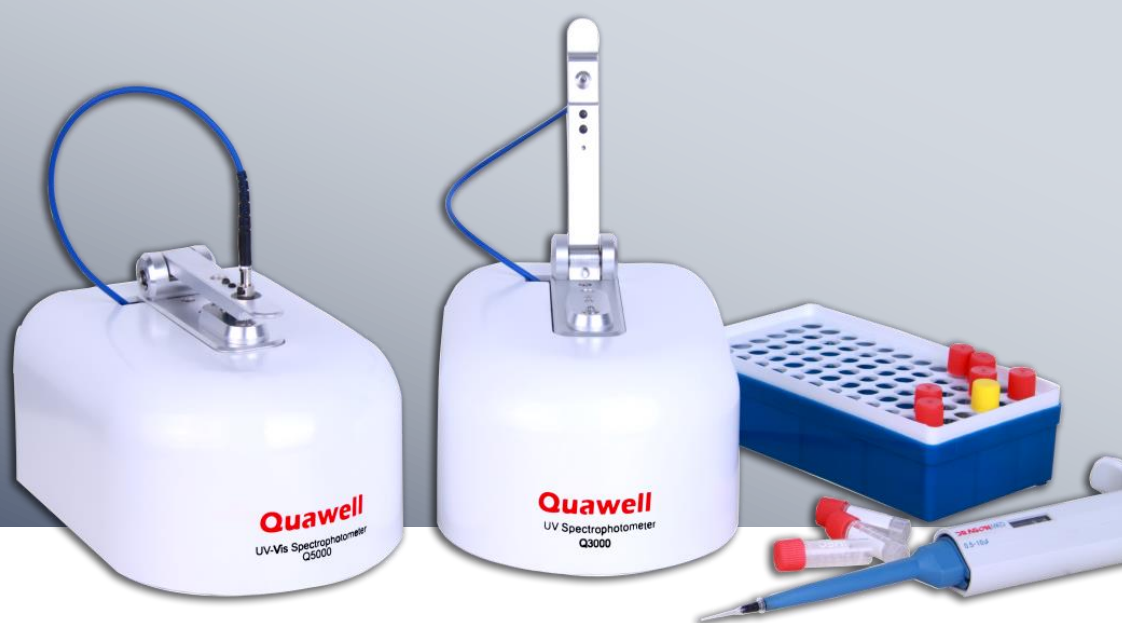




Micro-Volume Spectrophotometer

Q5000 & Q3000

Rev. 06/2024



Q5000

UV-Vis (200-900 nm)
Spectrophotometer

Q3000

UV (260 nm & 280 nm)
Spectrophotometer

Advanced features



- Micro-volume sample size (0.5 - 2 μ l)
- No cuvette or any sample holder required
- No any consumables needed
- Using CCE technologies (software calibration)

The unique liquid column technologies

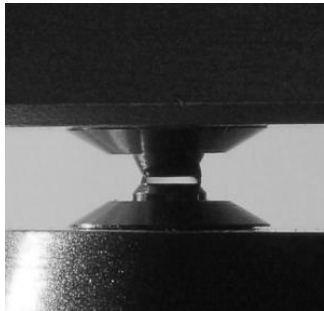


Figure 1: Initially the sample is loaded and the upper arm is closed.

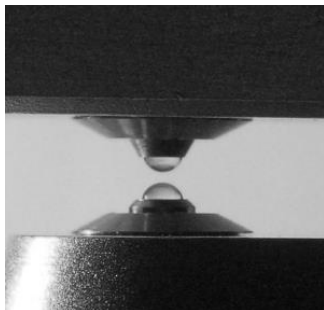


Figure 2: The upper arm is lifted by the actuator, due to molecular effects, the sample is broken into two separate parts, one part is attached to lower surface and the other part is attached to upper surface.

