Create Change in the Lab

NanoPhotometer® N50

Microvolume Spectroscopy

WiFi HotSpot LAN

Microvolume Capability

Starting with only 0.3 µl of sample

Endless Connectivity

Built-in File Server for data access from Windows and Mac computers
Print to Airprint™ and HP Universal Driver compatible printers as well as DYMO Label printers
Rest API for LIMS integration

Certainty in Real Time

Blank Control™, air bubble and impurity recognition

Flexible Unit Control and Ultimate Data Security

Computer (Windows & Mac)
Built-in touchscreen
Smartphone / Tablet (Android OS & iOS)
Proprietary NPOS immune to known threats

World's smallest footprint in its class: only 20 x 20 x 12 cm
Ideal for nucleic acids, protein and samples in most organic solvents
Allows kinetic studies in a drop
No reconditioning, no recalibration and no regular maintenance ever
Stand-alone operation with built-in 7 inch glove compatible touch screen
Universal data output: Excel and PDF
Multi Language User Interface
Barcode ready
32 GB of onboard memory

Technical Specifications

NanoVolume Performance	
Detection Range dsDNA	1 ng/µl to 16,500 ng/µl (N50: 5 ng/µl to 7,500 ng/µl)
Detection Range BSA	0.03 mg/ml to 478 mg/ml (N50: 0.15 mg/ml to 217 mg/ml)
Minimum Sample Size	0.3 µl
Photometric Range (10 mm equivalent)	0.02 - 330 A (N50: 0.1 - 150 A)
Path Length	0.67 and 0.07 mm
Dilution Factor	15 and 140
Vortexer	2,800 rpm; tube size up to 2.0 ml
Cuvette Performance	
Detection Range dsDNA	0.1 ng/µl to 130 ng/µl
Detection Range BSA	0.003 mg/ml to 3.7 mg/ml
Photometric Range	0 - 2.6 A
Center Height (Z-Height)	8.5 mm
Cell Types	Outside dimension 12.5 x 12.5 mm
Heating	37 °C ± 0.5 °C
Optical Specifications	
Wavelength Scan Range	200 - 900 nm (N50: 200 - 650 nm)
Measure Time For Full Scan Range	3.5 - 6.0 seconds
Wavelength Reproducibility	± 0.2 nm (N50: ± 1 nm)
Wavelength Accuracy	± 0.75 nm (N50: 1.5 nm)
Bandwidth	better than 1.8 nm (N50: 5 nm)
Stray Light	< 0.5 % at 240 nm using NaI (N50: < 2 %) and < 1 % at 280 nm using Acetone (N50: < 2 %)
Absorbance Reproducibility	< 0.002 A (0.67 mm path) @ 280 nm (N50: < 0.004 A (0.67 mm path) @ 280 nm)
Absorbance Accuracy	< 1.75 % @ 0.7 A (0.67 mm path) @ 280 nm of the reading
Zero Stability	±0.003 A/hour after 20 min warm up @ 280 nm
Noise	0.002 A rms at 0 A @ 280 nm 0.002 A (pk to pk) at 0 A @ 280 nm
Optical Arrangement	1 x 3648 CCD Array (N50: 1 x 1024 CCD Array)
Lamp	Xenon flash lamp
Lifetime	10^9 flashes, up to 10 years
Processing Power & Compatibility	
Operating System	Linux based NPOS
Onboard Processor	Quad Core 1 GHz
Internal Storage	32 GB
Control Options	Onboard with built-in Touchscreen, Computer, Smartphone and Tablet
Software Compatibility	Windows 7, 8, 10 (32 & 64 bit), OS X, iOS & Android OS
Min. Requirement Smartphone/Tablet	4" screen; Apple: iPad 2, iPhone5 & iOS 6; Android Phone: OS version 4.4; Android Tablet: OS version 5.0, Quadcore 1.2 GHz with 1 GB RAM
General Specifications	
Main Body Size	20 cm x 20 cm x 12 cm
Weight	3.8 - 5.2 kg depending on configuration
Operating Voltage	90 - 250 V, 50/60 Hz, 60 W (90 W with battery pack), 18/19 VDC
Display	1024 x 600 pixels; Touchscreen glove compatible
Built-in Battery Pack	Optional rechargeable lithium ion battery; 95 Wh, 6.6 Ah; Operation time: up to 10 h; min. charging cycles: 800
Certification	CE, IEC 61010-1:2012 and EN 61326-1:2013
Battery Certification	IEC 62133 and UN38.3 transport test
In & Output Ports	2x USB A, USB B, HDMI, Ethernet, WLAN
Additional Data Input	Mouse & keyboard options
Security	Slot for Kensington lock

Reviews

"Best small volume spec on the market"

Rating: 5.0 ★★★★★

Application Area: Protein/nucleic acid quantitation

"The Implen NanoPhotometer N50 is extremely easy to use (intuitive menus and settings), accurate, and genuinely capable of measuring very small volumes repeatably. The touch screen works well even with gloves. Window configurations are adaptable so you can customize the information you're looking at while working. The instrument is light and mobile, and since it's all-in-one, you can literally move it to where you're working as needed... In my opinion, it's the best nano-scale measurement device on the market for routine lab sample quantification and spectral reading."

David Rawling
Organization: Inflammatix, Inc.

"Great result, very positive experience"

Rating: 5.0 ★★★★★

Application Area: Nucleic Acid Sample Quality Control

"The instrument was very easy to use. I had a great interaction with the Implen team. They were very supportive of my startup and offered me a payment plan that helped me get me to my next round of funding. I really appreciate their support and commitment to startups."

Shan Zhao
Organization: Basepaws Inc.