

Maximum Flexibility in UV/Vis Spectrophotometry

ScanDrop²

ScanDrop²

ScanDrop²

The ScanDrop² from Analytik Jena is the second generation of microvolume spectrophotometers uniting flexibility and reliability with innovative technology and modern design all in a single instrument.

A flexible, easy-to-use platform for measuring small volumes of 0.3 µl or more, the new ScanDrop² and its familiar walk-away principle allow operators to process samples either individually or in a series of up to 16 samples.

The ability to record the entire spectrum from 220 nm to 1000 nm in only four seconds makes the system the ideal choice for UV/Vis applications, particularly for protein and nucleic acid determinations.

The ScanDrop² raises the bar when it comes to design and user friendliness: all you have to do is switch it on and start your measurements. Thanks to its long-life xenon flash lamp, the system is ready immediately with no warm-up phase required. A number of measurement adapters are available to supplement the built-in test position for 10 mm cuvettes: these include an adapter that accommodates the patented CHIPCUVETTE[®] (with 16 channels for measurements at up to 32 positions), an 8-position cuvette changer for standard cuvettes (up to 10 mm), and a Butterfly Cuvette for testing 9 samples with no consumables. The system automatically moves the adapters into their defined positions with exceptional precision.

A 10" tablet with a high-resolution color touchscreen allows users to operate the ScanDrop² without an additional PC, while FlashSoftPro, an easy-to-use software system that has been optimized for this use, opens up unlimited opportunities for UV/Vis applications.





Efficient, robust UV/Vis spectrophotometer

- **Precise:** UV/Vis adsorption measurements between 220 nm to 1000 nm
- **Optimum:** CCD detector for optimized resolution ≥ 1.2 nm
- **Powerful:** Only 4 sec per spectrum/sample for fast results
- **Long-lasting:** Highly precise, fiberless optical system combined with a powerful xenon flash lamp

Innovative design for reliable handling

- **Simple:** Easy handling - just pipette the sample and take your measurement
- **Intelligent:** Rotating mechanism opens instrument for optimum access and view of the 10" tablet PC
- **Brilliant:** 2D scanning area adaptable to different center heights
- **Versatile:** Interchangeable adapters prevent contact between samples and the optical system

Flexibility for adapting to a variety of demands

- **Compatible:** Interchangeable adapters available for microliter measurement cells and standard cuvettes
- **Versatile:** Highly precise measurements with or without consumables
- **Practical:** Walk-away principle applies to everything from individual samples to simple series of samples
- **Reliable:** Entirely eliminates evaporation, cross-contamination and sample carryover effects

Reliable data capture and simple evaluation

- **Modern:** Stand-alone operation from an integrated 10" tablet and/or PC
- **Convenient:** No charge for software licenses or updates
- **Universal:** A variety of modules and preinstalled methods for customized data processing
- **Multilingual:** Available in multiple languages

ScanDrop²

Maximum Flexibility in UV/Vis Spectrophotometry

Efficient, Robust Spectrophotometer

This flexible, precise spectrophotometer raises the bar for UV/Vis measurements at wavelengths ranging from 220 nm to 1000 nm, making it ideal for protein and nucleic acid applications.

The ScanDrop² is a versatile, robust instrument that is user friendly without sacrificing measurement reliability. Optimized for the UV/Vis range, its symmetrical Czerny-Turner design with a linear CCD detector ensures excellent stability and reproducible results while offering a high level of resolution (≥ 1.2 nm).

Its long-lasting xenon flash lamp, which, unlike other systems, requires no warm-up phase, means that the ScanDrop² is immediately ready-to-use. At 10^9 flashes (approx. 100,000 hours), the product life of this lamp exceeds that of conventional light sources by orders of magnitude, delivering fast results and measurements that only takes 4 sec per spectrum. The heart of the ScanDrop² is the polychromator system, which uses no moving components or optical fibers. The settings are permanent, and the system is fixed in place and resistant to external influencing factors, eliminating the need for calibration.

- Symmetrical Czerny-Turner design with a linear CCD detector has been optimized for the UV/Vis range (220 nm to 1000 nm)
- Operators may select any desired wavelength along the UV/Vis spectrum in increments of 0.5 nm.
- Measurements take 4 sec per spectrum; at ≥ 1.2 nm, resolution is high.
- Long-lasting xenon flash lamp
- Polychromator with highly precise, fiberless optical system

Innovative Design for Reliable Handling

Clever design: Measurements with the ScanDrop² are very easy and reliable, thanks to how the instrument opens and automatically positions samples in the path of the beam.

