

> Liquid Handling & Robotics

> **Reader & Washer**

> **Microplate Reader**

Infinite® 200

Infinite® 200 NanoQuant

Infinite® F500

Infinite® M1000

Sunrise™

> Microplate Washer

> Accessories

quad4 monochromator™

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Infinite® 200 series



Multimode microplate readers for infinite application flexibility and high-level of performance



The Infinite 200 series offers all main detection technologies in one easy- to- use modular and upgradeable instrument, which grows with the spectrum of your ideas.

Effective starting in 2008, the enhanced version of the Infinite 200 series will provide even more improved absorbance and luminescence measurements and increased sensitivity and specificity for these modes.

The unique modular design and adaptability of the Infinite 200 series provides researchers with a choice of an advanced **quad-4 monochromators™** system, or a filter system and allows them to tailor the instrument's detection modes for their individual needs.



The Infinite 200 series is compatible with Tecan's new **NanoQuant Plate™**, a sensitive, quartz-based tool that can measure up to 16 samples simultaneously from just 2 µl sample volumes.

[For more information...](#)



Infinite M200 – highlights of monochromator system

> **quad-4 monochromators™** for excellent performance AND flexibility

> Advanced wavelength-scanning for high application flexibility

> Fast wavelength switching for ion studies

> Two in one solution: Spectrophotometer for cuvettes and microplates

Infinite F200 – highlights of filter system

> Optimized filter sets for routine applications

> Fluorescence Polarization mode

> Patent pending system for monitoring of filter lifetime

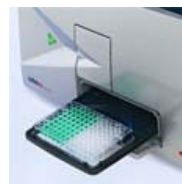
The Infinite 200 series of microplate readers offers the possibility to combine reagent dispensing with fluorescence, luminescence or absorbance in an affordable platform for the complete range of life science applications.

Outstanding levels of sensitivity – in all measurement modes

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.

The Infinite 200 series supports the following eight detection modes for sample measurements in 6-384 well plates, PCR plates or cuvettes:

- > Fluorescence intensity top and bottom reading
- > Fluorescence resonance energy transfer (FRET)
- > Time resolved fluorescence (TRF)
- > Fluorescence polarization
- > Flash luminescence
- > Glow luminescence
- > Dual color luminescence including filter for BRET1 & BRET 2 applications)
- > Absorbance



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Infinite® 200 - Features



Broad range of options for uncompromised flexibility:

Based on its advanced set of functionality the Infinite 200 detection platform provides a good solution for a broad range of applications.

Additionally its modular design enables you to purchase the configuration that you need today and upgrade your Infinite 200 system with additional features as your application requirements expand.

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Infinite® 200 - Applications



The advanced multimode detection system for a range of research labs in academia and life science industry

The Infinite 200 series is an ideal solution for a broad range of applications requiring excellent sensitivity, multiplexing capability and high format flexibility including 6 - 384 well microplates as well as cuvettes and the new NanoQuant plate™ for low sample volumes.

The Infinite 200 supports many different applications and assay technologies, such as:

- » Genomic applications:
 - » DNA-quantification via Abs. 260nm reading
 - » DNA & RNA-quantification via FI-reading: PicoGreen®, RiboGreen®, Hoechst-dyes
 - » DNA-purity check via Abs. 260 / Abs. 280 nm ratio measurements
 - » Protein quantification via BCA®-assay, Bradford & Lowry®
 - » **DLR™** (Dual Luciferase Reporter Gene Assays)
 - » Reporter Gene Assays such as alkaline phosphatase, GFP etc.
- » Cell-based applications:
 - » Cell viability, proliferation, migration, adhesion
 - » Apoptosis
 - » Ion channel assays
- » Monitoring of molecular interactions via FP-measurements:
 - » Receptor / Ligand interactions
 - » DNA / DNA binding
 - » DNA/Protein binding
 - » Protein/protein binding
 - » PolarScreen Red Assay
- » FRET-assays
- » Multilabel assays
- » Europium assays

If you are interested in more details on the applications for the Infinite 200 series, please take a look at the related [Technical Literature / Download](#)

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Infinite® 200 - Typical performance values



