OPTIZEN Spectrophotometers

Frequently Asked Questions (FAQs)

NanoQ Series

Category	Frequently Asked Questions	Answers
1. General	What are the differences between NanoQ models?	All models feature micro volume mode measurement. The NanoQ Plus model includes a cuvette mode that can measure samples from 1 ml up to 3 ml.
	Do I need a computer to run NanoQ?	No. The NanoQ series is a standalone device that can be operated without a PC. Controlled through a custom operating system equipped with a 7-inch high-resolution glove-compatible touchscreen display.
	I work in a busy laboratory. How much training do you need to learn how to use this tool?	NanoQ is designed to be easy to use right out of the box. No special training is needed and there is no software to install.
	Need to know the concentration of the sample to choose the right path length?	No. The NanoQ automatically uses the optimal microvolume pathlength for each measurement.
2. Performance	How many high concentration samples can NanoQ be used for?	Yes. NanoQ enables accurate and reproducible measurements for bovine serum albumin (BSA) samples up to 400 mg/ml and dsDNA samples up to 16,500 ng/µL.
	How much phtometric accuracy should I expect with NanoQ?	Typically within 3% (at 0.97A at 302 nm)
	How much photometric reproducibility should I expect with NanoQ?	Guaranteed photometric reproducibility of ± 1.5 ng/µL for <= 200 ng/µL and ± 1% for> 200 ng/µL> samples for dsDNA samples.
	Are there any sample contamination issues between measurements when performing microvolume measurements?	No. Simply wiping the top and bottom measuring surfaces with a dry lab wipe will not affect the next measurement.
3. Microvolume	What is the absorbance range for microvolume measurements?	Absorbance Range: 0.02 – 330 (1 cm equivalent)
	What is the lower detection limit for micro volume measurements?	2 ng/µL for dsDNA and 0.06 mg/ml for BSA.
	What is the maximum concentration of dsDNA and BSA that NanoQ can measure?	The maximum measurable concentration of NanoQ is 16,500 ng/µL for dsDNA and 400 mg/ml for BSA.
	What is the minimum sample volume required for microvolume measurement?	Typically, volumes from 1 µL to 2 µL are recommended
4. Cuvette	Which Z-height cuvette do you use?	The Z Height is 8.5 mm.
	When using the cuvette, I did not get the expected data. What should I check?	Before measurement, confirm the cuvette image to see if the mode selection has changed to cuvette mode on the run screen. Make sure the cuvette is properly inserted along the arrow light path.

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5. Software	What measurement modes are available?	dsDNA, RNA, ssDNA, Protein A280, Labeled Proteins, Colorimetric Assays (BCA, Bradford, Lowry, Pierce 660 nm), Spectrum and OD 600. Kinetics, etc.
	Why are various nucleic acid measurement modes available?	Nucleic acid samples are commonly measured biomolecules and separating the types as individual modes simplifies the workflow.
	How are Protein UV tabs and Protein Assay tabs used?	It depends on the sample type and the buffer used. When working with purified protein solutions, you typically use absorbance measurements directly at 280 nm. For cell lysates and uncharacterized protein solutions, a colorimetric method (Assay) is usually used. Colorimetric analysis (Assay) is also used when the protein is suspended in a solution such as RIPA buffer that has a strong absorbance signal in the UV range.
	Does the software support user accounts?	Yes. The NanoQ enables the use of both password and non-password protected accounts.
	What is the automatic measurement function?	With the automatic measurement option, measurements are made quickly by lowering the measurement arm without pressing the measurement button.
	How can I update my device's software?	You can download a zip file containing the latest available updates to a USB flash drive in FAT32 format. Software updates are free.
	What data is stored in Kinetics mode?	Absorbance versus time by wavelength (multi-wavelength possible) data is stored and can be easily exported for analysis.
6. Data	Are measured data stored on instruments?	Yes. All data is automatically saved on the integrated on-board computer and can be easily accessed at any time using the file manager. Measurement data that has not been saved can also be checked in the temporary folder.
	You exited the measurement mode without knowing and saving. Can I recover unsaved measurement data?	Yes. NanoQ provides a function that automatically saves unsaved measurement data to a temporary folder. Temporary folders can be accessed from the file manager.
	Can the measured data be saved directly to the PC?	Yes. By using the remote storage function, you can save directly to a specific folder designated on the PC (requires PC S/W installation).
	I want to work with data at my desk. What are the data export options?	Saved data can be exported to the device on a USB flash drive in FAT32 format. You can save it to your PC's remote storage.
	Can data be deleted or copied from the device?	Yes. You can copy and delete data in the device using the file manager.
7. Maintenance	Should I turn off the instrument at the end of every measurement session or at the end of the day?	The machine automatically goes into sleep mode after 10 minutes of inactivity. The time to enter the standby mode can be changed in minutes. To resume the last function, simply tap anywhere on the screen.
	Are device diagnostics included in the software?	Yes. NanoQ has a built-in test function that first checks the status of the device when the power is turned on.
	How do I clean the measuring surface?	Remove the sample from both the top and bottom surfaces using a dry wrap wipe. If the surface is dirty (if there is a dried sample), drop 2 µL of distilled water, lower the measuring arm, wait 30 seconds, then remove the liquid with a laboratory wipe and clean the surface.