

Unmatched Accuracy & Performance

Advanced Microvolume Performance

- Nucleic Acid, Protein UV-Assay Measurements, OD600 plus much more
- Scan Range 200 – 900 nm in just 2.5 seconds
- Built-in high performance cuvette, with a spectral resolution < 1.5 nm
- Starting at 0.3 µl sample volume
- No Maintenance and recalibration required ever
- Accurate, consistent results
- Pre-programmed and customizable applications
- Broad detection range
dsDNA: 1 – 16,500 ng/µl | BSA: 0.03 – 478 mg/ml

Key Instrument Features

- Easy sample application, illuminated sample window
- Intuitive graphical user interface
- Standalone or Remote Operated – Windows, Mac, Android, and iOS
- Built-in computer with a high performance dual core 2.4 GHz processor and 64 GB of onboard data storage
- Portable with battery option – Only 20 x 20 x 12 cm footprint
- Low vibration and low energy built-in vortex
- GMP, GLP, GxP Ready 21 CFR Part 11 and IQOQ option



WiFi



USB



LAN



HDMI



HotSpot

Technical Specifications

NanoVolume Performance		Optical Specifications	
Detection Range dsDNA	1 – 16,500 ng/µl	Wavelength Scan Range	200 – 900 nm
Detection Range BSA	0.03 – 478 mg/ml	Measure Time	2.5 – 4.0 sec for full scan range
Sample Volume	0.3 – 2 µl	Wavelength Reproducibility	± 0.2 nm
Photometric Range (10 mm equivalent)	0.02 – 330 A	Wavelength Accuracy	± 0.75 nm
Path Length	0.67 & 0.07 mm	Bandwidth	< 1.5 nm
Dilution Factor	15 and 140	Absorbance Reproducibility	(Lid 15): < 0.002 A @ 0 – 0.3 A @ 280 nm CV < 1% @ 0.3 – 1.7 A @ 280 nm
Vortex	2,800 rpm Tube size up to 2.0 ml	Absorbance Accuracy	< 1.75% @ 0.7 A @ 280 nm of the reading
Cuvette Performance		Stray Light	< 0.5% @ 240 nm using NaI
Detection Range dsDNA	0.1 – 130 ng/µl	Optical Arrangement	1 x 4096 CMOS Array
Detection Range BSA	0.003 – 3.7 mg/ml	Lamp, Lifetime	Xenon flash lamp; 10 ⁹ flashes, up to 10 years
Photometric Range	0 – 2.6 A	General Specifications	
Center Height (Z-Height)	8.5 mm	Main Body Size	200 x 200 x 120 mm
Cell Types	Outside dimension 12.5 x 12.5 mm	Weight	3.8 – 5.2 kg depending on configuration
Heating	37 °C ± 0.5 °C	Power Requirements	90 – 250 V ± 10%, 50/60 Hz, supplied external power supply: 90 W, 18/19 V DC; typ. power consumption: 20 W
Processing Power & Compatibility		Display	1024 x 600 pixels; glove-compatible touchscreen
Operating System	Linux based NPOS	Built-in Battery Pack Optional rechargeable lithium ion battery	95 Wh, 6.6 Ah, 8 h Min. charging cycles: 800
Onboard Processor	Intel Celeron dual core 2.4 GHz	Certification	CE, IEC 61010-1:2012 and EN 61326-1:2013
Internal Data Storage	64 GB	Battery Certification	IEC 62133 and UN38.3 transport test
Software Compatibility	Windows 8, 10, 11 (32 & 64 bit) OS X (Intel x86 and Apple M1) iOS and Android OS	In & Output Ports	2x USB A, USB B, HDMI, Ethernet, Wi-Fi®
		Security	Slot for Kensington lock

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ISO 9001:2015



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Features and specifications are subject to change without notice.



NanoPhotometer® NP80

High Performance Microvolume & Cuvette
UV/Vis Spectrophotometer



NanoPhotometer® NP80

NanoVolume & Cuvette

Trusted Technology

For over a decade prestigious biological, chemical and pharmaceutical companies as well as research organizations around the globe have relied on Implen spectrophotometers. The NanoPhotometer® is the most innovative line of microvolume UV/Vis spectrophotometers – cited by thousands of scientific publications worldwide.

