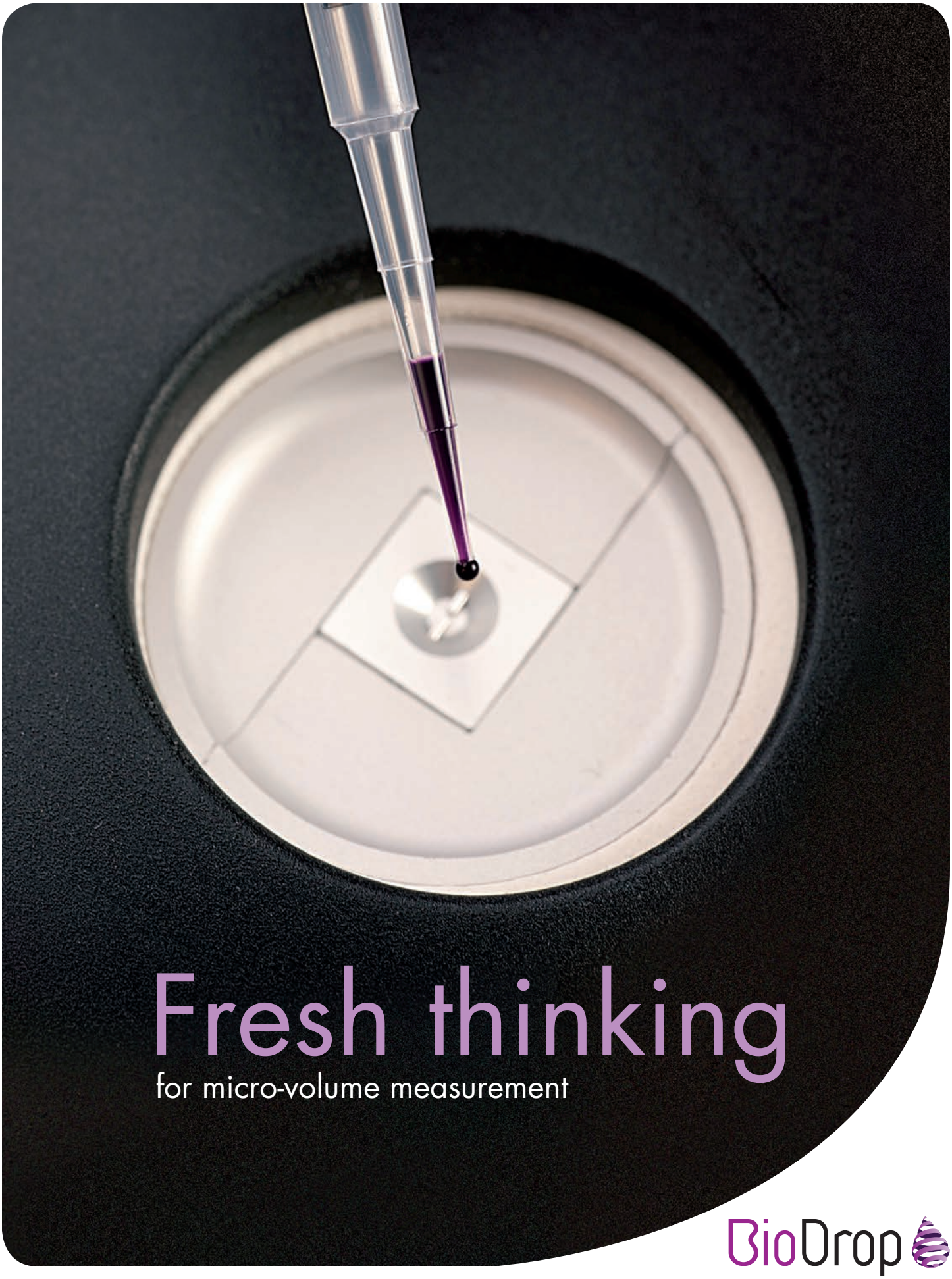


Fresh thinking

for micro-volume measurement

BioDrop

BioDrop

Accurate micro-volume results in seconds, for the confidence to do more

Whatever your application — PCR, QPCR, siRNA or DNA microarray — the BioDrop range of instruments deliver rapid, simple and accurate measurement of your DNA, RNA, oligo and protein concentration and purity from just 0.5 µL of sample. BioDrop is flexible when you require it, fast when you need it, and easy-to-use in every case.