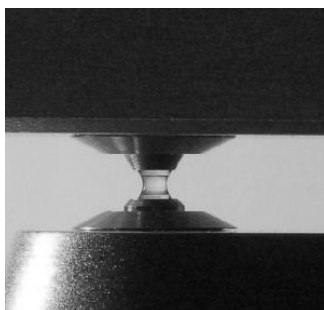


Figure 3: After reaching its home position, the upper arm is lowered. A liquid column is formed when the upper arm is lowered to the position where the two droplets touch.

The measurement is then performed at this position without moving the upper arm upwardly again.

Patent No.: US 7,969,575 B2

Q3000

UV Spectrophotometer (260 nm and 280 nm)

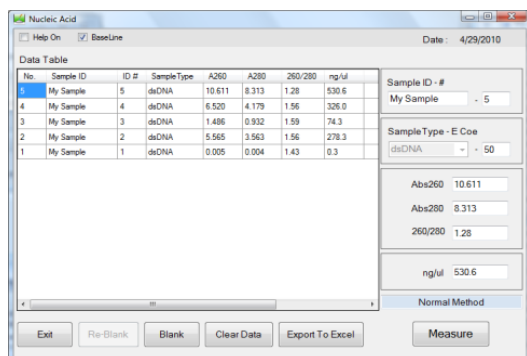
Quawell Q3000 is a micro- volume UV spectrophotometer specifically designed for the measurement of nucleic acids and proteins. Q3000 measures 2µl sample in less than 2 seconds with a high degree of accuracy and reproducibility.



Applications

Nucleic Acids	dsDNA ssDNA RNA	Protein A280	BSA IgG Lysozyme 1Abs = 1mg/ml
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Advantages



- LED light source
- No cuvette or consumables needed
- Sample size as small as 2µl
- Support Win7, 10 and 11 (32 & 64)
- Measure a sample in about 2 seconds
- Providing sample absorbance, concentration and 260/280 ratio
- Export data to Excel spreadsheet
- CCE technologies (software calibration)

Q3000 Specifications

Normal Sample Size	2 µl
Optic Path Length	0.2-1mm (auto selected)
Light Source	LED
Wavelength Range	260 nm, 280 nm
Wavelength Accuracy	1 nm
Absorbance Range	0.01-80 (10 mm)
Absorbance Precision	0.002 Abs (1mm)
Absorbance Accuracy	± 2%
Detector Type	Si photodiode
Detection Limit	1 ng/µl (dsDNA)
Max Concentration	4,000 ng/µl (dsDNA)
Measurement Cycle	~2 seconds
Dimensions	145 mm x 210 mm
Weight	2.5 kg
Operating Voltage	12 VDC
Power Consumption	15 W (operating)
Power Consumption	1.5 W (standby)
Surface Construction	303 stainless steel and quartz fiber
Software Compatibility	Windows® Win7, 10 or 11
CE Approval	Units sold in Europe
Patent No.	US 7,969,575 B2

Q5000

UV-Vis Spectrophotometer (200 nm – 900 nm)

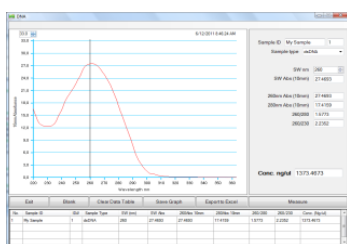
Quawell 5000 is a micro- volume UV- Vis spectrophotometer. Using our liquid column technologies, Q5000 measures a 2µl sample in about 3-8 seconds with a high degree of accuracy and reproducibility.