Light Source	UV Xenon flashlamp	
Wavelength selection		
Bandwidth	Ex: < 5 nm for $\lambda \leq 315$ nm and < 9 nm for $\lambda > 315$ nm; Em: < 20 nm for $\lambda \leq 315$ nm	
Infinite M200	Quad-4 monochromator system (2 excitation and 2 emission monochromators)	
	Absorbance	Fluorescence
Wavelength accuracy	< $\pm 0,5$ nm for $\lambda > 315$ nm; < $\pm 0,3$ nm for $\lambda \leq 315$ nm	< ± 2 nm for $\lambda > 315$ nm; < ± 1 nm for $\lambda \leq 315$ nm
Wavelength reproducibility	< $\pm 0,5$ nm for $\lambda > 315$ nm; < $\pm 0,3$ nm for $\lambda \leq 315$ nm	< ± 1 nm for $\lambda > 315$ nm; < $\pm 0,5$ nm for $\lambda \leq 315$ nm
Infinite F200	Up to 4 filter pairs per slide	
Wavelength range		
Fluorescence intensity	Standard: Ex 230-600nm, Em 330-600nm Optional: Ex 230-850nm, Em 280-850nm	
Fluorescence polarization	Standard: Ex 300 - 600 nm; Em 330 - 600 nm Optional: Em 330 - 850 nm	
Absorbance	230 - 1000 nm	
Detectors	Fluorescence - PMT, optionally UV and red-sensitive Absorbance - UV Silicon photodiode Luminescence - photon counting system with low dark current PMT	
Plate formats	6 to 384 well plates, cuvettes, NanoQuant Plate™	
Temperature control	Ambient +5°C up to 42°C	
Shaking	Linear, orbital	
Fluorescence sensitivity* values	Infinite F200	Infinite M200
Fluorescence top reading	0.5 fmol / well	1 fmol / well
Fluorescence bottom reading	5 fmol / well	9 fmol / well
TRF*	90 amol / well	
FP	< 5 mP standard deviation @ 1 nM Fluorescein**	N/A
Luminescence sensitivity* value	Standard	Basic
Glow luminescence	1 fmol ATP / well	< 20 fmol ATP / well
Flash luminescence	< 80 amol ATP / well	< 500 amol ATP / well
Absorbance		
Ratio accuracy 260 / 280 nm	$\pm 0,07$	
Precision @ 260 nm	< 0,2 %	
Accuracy @ 260 nm	< 0,5 %	
Measurement range	0 - 3 OD	
Injectors		
Pump speed	100 - 300 μ l/s	
Injection volume	selectable in 1 μ l increments; max. volume: 800 μ l per stroke	
Dead volume	100 μ l including pump back	
Fastest Read Times		
96 well plate	20 sec	
384 well plate	30 sec	
Wavelength Ex / Em-scan, 96 well plate 450 – 550 nm 5 nm step	150 sec	

* Utilizing red sensitive PMT

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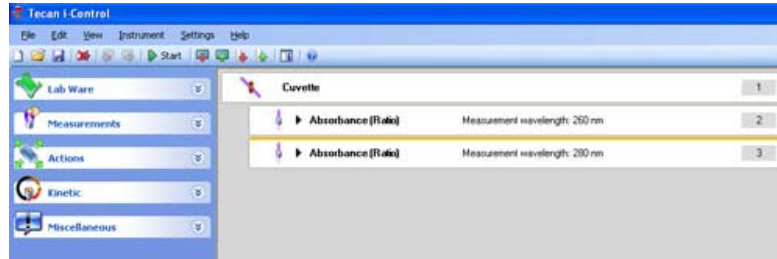
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Infinite® 200 - Software

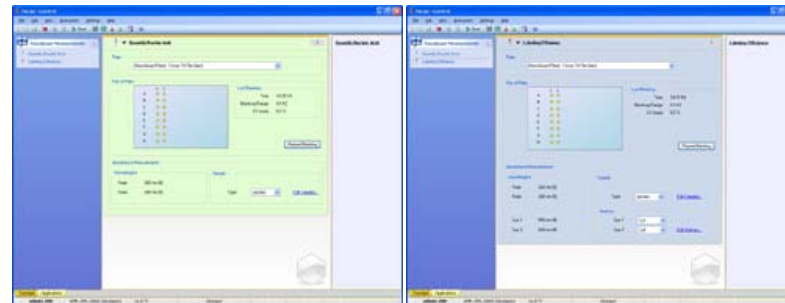
Software designed for your workflow

The Infinite 200 series are delivered with the easy-to-use **i-control™ software** interface that allows you to define the workflow for each application. Each workflow is easily created by dragging and dropping the processing steps into a sequence according to the assay protocol. The application workflow is then visible and can be saved for future use. Data are easily managed and exported to Windows® compatible formats (Excel®).



i-control – Abs. 260 / 280 measurement in cuvette with automated blanking

For the **Infinite 200 NanoQuant** special applications are included in the latest version of the i Control software, which features for quick and easy DNA/RNA quantification, or for determining labeling efficiency by less user intervention.



