

NanoQ

MICROVOLUME UV-Vis SPECTROPHOTOMETER



NanoQ Series

It supplies extremely fast and easy quantitative analysis of nucleic acid and protein by UV-Vis absorption spectrophotometry.

The NanoQ series incorporates array-type spectrophotometer technology using a Xenon lamp and a CMOS linear image sensor (2048 pixels), enabling rapid measurement of broadband absorption spectra from the ultraviolet to the visible range (190–850 nm) within seconds.

It provides various algorithms for spectral analysis, including peak and valley detection. More than 20 measurement modes can be easily configured, including nucleic acids (dsDNA, ssDNA, RNA), proteins (Lysozyme, BSA, IgG), and OD600 measurements.

Note The NanoQ Plus model provides pedestal and cuvette measuring mode, but the NanoQ does not.

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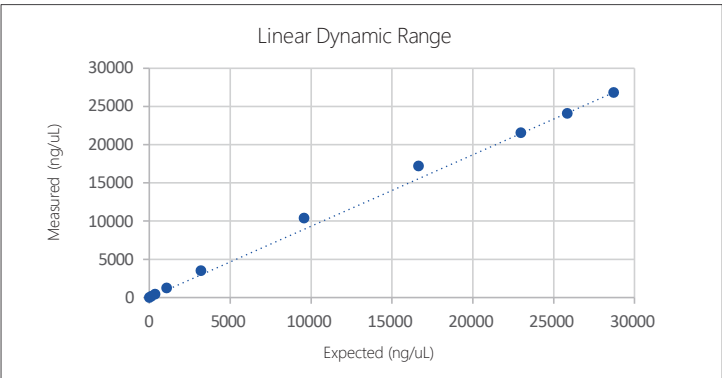
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Note The NanoQ Plus model provides pedestal and cuvette measuring mode, but the NanoQ does not.



The NanoQ series uses sample compression technology to ensure efficient light transmission, stable measurements, and minimal sample consumption. With precise optical path lengths of 1.0, 0.2, 0.1, and 0.03 mm, it maintains consistent accuracy across a wide concentration range, including 2–27,500 ng/μL for double-stranded DNA. Direct, dilution-free measurement reduces analysis time and significantly improves experimental efficiency.



Measurement menu configuration		
	Menu	Factor
Nucleic Acid (ng-ε/μℓ)	dsDNA	50
	ssDNA	37
	RNA	40
	miRNA	33
	Custom	Input
Protein (g-ε/ℓ)	BSA	1.5
	SA	1.49, 1.72
	IgG	0.71, 0.74
	IgE Human	0.65
	Lysozyme	0.38
	OD1	1
OD600	OD600	1

Specifications		
Product Name	NanoQ Plus	NanoQ
Photometrics System	Microvolume & Cuvette Spectrophotometer	Microvolume Spectrophotometer
Light Source(s)	Xenon flash lamp	
Lifetime	Up to 10 years	
Detector	2048-element CMOS linear image sensor	
Spectral Resolution	1.5 nm (FWHM at Hg 253.7 nm)	
Wavelength Range	190 to 850 nm	
Wavelength Display (setting)	1 nm	
Wavelength Accuracy	± 1 nm	
Baseline Correction Wavelength	Selectable (190 to 850 nm)	
Absorbance Precision	0.002 AU (0.5 mm path) or 1 %	
Absorbance Accuracy	3 % (at 0.97A at 302 nm)	
Measurement Time	Less than 8 seconds	
Microvolume	Minimum Sample Volume	1 μ L
	Pathlength	0.03 to 1.0 mm
	Photometric Range	0.02 to 550 A (10 mm equivalent)
	Detection Range	2 - 27,500 ng/ μ L (dsDNA) / 0.06 - 825 mg/mL (BSA) / 0.03 - 400 mg/mL (IgG)
	Pedestal Compartment Material	303 stainless steel and quartz fiber
Cuvette	Photometric Range	0 to 2 A
	Display Range	0 to 3 A
	Detection Limit	0.2 - 150 ng/ μ L (dsDNA)
		0.006 - 5 mg/mL (BSA)
		0.003 - 2 mg/mL (IgG)
	Center Height (Z-height)	8.5 mm
	Cell Types	12.5 x 12.5 mm (Outside dimension)
CPU	Octa Core ARM® Cortex™-A53 Processor	
Storage	32 GB	
Glove Compatibility	Compatible with lab gloves	
Connectivity	4 x USB-A ports, Ethernet, RS232	
Display	7-inch (resolution: 1280 * 800)	
Operating System (OS)	Android	
Dimensions(W*D*H)	216 mm * 290 mm * 165 mm	
Weight	3.0 kg	

NanoQ Lite+

Nano enables fast and accurate quantification of nucleic acid and protein samples using fixed wavelengths at 230, 260, and 280 nm.

NanoQ Lite+ is designed specifically for routine nucleic acid and protein quantification by applying fixed wavelengths at 230, 260, and 280 nm, rather than full-spectrum scanning. This focused measurement approach enables fast and stable analysis of DNA, RNA, and protein samples. With a streamlined, cost-effective configuration that eliminates unnecessary features, NanoQ Lite+ provides a reliable quantification solution for budget-conscious laboratories and educational institutions.