The instrument opens automatically in the front with a 180° rotating motion that provides optimum access for sample positioning. This also guarantees an unobstructed view of the adapted 10" tablet PC used for operating the instrument every time. The direction of the opening mechanism can be switched to accommodate right- and left-handed operators. This eliminates the need for opening the instrument manually in order to introduce the samples, making the ScanDrop² fast and easy to use.

- Rotating mechanism for opening the instrument
- Optimum sample access and unobstructed view of the tablet
- Adapters identified and positioned automatically
- 2D scanning area adaptable to different center heights

Interchangeable adapters accommodate samples in a variety of cuvettes-operators can also introduce samples directly without the use of consumables. The adapters used are then moved to their defined measurement positions inside the instrument. Because the 2D scan area of the ScanDrop² accommodates sample detection at a variety of center heights (ranging from 8.5 to 15 mm), testing does not depend on the type of cuvette, the manufacturer or the fill level of the solution. In addition, the sample cannot come into contact with the instrument's optical system, eliminating the need for cleaning after testing.



Rotating mechanism for opening the instrument



Flexible Adaption to Meet a Variety of Demands

Designed around a successful walk-away principle, the ScanDrop² is a powerful, versatile UV/Vis spectrophotometer for testing either individual samples or simple series of samples. In addition to working as a standard photometer with a 10 mm cuvette position, the ScanDrop² also accommodates various adapters that allow it to run multiple samples in parallel.

CHIPCUVETTE®

The ScanDrop² utilizes the unique, patented CHIPCUVETTE®, which allows the user to test samples ranging in volume from 0.3 µl to 4 µl. At the same time, CHIPCUVETTE® includes 16 individual microchannels, each with two different path lengths (0.1 mm and 1.0 mm). A feature that entirely eliminates sample evaporation, cross-contamination and carryover effects. Up to 32 measurements can be taken per run, with the option of performing double determinations at two different path lengths. This feature offers an unbeatable advantage when the sample concentrations are not known, as it eliminates the need for an additional sample dilution in many cases.

- 16 microchannels, each with 2 path lengths for up to 32 sample positions
- Sample volumes between 0.3 and 4 µl
- Automatic evaluation of the ideal result



Standard Cuvette Adapter

An adapter for the ScanDrop² is also available that can accommodate up to 8 different 10 mm cuvettes. Automatic sample positioning based on previously defined center heights makes it possible to use 10 mm cuvettes with different center heights (8.5 mm, 12 mm or 15 mm).

- Measurement series of up to eight 10 mm cuvettes
- Automatic positioning for different center heights



Butterfly Cuvette

The innovative Butterfly Cuvette can be used for testing up to 9 samples (volumes in the microliter range) and completely eliminates the need for consumables. Test preparation in the ScanDrop² is as easy as pipetting the sample into the positions of the Butterfly Cuvette adapter just insert the adapter, pipette the sample, and start your measurement. As another user-friendly feature, the cuvette flips open and shut automatically with no manual intervention required.

- UV/Vis measurements with no consumables
- Up to 9 sample positions (path length = 1 mm each)
- Cuvette flips open and closed automatically for easy use



Reliable Data Capture and Simple Evaluation

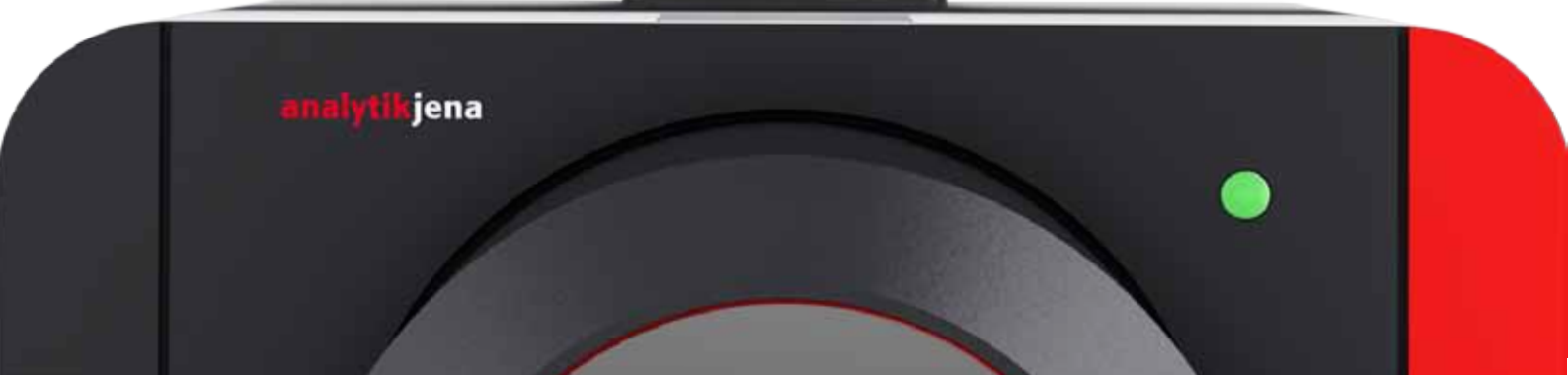
The FlashSoftPro control and analysis software, which is available in a standard PC version and in a version optimized for tablets with touchscreens, incorporates features and analysis modules exceeding all expectations.

