VICTOR Nivo multimode plate reader

The **VICTOR® Nivo™** is a high-performance filter-based multimode plate reader system that can be equipped with all major detection technologies – Absorbance, Luminescence, Fluorescence Intensity, Time-Resolved Fluorescence, Fluorescence Polarization, and Alpha. It is a compact, light-weight instrument designed for life science research laboratories performing routine low-throughput assays, or assay development work, and with diverse application requirements. The system's control software allows you to use results to perform basic data analysis – you can set up standard curves, general calculations, and statistical analysis, and build step-by-step calculation before or after measurement.

For research use only. Not for use in diagnostic procedures.

Key features

- Available in four configurations - standard models include Absorbance, Luminescence, and Fluorescence; option to add Time-Resolved Fluorescence, Fluorescence Polarization, and/or Alpha
- Top and bottom reading of all standard technologies (with the exception of Alpha) for plate formats up to 1536-wells
- Compact, lightweight instrument frees-up bench space and is easy to move
- Internal dynamic filter wheel system with space for up to 32 filters
- For Absorbance, choice of filter-based detection for best sensitivity or spectrometer for wavelength flexibility
- Time-Resolved Fluorescence certified for use with proprietary LANCE and HTRF technologies
- Enhanced Security software for regulated environments provides technological controls and features that support 21 CFR Part 11 compliance
- Laser based Alpha detection capabilities for fast and sensitive Alpha measurements
- Browser-based software enables control from a variety of devices – PC, laptop, or tablet
- Controllable via network or Wi-Fi to facilitate remote working and data access
- Optional dispenser for applications such as fast kinetics, flash Luminescence, or dual addition assays
- Integrated temperature control and optional gas control unit to keep cells healthy during long term kinetic assays
- Optional stacker for walkaway automation with the ability to de-lid plates

For complex calculations, optional MyAssays® Desktop Pro analysis software lets you download preconfigured, customizable protocols for HTRF®, LANCE®, DELFIA®, ATPlite™, Alpha, and other applications. And it integrates with our Enhanced Security software for compliance and data integrity.

Detection technologies

The system incorporates a dynamic wheel system with space for storage of up to 32 filters, providing ready access to filters for a large number of dyes. Filters are exchanged between the inner and outer filter wheels, so any individual filter can serve either excitation or emission lightpaths. As a result, there's no need to install new filters when switching between assays, and filters can be locked within the system so they can't be mislaid in the lab – ideal for multi-user environments. When fully-loaded, the filter system provides the flexibility to detect many dyes with better sensitivity and greater cost-effectiveness compared to a monochromator.

For Absorbance measurements, there is a choice of either a filter- or a spectrometer-based system. Full spectrum Absorbance measurements are ultra-fast – 220 to 1000 nm at selectable resolutions (2.0 nm, 5.0 nm, 10 nm) in less than one second per well. The spectrometer system also allows for the detection of a wide range of dyes or measurement of samples with unknown Absorbance spectra.

The system also features high-performance Alpha laser technology, validated for use with our proprietary AlphaScreen® and AlphaLISA® technologies.

GENERAL SPECIFICATIONS		
Dimensions	Without dispenser:	Width: 20 cm (8 in), Depth: 50 cm (19.5 in), Height: 26.5 cm (10.5 in)
	With dispenser:	Width: 20 cm (8 in), Depth: 50 cm (19.5 in), Height: 38 cm (15 in)
Weight		13 kg (29 lb) without dispenser, 15 kg (33 lb) with dispenser
Plate Formats		1- to 1536-wells
Environmental Control	Temperature Gas (optional)	3°C above ambient up to 65°C (0.1°C increments) CO_2: 0% – 20% (<0.1% accuracy) O_2: 1% – 20% (<0.1% accuracy)
Shaking		Linear, orbital and double orbital modes
Dispenser (optional)		2 Injectors, 500 µl each syringe, manual rinsing and priming control
Operation	Operating environment Power supply Power consumption	15°C – 35°C, < 80 % humidity 110 – 240 V, 50/60 Hz 120 W
Connections	Connection Remote Control	LAN Wi-Fi (modem included); LAN network
Operating System		Any operating system with common web browsers
Spectrometer (Absorbance only)	Wavelength range Variable bandwidth	220 nm – 1000 nm (1.0 nm increments) 2.0 nm, 5.0 nm, 10 nm
Detector	Flexible measurement height Wavelength range (Emission)	0 mm – 16 mm 230-1000 nm (Absorbance), 230-850 nm (other)
Flash Lamp	Wavelength range (Excitation)	230 nm – 1000 nm
Stacker (optional)	Handling time without lids	0:22[1]
	Handling time with lids, plates de-lidded during measurement	0:53[1]
	Handling time with lids on plate during measurement	1:21[1]

1. Time measured between two subsequent plates in a stacker run, min:sec

PERFORMANCE SPECIFICATIONS		96-well Microplate	384-well Microplate
Absorbance Filter	OD range	0 – 4 OD	0 – 4 OD
	OD accuracy	< 2.0 % (OD 2)	< 2.0 % (OD 2)
Absorbance Spectrometer	OD range	0 – 2 OD	0 – 2 OD
	OD accuracy	< 2.0 % (OD 2)	< 2.0 % (OD 2)
Luminescence	Sensitivity (Top Reading)	50 amol[2]	—
	Dynamic range	6 log	6 log
Fluorescence Intensity	Sensitivity (Top Reading)	0.5 fmol	0.01 fmol
	Sensitivity (Bottom Reading)	—	0.06 fmol
Time-Resolved Fluorescence	Sensitivity (Top Reading)	2.25 amol	0.5 amol
Fluorescence Polarization	Sensitivity (Top Reading)	3 mP	3 mP
Alpha	Sensitivity (Phosphotyrosine (PT66))	<100 amol	<100 amol

2. ATP detected by VICTOR Nivo with dispenser

TYPICAL THROUGHPUT (time per plate, MIN:SEC)	96-well	384-well
Absorbance (Spectrometer, 20 ms measurement time)	0:45	2:38
Absorbance (Filter, 20 ms measurement time)	0:24	1:20
Luminescence (20 ms measurement time)	0:20	1:05
Fluorescence Intensity (20 ms measurement time)	0:24	1:20
Time-Resolved Fluorescence (LANCE, 50 µs Delay, 500 ms)	2:30	9:50
Fluorescence Polarization (125 ms measurement time)	2:04	5:36
Alpha (50 ms excitation time, 700 ms emission time)	2:11	8:46

Revvity, Inc.
940 Winter Street
Waltham, MA 02451 USA

(800) 762-4000
www.revvity.com