Maintenance Free

Guaranteed lifetime accuracy for peace of mind with no preventive maintenance or recalibration required due to Patented Sample Compression Technology™ with precisely defined path lengths in a sealed optics block. The measurement environment consists of scratch-resistant and inert quartz.

Fast & Sensitive

Power on and instantly measure without lamp warm-up time. Full scan capability from 200 – 900 nm provides rapid and complete sample analysis in only 2.5 – 4.0 sec. Precision readings over the entire range from 1 to 16,500 ng/µl for dsDNA with the patented True Path Technology™ will exceed expectations. The temperature controlled cuvette port provides an unmatched dynamic range of up to 2.6 Abs without the need for a cover during the reading.

Mobile

Spectroscopy can now be taken anywhere. The optional integrated battery pack provides up to 8 hours of stand-alone battery powered operation. You can now work effortlessly under laminar flow hood/clean benches or share the device between different lab members or groups.

7” Color Touchscreen

Easy to Clean Surfaces

Minimum 0.3 µl Sample Volume

Illuminated Sample Window

Low Vibration Vortex

Temperature Controlled Cuvette Holder



Regulatory Compliance

CFR21 Software

The CFR21 software package provides compliance with FDA 21 CFR Part 11 requirements and is an optional software tool ideal for GxP laboratories, which require proper electronic record keeping. The software includes user account management with individual password protected Role Based Access Control (RBAC), electronic signatures, data integrity, security, and audit trail functionality.

Flexible

Control your NanoPhotometer® via touchscreen/ tablet/computer. Equipped with WiFi, USB A/B, HDMI, and LAN interface connections. Define and store your own data and methods and retrieve them through the NanoPhotometer® Network Drive. Connection and control via LIMS is available as an option.

Installation Qualification and Operation Qualification (IQ/OQ)

Our IQ/OQ package is offered for compliance with international standards in regulated environments and provides conforming data to document and verify that your instrument is installed and functioning according to its intended use and within specifications. The system suitability test is performed with a non-toxic liquid NIST traceable secondary standard that absorbs at a wavelength of 280 nm.



Lifetime Accuracy Guaranteed

- True Path Technology™
- Sample Control™ Technology
- Blank Control™ Technology
- Sample Compression Technology™



Electronic Signature

Implen NanoPhotometer®

Instrument Type

Version

Serial Number

Selftest passed

Autosave

Reason

User ID

User Name

eSign Date

eSign Time

N120

NP05 4.0 13220

M120100

2019-02-25; 15:56

No

Author

bjones

Becky Jones

2019-02-26

09:23:31

Read/Save/Print

msmith

Mark Smith

2019-02-26

16:49:32

Parameter

Method

Type

Mode

Protein Factor

Protein UV

BSA

Multi-Channel

1.500

Wavelength (nm)

Background Correction

Air Bubble Recognition

Sample Loading

280

320 nm

Off

Horizontally

Position	Sample ID	Content	Conc.	Units	A230	A260	A280	A320	A260/A280	Dilution
A01	BLK01	B	0.0000	mg/ml	0.000	0.000	0.000	0.000	0.000	
A02	BLK02	B	0.0000	mg/ml	0.000	0.000	0.000	0.000	0.000	
A03	BLK03	B	0.0000	mg/ml	0.000	0.000	0.000	0.000	0.000	
B01	SPL01	S	0.0090	mg/ml	0.024	0.016	0.009	0.003	2.167	10
B02	SPL02	S	---	mg/ml	0.004	0.003	-0.014	-0.003	0.000	10
B03	SPL03	S	---	mg/ml	0.003	0.007	-0.006	-0.004	1.500	10

