTRF assays.
- **Automated adjustable z-focus:** The Infinite M200 PRO has an adjustable z-focus for FI Top measurements, offering equally high sensitivity for all plate formats, helping to implement assay miniaturization. The new automated z-adjustment with integrated background value correction or the unique z-focus scan option helps researcher to find the optimized focus position and provide conditions for best sensitivity best crop of data.
- **Automatic injection:** The Infinite 200 series offers an optional injector system which supports fast injection of up to two reagents per well for triggering fast well-kinetic assays in fluorescence, luminescence and absorbance mode. Its dispense function for bulk reagents eliminates tedious pipetting steps for 6 – 384 well plates. The convenient pump-back function helps to minimize dead volume and saves reagents. The injectors are also equipped with a metal-free injector system to prevent any interference of metal-ions with protein solutions which makes it appropriate for a wide range of applications. Finally, the maintenance of the injectors is supported by pre-defined cleaning protocols and it is easily accessible with prime/wash buttons.

- **Automation/integration:** If you would like to use the instrument in more automated environments you have the choice of purchasing a stacker which can handle up to 50 microplates or you could also consider Tecan's Freedom EVO® automated liquid handling workstations.

- **The Infinite 200 PRO certifications and compatibilities:** The Infinite 200 PRO is already certified for LanthaScreen® and DLReady™ and is compatible with Transcreener® ADP2 Fluorescence Intensity Assay, GeneBLAzer® and other applications.

Access to Advanced Assay Systems

- **Ready-to-go luminescence module:** The optional luminescence module can be used for glow and flash luminescence (with injector) based measurements. You can attenuate the signal by effector 100 for high levels of light, which offers a high dynamic range for different applications. The instrument is equipped with a low noise photon counting PMT to support your sensitive measurement needs. The module is already equipped with filters for BRET1, BRET2 and ChromaGlo™-Luciferase assays.
- **Wide range of application for the Infinite F200 PRO:** The Infinite F200 PRO uses a patented intelligent filter slide system with integrated lifetime monitoring for the filters. Beside its high sensitivity in fluorescence-based technologies, which includes fluorescence intensity top (FI top) and fluorescence intensity bottom (FI bottom), fluorescence polarization (FP), time resolved fluorescence (TRF), fluorescence resonance energy transfer (FRET) and time-resolve fluorescence resonance energy transfer (TR-FRET), including highly sensitive HTRF assays, the Infinite F200 PRO offers a series of other capabilities, like the possibility to measure all kinds of absorbance-based applications, the compatibility with Tecan's NanoQuant Plate, a 2-syringe-based injector module and a high-performance photon counting luminescence module, offering the possibility to measure glow and flash luminescence, as well as dual color luminescence.

Ease-of-use and Convenience for Instrument Control (Software)

- The Infinite 200 PRO is operated via Tecan's i-control™ software, which combines outstanding ease-of-use with powerful instrument control. The software has a workflow-oriented design, which allows you to set-up your measurement script in a straightforward and logical way. Simply insert program strips for the detection mode, dedicated commands such as shaking, injection, temperature control, or specific actions such as kinetics. You will learn within minutes how to set up your first measurement scripts.
- The raw data is displayed automatically in Microsoft® Excel® format together with a set of relevant information. The instrument's serial number, date, time and **other relevant measuring parameters** are made available for your documentation needs or re-analysis of projects – this happens automatically and does not have to be specifically programmed. Furthermore, you have the option of inserting further comments to your records whenever you like.
- If you have further needs in terms of data reduction and calculation you can optionally purchase Tecan's Magellan™ software, which has been specifically designed to that end and which is even available in several different languages!

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