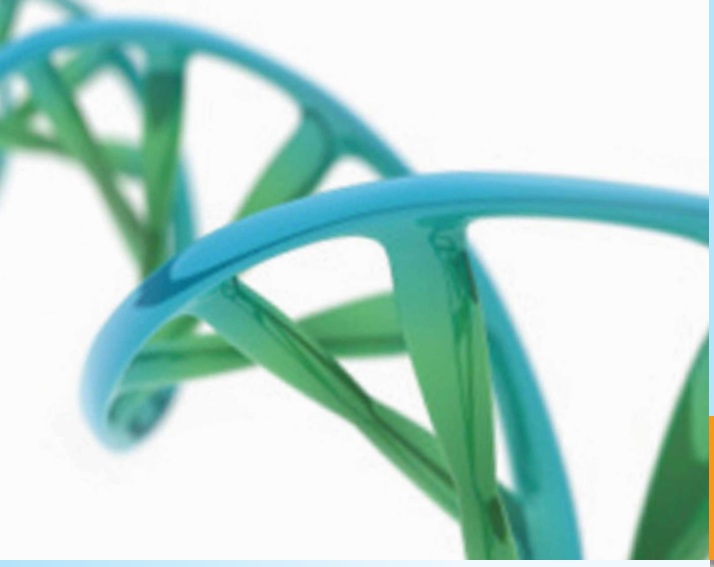


Thermo Scientific NanoDrop Products

Revolutionary technology.
Elegant simplicity.

Instruments for microvolume analysis of biomolecules

ISOGEN
LIFE SCIENCE

Thermo
SCIENTIFIC

Thermo Scientific NanoDrop instruments have pre-programmed methods for simple nucleic acid and protein quantitation

NanoDrop™ technology in a class by itself

Thermo Scientific NanoDrop Instruments

NanoDrop™ instruments were the first microvolume UV-Vis spectrophotometers and fluorospectrometers designed specifically for the life science market. The patented sample-retention system* enables direct measurement of 0.5 – 2 µL samples without wasteful dilutions and expensive consumables. The innovative pedestal design and pre-programmed methods make the process as simple as pipette, measure, and wipe clean. Highly polished stainless steel pedestals ensure no sample carryover. By reducing sample waste and providing accurate results in seconds, NanoDrop instruments have fundamentally changed the way scientists analyze DNA, RNA and proteins.

With over 30,000 instruments in labs worldwide, NanoDrop instruments have become the recognized standard for microvolume instrumentation. Today, thousands of scientists rely on NanoDrop instruments to deliver accurate sample concentration and purity assessment for everything — from routine quality checks to evaluation of precious samples for demanding, downstream applications.

With a full range of innovative, simple, and powerful instruments — no matter what your application or throughput needs — there is a NanoDrop instrument that is right for you.

Pipetting 1 µL onto pedestal

Measuring 1 µL sample

Our patented sample-retention system remains a groundbreaking technology in microvolume measurements. Only NanoDrop instruments use surface tension to contain a 1 µL of sample between two optical fibers. With the instrument arm open, a sample is pipetted directly onto the pedestal. When the arm is lowered a column is formed, thus eliminating the need for cuvettes or other containment devices.

*Patents US6628382 and US6809826

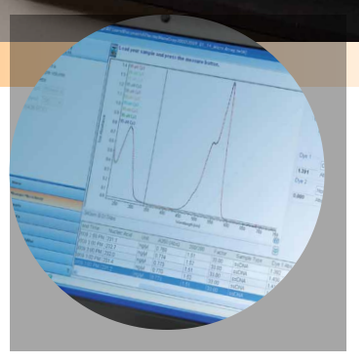
Realize the difference. Try any NanoDrop instrument for FREE.

Our trial program allows you to try an instrument in your lab with your own samples, completely free of charge. Once you have used a NanoDrop instrument, we are confident you will quickly realize the benefits of our revolutionary technology.

Visit www.thermoscientific.com/nanodrop to request your free trial instrument or contact your local authorized NanoDrop dealer.