Advanced Software

- Intuitive software for enhanced ease-of-use and efficiency
- On-board software includes a range of pre-programmed methods for sample characterisation
- Numerous advanced features such as Nucleic Acid Purity checks for contamination detection, unique user login, and custom method creation

Intelligent Design

- Large, high-resolution color touchscreen
- Sleek and compact bench-top instrument
- USB connector for PC control and data export

Micro-volume Sample Port

- Direct sampling provides quick and cost effective measurements from just 0.5 µL of sample. No cuvette needed
- No calibration and reconditioning required
- Wipe clean design. No sample crossover
- In-built sample port is available in the **BioDrop Duo+** and **BioDrop µLite+** models

Optimal Performance

- BioDrop is accurate, robust and fast. Results in < 4 seconds
- Sensitive Limit of Detection, highly accurate and reproducible results (see Features Table for details)
- Optional cell holder available in the BioDrop Duo+ for increased application flexibility

No Moving Parts

Only BioDrop delivers maintenance-free performance for a lifetime of reliable results

Direct Sampling

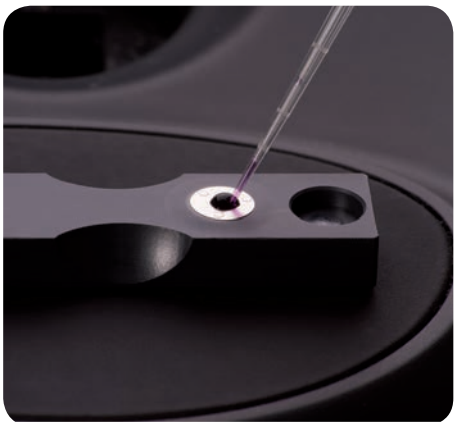
BioDrop's unique in-built sample port is dedicated to micro-volume measurement. The port is easy to use: simply pipette as little as 0.5 µL and measure. Cleaning the port is easy too, just wipe with lint–free tissue to reduce sample carryover to undetectable amounts.

The in-built sample port uses no moving parts. This means that the instrument provides excellent reproducibility without the need to recondition or calibrate. Measurements are also highly accurate because the pathlength of the port is highly specified to +/- 5 µm.

Unique BioDrop CUVETTE

The revolutionary micro-volume device, BioDrop CUVETTE, is an accurate and robust tool for micro-volume measurement of DNA, RNA, oligos and protein. The BioDrop CUVETTE is available in two different pathlengths (0.125 and 0.500 mm) or together as the Ultimate set to meet the requirements of scientists who need to measure samples across a broad concentration range.

The BioDrop CUVETTE has a simple yet elegant design. Samples are pipetted directly onto the sample window meaning more light is transmitted through to the sample which increases the measurement range as well as increasing accuracy, unlike other micro-volume cuvettes. BioDrop CUVETTEs are available in two different beam heights for use with most spectrophotometers.



Micro-Volume Specifications of the BioDrop In-Built Sample Port	
Pathlength (mm)	0.5
Pathlength Accuracy (µm)	+/- 5
Minimum Volume (µL)	0.5
Maximum Concentration dsDNA (ng/µL)	2,500
Detection Limit (ng/µL)	1

Micro-Volume Specifications of the BioDrop CUVETTEs		
BioDrop CUVETTE	125	500
Pathlength (mm)	0.125	0.5
Pathlength Accuracy (µm)	+/- 5	+/- 5
Minimum Volume (µL)	0.6	2.5
Maximum Concentration dsDNA (ng/µL)*	12,000	3,000
Detection Limit dsDNA (ng/µL)	7.1	1.2

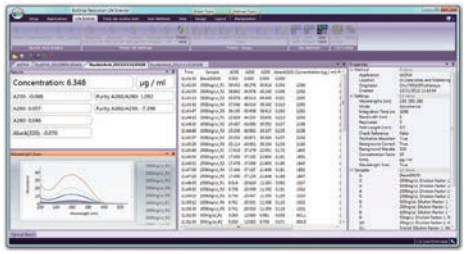
*Upper range dependent on instrument used with the BioDrop CUVETTE.

Intelligent Software. Powerful Analysis.

BioDrop instruments feature easy-to-use on-board software via a large, high resolution, color touchscreen. Pre-programmed applications in both on-board and PC software make it quick and easy to set up, choose methods and measure samples.

The powerful BioDrop Resolution Life Science PC software package is included with all instruments. Data can be transferred from the instrument using a USB flashdrive or the instrument can be operated using a PC via a USB connection. A built-in printer can also be selected for a complete standalone solution within a small footprint.

◄ Featuring a large, high resolution color touchscreen, and intuitive software, so it's easy to use BioDrop's extensive range of on-board applications.



▼ BioDrop Resolution Life Science PC software offers computer control, pre-programmed applications, and powerful custom analysis. When compliance is critical, a full 21 CFR part 11 compliant version is available.

BioDrop Applications	
Life Science Applications	DNA, RNA, Oligo, Fluorescent Dye, Tm Calculation, Protein Dye, Protein UV and Colorimetric protein methods
Applications:	Single Wavelength, Concentration, Wavescan, Kinetics, Standard Curve, Substrate, Equation Editor

Typical Applications

Application	Typical Concentration	BioDrop Duo+	BioDrop µLite+	BioDrop Duo+ and BioDrop CUVETTE 125	BioDrop Duo+ and BioDrop CUVETTE 500
Sequencing	125 ng/20 µl (6 ng/µl)	✓	✓		✓
Next Generation Sequencing	10 ng/µl	✓	✓	✓	✓
Transfections	5 to 30 µg/100µl 50 to 500 ng/µl	✓	✓	✓	✓
DNA Vaccines	0.5 to 2 mg	✓*		✓	
PCR	2 ng/µl	✓	✓		✓
Q-PCR	200 ng/100 µl (2 ng/µl)	✓	✓		✓
DNA Microarray	>2 µg	✓	✓		✓
siRNA	7.5 µg/µl	✓	✓	✓	✓
Protein Crystallography	50 ng/µl	✓	✓	✓	✓

*Using BioDrop CUVETTE 125.