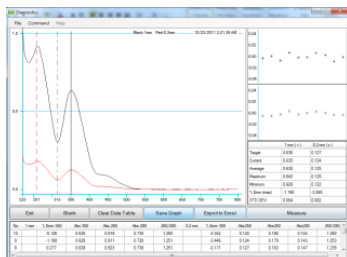
Applications

Nucleic acids	dsDNA ssDNA RNA	Protein assay	Protein BCA Protein Lowry Protein Bradford
Protein A280	BSA IgG Lysozyme 1 Abs = 1mg/ml	Others	Microarrays Dyed-Proteins Cell culture UV-Vis measurement

Powerful Software



- Support Win 7, 10 and 11 (32 & 64)
- Many useful features included
- Effect but Easy to use
- Free software updates download from website



- Auto-detect-analyzing light intensity
- Auto-detect-report liquid column condition
- Calibrating by software (with CCE technologies)
- Full spectrum data output feature

Q5000 Specifications

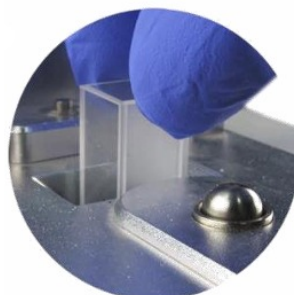
Normal Sample Size	0.5-2.0 µl
Optic Path Length	0.2-1mm (auto selected)
Light Source	Xenon flash lamp
Wavelength Range	200-850 nm
Wavelength Accuracy	1 nm
Absorbance Range	0.04-80 (10 mm)
Absorbance Precision	0.002 Abs (1mm)
Absorbance Accuracy	± 2%
Detector Type	2048 element linear silicon CCD array
Detection Limit	2 ng/µl (dsDNA)
Max Concentration	4,000 ng/µl (dsDNA)
Measurement Cycle	~5-8 seconds
Dimensions	145 mm x 210 mm
Weight	2 kg
Operating Voltage	12 VDC
Power Consumption	15 W (operating)
Power Consumption	1.5 W (standby)
Surface Construction	303 stainless steel and quartz fiber
Software Compatibility	Windows® Win7, 10 or 11
CE Approval	Units sold in Europe
Patent No.	US 7,969,575 B2

Quawell

Q6000 Micro-Volume Spectrophotometer



Micro-Volume Mode



Cuvette Mode

Q6000 Specifications

Sample Size	0.5 - 1.5 μ L
Optic Path Length	0.5, 0.25 and 0.05mm (auto selected option)*
Light Source	Xenon flash lamp
Wavelength Range	200-850 nm
Wavelength Resolution	1nm
Wavelength Accuracy	1nm
Absorbance Range	0.04 - 300 (10 mm)*
Absorbance Precision	0.002 Abs (1 mm)
Absorbance Accuracy	$\pm$ 2% (0.0337 Abs at 0.5 mm at 350 nm)
Detector Type	2048 element linear silicon CCD array
Detection Limit	2 ng/ μ L (dsDNA)
Max Concentration	15,000 ng/ μ L (dsDNA)*
Measurement Cycle	~ 3 seconds (Q6000B)
Dimensions and Weight	145 mm x 210 mm, ~ 2.5 kg
Operating Voltage	12 VDC
Power Consumption	15 W (operating)
Surface Construction	303 stainless steel and quartz fiber
Software Compatibility	Windows® Win7, 10 or 11 (32 & 64)

* Option

Cuvette Mode

Cuvette Specification	12.5 mm (L) x 12.5 mm (W) x 45 mm (H)
Path Length	10, 5, 2 and 1 mm
Optical Beam	8.5 mm from the bottom of the cuvette
Heat to Cuvette Holder	37 $\pm$ 0.5 $^{\circ}$ C
Stir Speed	130-900 RPM
Absorbance Range	0.04 - 75 Abs