Pedestal measurements

Cuvette measurements



Instant results

NanoDrop 2000c with dual sampling modes

Innovative design, maximum performance

Thermo Scientific NanoDrop 2000c Spectrophotometer

Full-spectrum microvolume and cuvette measurements in a single instrument

The NanoDrop 2000c is a full-spectrum UV-Vis spectrophotometer, offering a complete solution by integrating both a patented sample-retention system for microvolume samples and a cuvette option. Dual sampling modes accommodate very low and very high-concentration samples. Our straightforward software displays a full-spectrum and tabulates results for easy data interpretation.

- Superior accuracy and reproducibility
- Microvolume sample size (0.5 – 2.0 µL)
- Pipette directly onto the pedestal, measure and wipe clean
- Measurements take less than 5 seconds
- Cuvette position includes temperature control (37° C) and stirring for kinetics measurements
- Use quartz or disposable cuvettes
- Cell culture (OD600) measurements
- Customize methods, design reports and export data

Thermo Scientific NanoDrop 2000 Spectrophotometer

Full-spectrum microvolume measurements

The NanoDrop 2000 is an alternate choice for labs that only need microvolume measurement capability. Using the same sample-retention system, the NanoDrop 2000 provides the same accuracy, full-spectrum analysis, and benefits as the NanoDrop 2000c, without the added flexibility and sensitivity of the cuvette option.

Efficiency and unmatched accuracy

Thermo Scientific NanoDrop 8000 Spectrophotometer

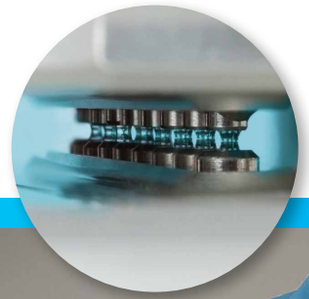
Higher throughput, full-spectrum microvolume measurements

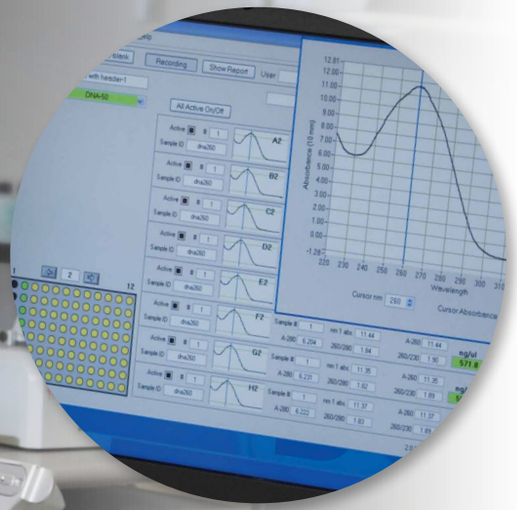
The NanoDrop 8000 Spectrophotometer delivers full-spectrum UV-Visible absorbance measurements for up to eight samples at one time. Use an eight-channel pipette to dispense samples from tubes or plates onto a linear array of pedestals, measure and wipe clean. The sample position illluminator visually indicates the current measurement row facilitating accurate and efficient pipetting to the pedestals. Displaying a full-spectrum for all samples, the NanoDrop 8000 is designed for higher throughput evaluation of precious samples when downstream requirements for sample QC are critical.

Sample position illuminator

Multi-sample loading

Multi-sample measurement





Full-spectral data for each sample

The NanoDrop 8000 offers all the benefits of the trusted NanoDrop pedestal technology in a higher-throughput format for researchers working from tubes or plates

- Analyzes from one to eight samples at a time
- Full-spectral data is displayed for each sample (220 – 750 nm)
- Measures nucleic acid concentration and purity (2.5 – 3,700 ng/µL for dsDNA)
- Measures protein concentration and purity (0.15 – 100 mg/mL for BSA)
- User-friendly software that is easy to configure
- Pre-configured methods for colorimetric protein analysis
- Flexible options for exporting data and producing customized reports
- Custom method capability