New i-Control applications for DNA/RNA quantification and measuring the labeling efficiency.

Sample Type	1	2
A	200 0.2630 OD 200 0.2628 OD Value: 29.45 mg/L Ratio: 1.78 ratio	200 0.2646 OD 200 0.2633 OD Value: 28.85 mg/L Ratio: 1.82 ratio
B	200 0.2622 OD 200 0.2627 OD Value: 27.45 mg/L Ratio: 1.62 ratio	200 0.2633 OD 200 0.2626 OD Value: 28.45 mg/L Ratio: 1.82 ratio
C	200 0.2622 OD 200 0.2622 OD Value: 27.45 mg/L Ratio: 1.78 ratio	200 0.2622 OD 200 0.2622 OD Value: 27.45 mg/L Ratio: 1.72 ratio
D	200 0.2622 OD 200 0.2622 OD Value: 27.45 mg/L Ratio: 1.78 ratio	200 0.2622 OD 200 0.2622 OD Value: 27.45 mg/L Ratio: 1.72 ratio
E	200 0.2624 OD 200 0.2624 OD Value: 28.45 mg/L Ratio: 1.78 ratio	200 0.2624 OD 200 0.2624 OD Value: 28.45 mg/L Ratio: 1.78 ratio
F	200 0.2624 OD 200 0.2624 OD Value: 28.45 mg/L Ratio: 1.78 ratio	200 0.2624 OD 200 0.2624 OD Value: 28.45 mg/L Ratio: 1.78 ratio
G	200 0.2624 OD 200 0.2624 OD Value: 28.45 mg/L Ratio: 1.78 ratio	200 0.2624 OD 200 0.2624 OD Value: 28.45 mg/L Ratio: 1.78 ratio
H	200 0.2624 OD 200 0.2624 OD Value: 28.45 mg/L Ratio: 1.78 ratio	200 0.2624 OD 200 0.2624 OD Value: 28.45 mg/L Ratio: 1.78 ratio

Example of Excel data output of measuring nucleic acid concentration

Sample Type	1	2
A	200 0.2630 OD 200 0.2628 OD Value: 29.45 mg/L Ratio: 1.78 ratio	200 0.2646 OD 200 0.2633 OD Value: 28.85 mg/L Ratio: 1.82 ratio
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C	200 0.2622 OD 200 0.2622 OD Value: 27.45 mg/L Ratio: 1.78 ratio	200 0.2622 OD 200 0.2622 OD Value: 27.45 mg/L Ratio: 1.72 ratio
D	200 0.2622 OD 200 0.2622 OD Value: 27.45 mg/L Ratio: 1.78 ratio	200 0.2622 OD 200 0.2622 OD Value: 27.45 mg/L Ratio: 1.72 ratio
E	200 0.2624 OD 200 0.2624 OD Value: 28.45 mg/L Ratio: 1.78 ratio	200 0.2624 OD 200 0.2624 OD Value: 28.45 mg/L Ratio: 1.78 ratio
F	200 0.2624 OD 200 0.2624 OD Value: 28.45 mg/L Ratio: 1.78 ratio	200 0.2624 OD 200 0.2624 OD Value: 28.45 mg/L Ratio: 1.78 ratio
G	200 0.2624 OD 200 0.2624 OD Value: 28.45 mg/L Ratio: 1.78 ratio	200 0.2624 OD 200 0.2624 OD Value: 28.45 mg/L Ratio: 1.78 ratio
H	200 0.2624 OD 200 0.2624 OD Value: 28.45 mg/L Ratio: 1.78 ratio	200 0.2624 OD 200 0.2624 OD Value: 28.45 mg/L Ratio: 1.78 ratio

Example of Excel data output of measuring nucleic acid labeling efficiency

For comprehensive data reduction and wavelength scanning, the **Magellan™ software** perfectly matches the flexibility of the Infinite 200 series of multimode readers. For a quick start with your Infinite 200, the Magellan software additionally provides a list of example files for a range of applications.



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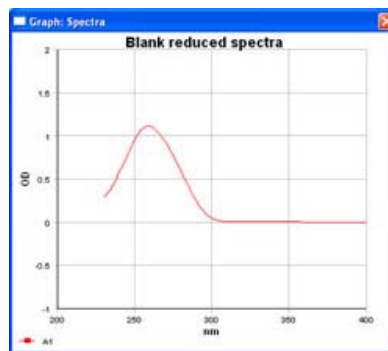
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Magellan – example of layout for 96 well plate

Magellan – DNA-spectrum

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