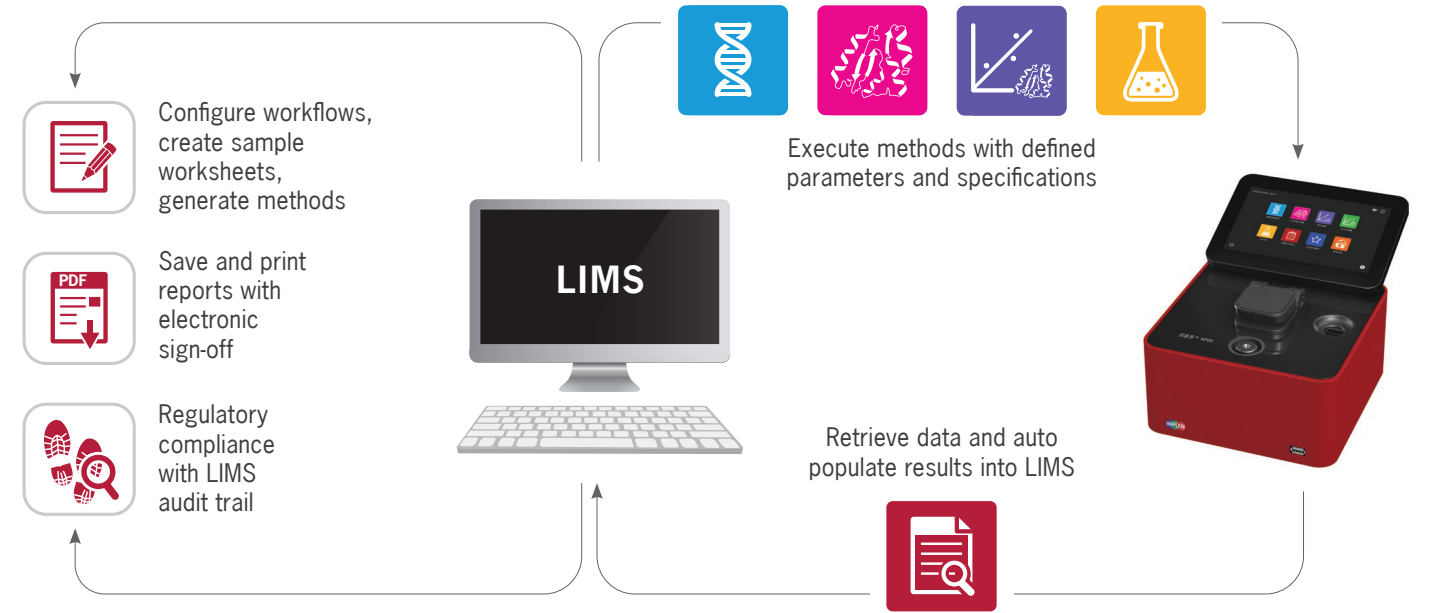
Audit Trail

ID	Date/Time	UserID	Category	Action	Details
77	2019-02-11 13:09:19	Admin1	Administrator	Login	
78	2019-02-11 13:09:26	Admin1	Administrator	File opened successfully	NanoPhotometer/Admin1/Test.ids
79	2019-02-11 13:09:32	Admin1	Administrator	File opened successfully	NanoPhotometer/Admin1/sampleTest96.ids
80	2019-02-11 13:09:35	Admin1	Administrator	Blank measurement	
81	2019-02-11 13:09:36	Admin1	System	Warning message	All leastOneBlankHighAbsorbance
82	2019-02-11 13:10:21	Admin1	Administrator	Blank measurement	
83	2019-02-11 13:10:26	Admin1	System	Warning message	Closed id
84	2019-02-11 13:10:43	Admin1	Administrator	Sample measurement	
85	2019-02-11 13:14:22	Admin1	Administrator	Blank measurement	
86	2019-02-11 13:14:23	Admin1	System	Warning message	All leastOneBlankHighAbsorbance
87	2019-02-11 13:20:57	Admin1	Administrator	Method closed without saving data	Backup-BSA-13-20-190311.ids
88	2019-02-11 13:20:58	Admin1	System	autosave	Backup-BSA-13-20-190311.ids
89	2019-02-11 13:21:09	Admin1	Administrator	File opened successfully	NanoPhotometer/Admin1/Test96.ids
90	2019-02-11 13:21:47	Admin1	Administrator	Measurements saved	method: IgGMouse1.abel, file: My NanoPhotometer/Test96-2, format: Excel, PDF
91	2019-02-11 13:22:49	Admin1	Administrator	Logout	

Measurement data are saved by confirming User ID and password. Saved files provide the user name/author, User ID, date and time for proper electronic record keeping. IDS and PDF files cannot be altered and ensure data integrity.

The audit trail automatically records all actions and preference changes in an audit log. The audit log contains a sequence ID, time stamp, user ID and category for each action. Audit trails can be saved as a PDF and printed by an Administrator for documentation purposes.

LIMS Integration



Add more efficiency to your workflow by integrating the NanoPhotometer® with your LIMS to control processes, eliminate errors and save time. The NanoPhotometer® can be integrated with any LIMS software provider.