NEW

Thermo Scientific NanoDrop Lite Spectrophotometer

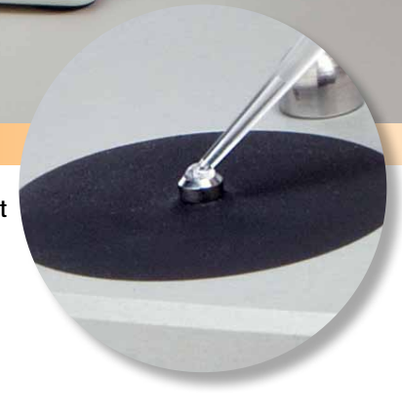
Basic microvolume measurements

Meet the newest member of the NanoDrop instrument family. The NanoDrop Lite is a basic microvolume instrument which uses our patented sample-retention system to deliver the same exceptional accuracy and reproducibility as other NanoDrop instruments. Its compact design, with built-in controls and software, makes the NanoDrop Lite small enough to fit on any benchtop. It is designed for labs that already have a NanoDrop instrument or that share a NanoDrop instrument with other labs. The NanoDrop Lite is also ideal for labs that want the trusted NanoDrop technology, but don't need the full performance or spectral data of the NanoDrop 2000l2000c or NanoDrop 8000.

Simple analysis, compact delivery

NanoDrop Lite shown docked to its equally compact printer

- Employs the unique NanoDrop microvolume sampling technology
- Delivers the accuracy and reproducibility expected from NanoDrop instruments
- Uses built-in controls and software — no computer required
- Offers an optional printer for cryogenic labels
- Measures nucleic acid concentration at 260 nm and purity using the 260/280 ratio
- Measures purified protein concentration at 280 nm



Pedestal measurement

Fluorescence made compact and simple

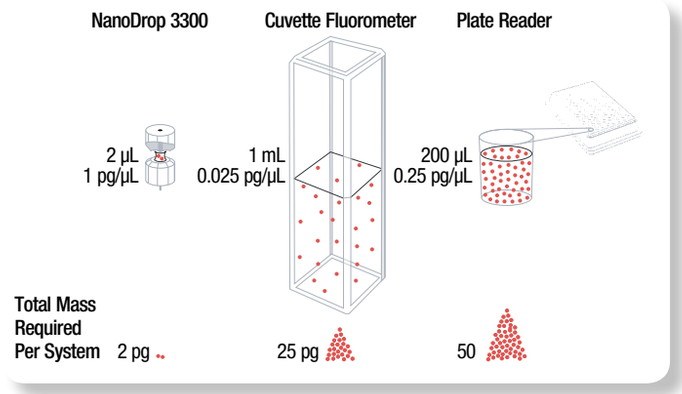
Thermo Scientific NanoDrop 3300 Fluorospectrometer

Full-spectrum microvolume fluorescence measurements

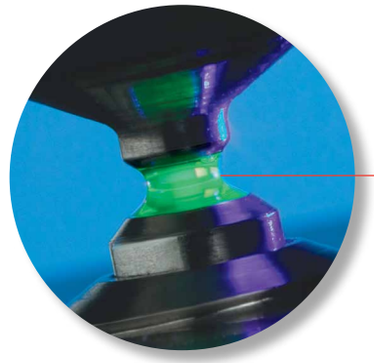
The NanoDrop 3300 Fluorospectrometer brings the sensitivity and selectivity of fluorescence spectroscopy to microvolume samples. Using our patented sample-retention system, the NanoDrop 3300 performs broad-spectrum fluorescence analysis in a versatile, high-performance instrument. The NanoDrop 3300 significantly lowers the mass detection limit more than an order of magnitude, compared to conventional fluorometers. It's a powerful instrument offering many benefits:

- Sample size as small as 1µL, conserves precious samples
- High performance LEDs replace filters for excitation
- Multiplex emission from multiple probes using the broad excitation white LED
- Easy-to-use software guides the novice fluorescence researcher with minimal training required
- Advanced instrument control for experienced spectroscopists