Which BioDrop is Right For You?

BioDrop Duo+

The ideal solution for those where flexibility of measurement is key.

- A single instrument with the in-built sample port for micro-volume measurement, and a cuvette holder.
- Ideal for many quick measurements of DNA, RNA or protein across a broad concentration range.
- Cuvette holder offers flexibility to measure highly concentrated samples using the BioDrop CUVETTE 125 or larger volumes using conventional 10 mm cuvettes.
- Well suited for those performing assays where a broad range of concentrations need to be measured: delivery of DNA or RNA into cells or bacteria, sequencing, PCR and gene expression profiling.

BioDrop µLite+

The choice for life scientists for whom speed and accuracy in micro-volume measurements are required, rather than a broad measurement range.

- In-built sample port allows a quick check of many samples.
- Ideal for performing DNA, RNA, oligo and protein quantification and purity measurements.
- A great choice for busy labs that need a quick concentration check before PCR, qPCR, sequencing DNA or RNA delivery into cells or bacteria.

PARAMETER	BioDrop Duo+*	BioDrop µLite+*
Display	7" display with capacitive touch panel	
Configuration	Split Beam	
Lamp	Pulsed Xenon lamp with 3 year warranty	
Languages	English, French, German, Spanish, Italian, Japanese, Chinese	
Sample volumes as low as 0.5 µl	Yes	
Micro-volume sample port with No Moving Parts	Yes	
No sample carryover, Wipe Clean design	Yes	
Nucleic Acid Purity Check with warning	Yes	
Rapid start, no warm-up time	Yes	
Standalone operation with on-board analysis	Yes	
Measurement Time	< 4 seconds	
Pathlength	10 mm cuvette port (Z=15 mm); 0.5 mm micro-volume sample port	0.5 mm micro-volume sample port
Wavelength Range	190 nm-1100 nm	
Wavelength Accuracy	±2 nm	
Wavelength Reproducibility	±1 nm	
Spectral Bandwidth	5 nm	
Stray Light	<0.5%T @ 220 nm NaI, <0.5%T @ 340 nm $NaNO_2$	
Photometric Range	-0.3A to 2.5A, 0 to 199%T	
Photometric Accuracy	±0.01A + 1.5% of the reading @ 546 nm	
Photometric Reproducibility	±0.003A (0 to 0.5A), ±0.007A(0.5 to 1.0A)	
Noise	0.005A peak to peak, 0.002A RMS	
Power Input	120 to 240V~ 50/60Hz 40VA Max	
Dimensions	Height 190 mm x Width 280 mm x Depth 410 mm (521 mm with printer)	
Weight	Approx. 3.55kg (4kg with printer)	
Software	Resolution Software (included)	
Life Science Applications	DNA, RNA, Oligo, Fluorescent Dye, Tm Calculation, Protein Dye, Protein UV and Colorimetric protein methods	
Applications	Single Wavelength, Concentration, Wavescan, Kinetics, Standard Curve, Substrate, Equation Editor	

Order #	Product	Description
80-3006-70	BioDrop Resolution CFR software	Full 21 CFR part 11 compliant PC control software
80-3006-68	BioDrop Duo+	Spectrophotometer with 10 mm cell holder and 0.5 mm micro-volume port
80-3006-69	BioDrop Duo+ with built-in printer	Spectrophotometer with 10 mm cell holder and 0.5 mm micro-volume port and built-in printer
80-3006-55	BioDrop µLite+	Spectrophotometer with 0.5 mm micro-volume port
80-3006-56	BioDrop µLite+ with built-in printer	Spectrophotometer with 0.5 mm micro-volume port and built-in printer
80-3006-25	BioDrop Ultimate Z = 15 mm	Micro-volume cuvettes 0.5 mm and 0.125 mm path length, 15 mm beam height
80-3006-20	BioDrop 500 Z = 15 mm	Micro-volume cuvettes 0.5 mm path length, 15 mm beam height
80-3006-21	BioDrop 125 Z = 15 mm	Micro-volume cuvettes 0.125 mm path length, 15 mm beam height

Accurate micro-volume results in seconds. What can you do with a Drop?

Download the BioDrop Application Note and locate your local sales representative at https://www.biodrop.co.uk

Distributors:

80-3006-65 Issue 5.1

Fresh thinking for micro-volume measurement

BioDrop

Tel: **+44.1223.423.723** | Email: **enquiries@biodrop.co.uk** | Web: **www.biodrop.co.uk** | Twitter: **@BioDrop_News** | Facebook: **BioDrop** | Youtube: **BioDropLtd**