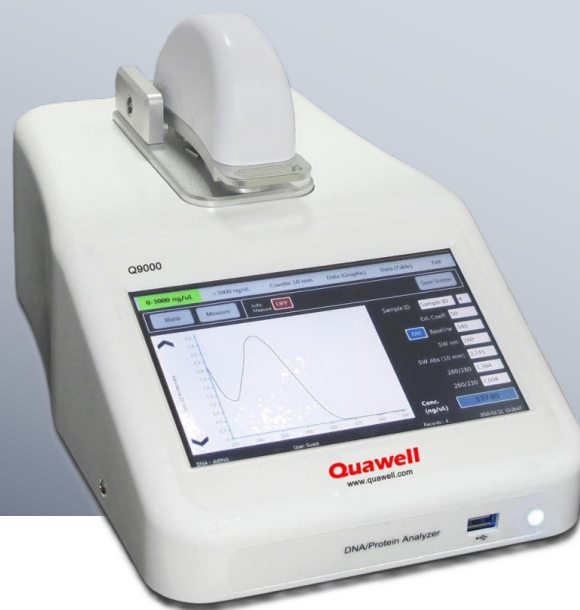
Selection List

	2 – 3000 ng/ μ L *	3000 - 15000 ng/ μ L *	Cuvette
Q6000B	Yes		
Q6000C	Yes		Yes
Q6000M	Yes	Yes	
Q6000CM	Yes	Yes	Yes

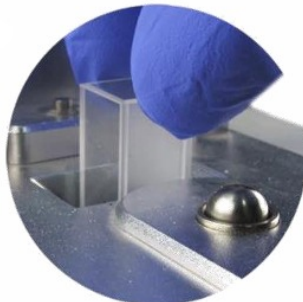
* dsDNA 10 mm pathlength normal measurement mode

Quawell

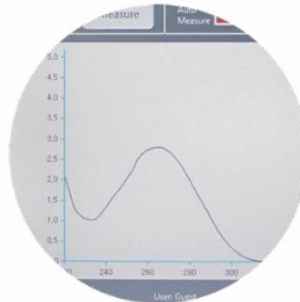
Q9000 Micro-Volume Spectrophotometer



Micro-Volume Mode



Cuvette Mode



7" Touchscreen



Embedded Computer

Q9000 Specifications

Sample Size	0.5 - 1.5 μ L
Optic Path Length	0.5, 0.25 and 0.05mm (auto selected option)*
Light Source	Xenon flash lamp
Wavelength Range	200-850 nm
Wavelength Resolution	1nm
Wavelength Accuracy	1nm
Absorbance Range	0.04 – 300 (10 mm)*
Absorbance Precision	0.002 Abs (1 mm)
Absorbance Accuracy	$\pm$ 2% (at 0.674 Abs at 350 nm)
Detector Type	2048 element linear silicon CCD array
Detection Limit	2 ng/ μ L (dsDNA)
Max Concentration	15,000 ng/ μ L (dsDNA)*
Measurement Cycle	~ 3 -12 seconds
Dimensions and Weight	145 mm x 210 mm, ~ 3 kg
Operating Voltage	12 VDC
Power Consumption	15 W (operating)
Surface Construction	303 stainless steel and quartz fiber

* Option

Cuvette mode

Cuvette Specification	12.5 mm (L) x 12.5 mm (W) x 45 mm (H)
Path Length	10, 5, 2 and 1 mm
Optical Beam	8.5 mm from the bottom of the cuvette
Heat to Cuvette Holder	37 $\pm$ 0.5 $^{\circ}$ C
Stir Speed	130-900 RPM
Absorbance Range	0.04 - 750

Computer

Display	7" High Resolution Tough Screen
Computer	Embedded Single Board Computer
CPU	Intel® Atom™
Memory	2GB DDR3 Memory
Storage	16GB Solid State Drive
USB Ports & Connectors	2x USB 2.0
Ethernet	Ethernet (10/100/1000Mbps)
Operating System	Win 7 (32)
Wi-Fi	Option

Selection List

	2 – 3000 ng/ μ L *	3000 - 15000 ng/ μ L *	Cuvette
Q9000B	Yes		
Q9000C	Yes		Yes
Q9000M	Yes	Yes	
Q9000CM	Yes	Yes	Yes

* dsDNA 10 mm pathlength normal measurement mode

** dsDNA 10 mm pathlength high measurement mode

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