The NanoDrop 3300 lowers the mass detection limit more than an order of magnitude over conventional fluorometers. This capability is often more important than the ability to measure samples of low concentration.



dsDNA detection limits using fluorescence assay



Microvolume fluorescence analysis

UV LED max = 365 nm; Long pass filter at 400 nm

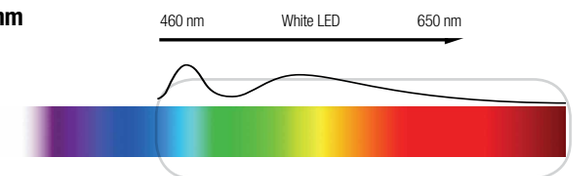
Example Applications:
wt GFP and BFP mutants
Hoechst
4-MU
Quantum Dots
OPA

Blue LED max = 470 nm

Example Applications:
GFP mutants
Fluorescein (FITC-FAM)
DyLite 488® | AlexaFluor 488®
PicoGreen® and RiboGreen®
DyLite 550® | AlexaFluor 555®
Quantum Dots
SybrGreen
FRET experiments

White LED range = 460 – 650 nm

Example Applications:
DyLite 550® | AlexaFluor 555®
Cy3®; Cy 5®
DyLite 550® | AlexaFluor 555®
DyLite 650® | Alexa 647®
Rhodamine
Quantum Dots
Molecular beacons



Choose the NanoDrop instrument that's right for you

		Full-Spectral Data	Pre-Programmed Methods for Nucleic Acids	Measures Nucleic Acid 260/280 Ratio	Measures Nucleic Acid 260/230 Ratio	Pre-Programmed Methods for Protein	Measures Purified Protein A280	Pre-Programmed Methods for Colorimetric Assays (i.e. BCA)	Measures Fluorescently-Labeled Samples	Custom Methods Editor	PC Based	Built-in Cuvette Mode	Qualification Procedures IQ/OQ	User Calibration Verification
UV-Vis	NanoDrop 2000c	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
UV-Vis	NanoDrop 2000	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
UV-Vis	NanoDrop Lite		✓	✓		✓	✓							✓
UV-Vis	NanoDrop 8000	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
Fluorescence	NanoDrop 3300	✓	✓			✓			✓	✓	✓			

Still cannot decide? See more detailed product information at www.thermoscientific.com/nanodrop or contact your local authorized NanoDrop dealer.

NanoDrop 2000l2000c Spectrophotometer

NanoDrop Lite Spectrophotometer

NanoDrop 8000 Spectrophotometer

NanoDrop 3300 Fluorospectrometer

Why do thousands of scientists consider NanoDrop instruments essential to their work?

Microvolumes: NanoDrop instruments allow you to analyze samples as small as 0.5 µL

Superior Technology: The NanoDrop patented sample-retention system is one of a kind with proven performance in thousands of instruments.

Fast and Easy: Pipet your sample onto the pedestal, measure, then wipe clean. Highly polished stainless steel pedestals ensure no sample carryover. Yes, it really is that simple.

Low Cost of Ownership: No specialty wipes, expensive plates, cuvettes, caps or custom tips required.

Small Footprint: Ultra-compact instrument design saves laboratory space. Portability combined with superior performance allows the introduction of this technology to new workflows and applications.

User-friendly Software: Packed with features, but easy to use. Minimal training is needed. Software updates available on our website.

Outstanding Technical Support: Our technical support experts are life science specialists with extensive experience in microvolume analysis. Detailed technical information and advice is also available on our website.

