Designed for Research on an Epic Level

NanoPhotometer® NP80

All-in-One Spectroscopy

Microvolume and Cuvette Capability
Built-in Vortex

Starting with only 0.3 µl of sample
Linear up to 2.6 Abs

Full Scan

2.5 – 4 seconds per reading
200 to 900 nm
Resolution better than 1.5 nm

Regulatory Compliance, Certainty in Real Time and IQ/OQ Package

Optional CFR21 software provides password protected role based access control (RBAC), data integrity, electronic signatures and audit trail functionality
Impurity and air bubble recognition with Sample Control™ and Blank Control™
Compliant with international standards in regulated environments

Wi-Fi® **HotSpot** **LAN**

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

Battery Powered

Up to 8 hours battery operation

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
64 GB of onboard memory

Technical Specifications

NanoVolume Performance	
Detection Range dsDNA	N60, NP80: 1 – 16,500 ng/µl N50: 5 – 7,500 ng/µl N120: 2 – 8,000 ng/µl
Detection Range BSA	N60, NP80: 0.03 – 478 mg/ml N50: 0.15 – 217 mg/ml N120: 0.06 – 230 mg/ml
Sample Volume	N50, N60, NP80: 0.3 – 2 µl N120: 2 – 3.5 µl
Photometric Range (10 mm equivalent)	N60, NP80: 0.02 – 330 A N50: 0.1 – 150 A N120: 0.04 – 160 A
Path Length	N50, N60, NP80: 0.67 & 0.07 mm N120: 1 and 0.125 mm
Dilution Factor	N50, N60, NP80: 15 and 140 N120: 10 and 80
Vortex	N60, NP80: 2,800 rpm Tube size up to 2.0 ml

Cuvette Performance – NP80 & C40	
Detection Range dsDNA	0.1 – 130 ng/µl
Detection Range BSA	0.003 – 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

Processing Power & Compatibility	
Operating System	Linux based NPOS
Onboard Processor	Intel Celeron dual core 2.4 GHz
Internal Data Storage	C40, N50, N60, NP80: 64 GB N120: 128 GB
In & Output Ports	2x USB A, USB B, HDMI, Ethernet, Wi-Fi®
Software Compatibility	Windows 8, 10, 11 (32 & 64 bit) OS X (Intel x86 and Apple M1) iOS and Android OS

Optical Specifications	
Wavelength Scan Range	C40, N60, NP80, N120: 200 – 900 nm N50: 200 – 650 nm
Measure Time For Full Scan Range	C40, N50, N60, NP80: 2.5 – 4.0 sec N120: 1.7 – 2.5 sec per sample
Wavelength Reproducibility	C40, N60, NP80, N120: ± 0.2 nm N50: ± 1 nm
Wavelength Accuracy	C40, N60, NP80, N120: ± 0.75 nm N50: ± 1.5 nm
Bandwidth	C40, N60, NP80: < 1.5 nm N50: < 3 nm N120: < 2.5 nm
Absorbance Reproducibility	C40, NP80 (Cuvette): < 0.002 A @ 0 – 0.3 A @ 280 nm CV < 1% @ 0.3 – 2.0 A @ 280 nm N50 (Lid 15): < 0.004 A @ 0 – 0.3 A @ 280 nm CV < 1% @ 0.3 – 1.5 A @ 280 nm N60, NP80 (Lid 15): < 0.002 A @ 0 – 0.3 A @ 280 nm CV < 1% @ 0.3 – 1.7 A @ 280 nm N120 (Lid 10): < 0.004 A @ 0 – 0.3 A @ 280 nm CV < 0.4% @ 0.8 A @ 280 nm
Absorbance Accuracy	< 1.75% @ 0.7 A @ 280 nm of the reading
Stray Light	C40, N60, NP80: < 0.5% @ 240 nm using NaI N50: < 2% @ 240 nm using NaI N120: < 1% @ 240 nm using NaI
Optical Arrangement	C40, N50, N60, NP80, N120: 1x 4096 CMOS Array
Lamp | Lifetime	Xenon flash lamp | 10^9 flashes, up to 10 years

General Specifications	
Main Body Size	200 x 200 x 120 mm
Weight	3.8 – 5.2 kg depending on configuration
Power Requirements	90 – 250 V ± 10%, 50/60 Hz, supplied external power supply: 90 W, 18/19 V DC; C40, N50, N60, NP80: typ. power consumption: 20 W N120: typ. power consumption: 30 W
Display	1024 x 600 pixels; glove compatible touchscreen
Built-in Battery Pack: Optional rechargeable lithium ion battery	C40, N60, NP80: 95 Wh, 6.6 Ah, 8 h N120: 47.5 Wh, 3.3 Ah, 3 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
Security	Slot for Kensington lock

Reviews

"I love these machines. They make my job easier."

Rating: 5.0 ★★★★★

Application Area: Teaching lab/upper divisional Bioc lab

"We have 8 and I am very pleased with how easy they are to use. This is a new product for our students and they are able to follow the directions we give them and get results. With any new piece of equipment, there is a learning curve, but it's a small one once they are comfortable using them. I like the fact that they are easy to demo, easy to install updates, and easy to troubleshoot. Compared to our old specs, these save the students time, they get results quickly, each group has their own NanoPhotometer at their station... My sales rep is fantastic"

Barbara Pinch
Organization: University of Minnesota

"Great results and very accurate!"

Rating: 5.0 ★★★★★

Application Area: Protein assays and concentrations

"I love love love this machine. It's portable, idiot proof, and accurate. For its DNA analysis, it is much more accurate than the old familiar... . I love the fact that it is so modifiable and easy to use. We use it for a variety of functions in the lab, including Bradford assays. I really love that there is a built-in graph for these and that you can email it to yourself or save on a USB stick. This machine is the thing we have all been needing but never knew we missed. Also the customer care is outstanding and I look forward to our rep every time she comes."

Andrea Kuipers
Organization: California Institute of Technology

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