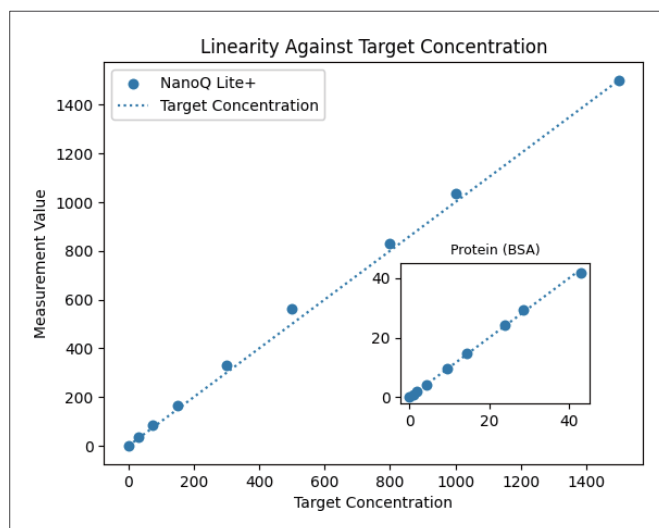


NanoQ Lite+ is a microvolume spectrophotometric instrument designed for fast and accurate measurement of DNA and protein concentrations from small sample volumes.

Its optimized optical path design ensures stable and reliable results even in repetitive measurements, making it well suited for routine research and quality control environments.

1. Optimized optical path design (0.75 mm)
Enhances signal stability and minimizes measurement variation
2. Excellent repeatability and reproducibility
Maintains low variability even in repeated measurements for reliable results
3. Linearity across a wide concentration range
Ensures high agreement with target concentrations from low to high levels
4. Suitable for routine laboratory use
Provides stable performance for repetitive analyses in research, education, and QC environments
5. Intuitive measurement workflow
Enables fast and simple measurements without complex preparation steps

NanoQ Lite+ demonstrates high linear agreement with target concentrations across a wide range of DNA and protein samples.



Specifications	
Photometrics System	Microvolume & Cuvette Spectrophotometer
Light Source(s)	Xenon flash lamp
Lifetime	Up to 10 years
Detector	2048-element CMOS linear image sensor
Spectral Resolution	≤ 1.8 nm (FWHM at Hg 254 nm)
Wavelength Range	(Pedestal) 230 nm, 260 nm, 280 nm
	(Cuvette) 600 nm for OD600
Wavelength Display (setting)	1 nm
Wavelength Accuracy	± 1 nm
Absorbance Precision	SD 0.002 or 2 % CV, whichever is greater (*)SD from 20 times repeatedly measured at 0.5 Abs
Absorbance Accuracy	3 % (at 0.97A at 302 nm), $23 \pm 2^\circ$
Measurement Time	< 1 second
Sample Volume	1–2 μ L
Pathlength	0.75 mm (fixed)
Photometric Range	0.04 - 30 A (10mm equivalent)
Maximum Concentration	1,500 ng/ μ L (dsDNA)
	1,200 ng/ μ L (RNA)
	45 mg/mL (BSA)
	21 mg/mL (IgG)
Detection Limit	2.0 ng/ μ L (dsDNA)
	1.6 ng/ μ L (RNA)
	0.06 mg/mL (BSA)
	0.03 mg/mL (IgG)
CPU	Octa Core ARM® Cortex™-A53 Processor
Storage	32 GB
Glove Compatibility	Compatible with lab gloves
Connectivity	4 x USB-A ports, Ethernet, RS232
Display	7-inch (resolution: 1280 * 800)
Operating System (OS)	Android
Dimensions(W*D*H)	216 mm * 290 mm * 165 mm
Weight	3.0 kg

Cuve Lite

A compact sample analyzer with excellent portability, allowing for on-the-go processing and analysis.

K LAB's portable analyzer boasts high portability, enabling fast and accurate measurements anywhere. With a built-in battery(*Optional), it can be used without a power connection, offering convenience wherever you go. Providing excellent performance at an affordable price, it ensures reliable results even in environments where immediate on-site analysis is required. Its user-friendly design makes it easy for anyone to use.



Cuve Lite is optimized for on-site diagnostic testing (POCT) across various fields, including pharmaceuticals, biotechnology, chemistry, food testing, and environmental monitoring, through its combination with a wide range of reagents. It enables fast and accurate real-time analysis in the field.

Cuve Lite main characteristics

- Compact & Ultra-light (1kg): Offers excellent portability
- Versatile Reagent Combinations: Maximizes effectiveness
- Optimized for POCT: Real-time field measurement, OEM bulk supply available
- Battery & AC Power: Built-in auto-charging function (*Optional)
- Intuitive UI: Easy and simple measurements
- USB Port Support: Easy data output to PC and printer
- Semi-permanent LED Lamp: Low-power design reduces maintenance costs

Concentration Measurement



Absorbance Measurement



Specifications		
Product Name		Cuve Lite
Photometrics System		Cuvette Spectrophotometer
Light Source(s)		LEDs
Lifetime		Up to 10 years
Detector		Silicon photodiodes
Spectral Resolution		≤ 8.0 nm
Wavelength Range		450, 540, 600, one selected wavelength (customizable)
Wavelength Accuracy		± 1 nm
Absorbance Precision		0.004 AU (0.5 mm path)
Absorbance Accuracy		< 5 % (at 1A at 260nm)
Measurement Time		< 10 seconds
Cuvette	Photometric Range	0 to 2 A
	Display Range	0 to 3 A
	Center Height (Z-height)	15 mm
	Cell Types	12.5 x 12.5 mm (Outside dimension)
Battery (Optional)	Battery Type	Lithium-Ion
	Cell Format	18650
	Cell Configuration	3 S (3 Series)
	Nominal Voltage	10.8 V
	Capacity	3400 mAh
CPU		ARM® Cortex-M series
Display		4.3-inch, (resolution: 480 * 272 pixels)
Touchscreen		Resistive touch
Glove Compatibility		Compatible with lab gloves
Storage		200 Measurement data
Operating Voltage		12 V (DC)
Dimensions(W*D*H)		145mm * 190mm * 120mm
Weight		1.0 kg

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