The specifications

	NanoDrop 2000 | 2000c	NanoDrop Lite	NanoDrop 8000	NanoDrop 3300
Instrument Type	Spectrophotometer	Spectrophotometer	Spectrophotometer	Fluorospectrometer
Instrument Control	Computer software	Local control	Computer software	Computer software
Minimum Sample Size	0.5 µL	1 µL	1 µL	1 µL
Sample Number	1	1	up to 8	1
Pathlength(s)	0.05, 0.1, 0.2 and 1.0 mm, auto-ranging	0.5 mm	0.1, 0.2 and 1.0 mm, auto-ranging	N/A
Light Source(s)	Xenon flash lamp	Light emitting diodes	Xenon flash lamp	Light emitting diodes
Excitation Maxima of LEDs	N/A			UV: 365 nm, Blue: 470 nm, White: 460 – 650 nm
Detector Type	2048-element linear silicon CCD array	Silicon photodiode	2048-element linear silicon CCD array	2048-element linear silicon CCD array
Wavelength Range	190 – 840 nm	260 and 280 nm	220 – 750 nm	400 – 750 nm
Wavelength Accuracy	±1 nm	N/A	±1 nm	±1 nm
Spectral Resolution	≤ 1.8 nm (FWHM at Hg 253.7 nm)	< 8.0 nm	≤ 3 nm (FWHM at Hg 546.1 nm)	≤ 8 .0nm (FWHM at Hg 546.1 nm)
Typical Measurement Reproducibility	0.002*	0.002*	0.003*	< 5% CV (10 nM fluorescein)
Absorbance Accuracy**	3% (at 0.74 Abs at 350 nm)	3% (at 1.05 Abs at 260 nm)	3% (at 0.74 Abs at 350 nm)	N/A
Absorbance Range (10 mm equivalent)	Pedestal: 0 – 300 Abs Cuvette: 0 – 1.5 Abs	0 – 30 Abs	0 – 75 Abs	N/A
Fluorescence Range	N/A			> 4 orders of magnitude fluorescein
Lower Limit of Detection	Pedestal: 2 ng/µL (dsDNA) 0.10 mg/mL (BSA) Cuvette: 0.4 ng/µL (dsDNA) 0.01 (BSA)	4 ng/µL (dsDNA) 0.12 mg/mL (BSA)	2.5 ng/µL (dsDNA) 0.15 mg/mL (BSA)	< 1 fmol fluorescein
Maximum Concentration	Pedestal: 15,000 ng/µL (dsDNA) 400 mg/mL (BSA)	1,500 ng/µL (dsDNA) 45 mg/mL (BSA)	3,700 ng/µL (dsDNA) 100 mg/mL (BSA)	N/A
Measurement Time	< 5 seconds	< 5 seconds	< 20 seconds	2 – 10 seconds
Footprint	14 x 20 cm	16 x 11.5 cm	24 x 32 cm	14 x 20 cm
Weight	2000: 2.0 kg 2000c: 2.1 kg	0.8 kg	3.4 kg	1.5 kg
Sample Pedestal Material of Construction	303 stainless steel and quartz fiber			303 stainless steel and quartz fiber
Cuvette Position	Optional stirring: 150 – 850 rpm Heating: 37 ± 0.5°C z-height: 8.5 mm	N/A	N/A	N/A
Operating Voltage	12 V (DC)	6 V (DC)	12 V (DC)	5 V (DC)
Operating Power Consumption	12 – 18 W	18 W	30 W	2 W
Standby Power Consumption	5 W	< 2.5 W	6 W	1 W
Software Compatibility	Professional versions of Windows® XP (32 bit) Service Pack 2 or later; Windows® Vista™ (32 bit); Windows® 7 (32 bit and 64 bit)	Local control only	Professional versions of Windows® XP (32 bit) Service Pack 2 or later; Windows® Vista™ (32 bit); Windows® 7 (32 bit and 64 bit)	Professional versions of Windows® XP (32 bit) Service Pack 2 or later; Windows® Vista™ (32 bit); Windows® 7 (32 bit and 64 bit)

* SD of 10 individual measurements at 0.74 Abs

** Absorbance expressed at Abs/mm measured at 25°C

All NanoDrop instruments are approved to CE and UL/CSA standards.

Thermo Scientific NanoDrop Products
Instruments for microvolume analysis of biomolecules

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