The integrated 10" tablet PC turns the ScanDrop² into a compact, stand-alone system based on Windows 8.1 that can be operated with no peripherals. The ScanDrop² can also be operated from a standard PC or laptop. In addition to its easy-to-use, uncluttered menu interface, the software also comes with a series of preinstalled methods for analyzing nucleic acids and proteins, thus entirely satisfying the demands of life-science customers.

The quick-start menu offers a fast, uncomplicated way of calling up frequently used methods. The use of a mathematical module allows users to create, save and reuse specific formulas. With the aid of the quantification module, users can automatically analyze samples of unknown concentration, and create a calibration curve using standard samples. The UV/Vis module can be used for cyclic or kinetic sample measurements.

Users can transfer the data they generate or directly to a USB stick. Another extraordinarily convenient feature is the optional barcode reader, which can be used for scanning in sample information, and for tracking and documenting sample processing.

- Comprehensive software package for intuitive operation
- Preprogrammed methods for a quick start
- Modern 10" tablet PC with Windows 8.1 and color touch screen
- User administration with 3 levels of authorization
- No license; free updates



Control and analysis software FlashSoftPro

Technical Data

Spectral photometer data

Wavelength precision	± 0,5 nm	Absorbance range	0.02 - 300 (10 mm equivalent, @ 250 nm)
Spectral resolution	≥ 1.2 nm (FWHM @ Hg 253.7 nm)	Wavelength reproducibility	±0.05 nm (bei 361 nm)
Absorbance accuracy	2 % (230 nm)	Photometric reproducibility	±0.01 A (546 nm)

Optics

Measuring principle	Polychromator system with symmetric Czerny-Turner	Read-out time	4 sec per spectrum
Light source	Xenon Flash Lamp	Wavelength range	220 nm to 1000 nm (0.5 nm steps)
Detector	Linear CCD detector optimized to UV/Vis		

Sample parameter

Number of samples	1 to 16 sample @ 2 path length parallel	Sample amount	0.3 µl up to 2 ml
Sample handling	<ul style="list-style-type: none"> ▪ Measurement of samples by using cuvettes (10 mm or CHIPCUVETTE®) ▪ Optional: measurements without consumables by Butterfly Cuvette 		

Application UV/Vis

Cuvette	Path length	Volumen	Virtual dilution
Standard Cuvette	Up to 10 mm	Up to 2.0 ml	-
Butterfly Cuvette	1 mm	2.0 – 4.0 µl	1:10
CHIPCUVETTE®	0.1 mm	Min. 0.3 µl	1:100
	1.0 mm	Min. 2.0 µl	1:10
	Both	Min. 4.0 µl	1:10 and 1:100

Control

Control	PC or stand-alone (optional)	Display	Optional: 10" tablet, colored, touch, WIN 8.1
Features	<ul style="list-style-type: none"> ▪ Preinstalled methods for easy access ▪ Module for setup of own formulas ▪ Quantification by standards ▪ Automatic evaluation of results ▪ Broad range of data analysis ▪ 2D scanning area for different centre height of 8.5 to 15 mm 		

Technical Data

Dimensions

Weight	Approx. 10 kg
Dimension (W x H x L)	290 mm x 384 mm (incl. tablet) x 370 mm

Additional technical data

Interface	<ul style="list-style-type: none">▪ PC connection: USB▪ Tablet: USB for data transfer, barcode reader
Warranty	2 warranty on device system

Order Information

Order Number	Description
844-00203-2	ScanDrop ² Device combination for usage of different adapter and 10 mm cuvette measurement position, without PC, incl. control unit and software FlashSoftPro
844-00204-2	ScanDrop ² Device combination for usage of different adapter and 10 mm cuvette measurement position, without PC and without control unit, incl. software FlashSoftPro
844-00220-0	Butterfly Cuvette for ScanDrop ² Flip-top cuvette incl. adapter for UVVIS measurements without consumables, 9 positions with 1 mm path length each
844-00221-0	CHIPCUVETTE [®] Adapter for ScanDrop ² Adapter for CHIPCUVETTE [®] and UVVIS measurements using ScanDrop ² , double determination of 1 to 16 sample at 0.1 mm and 1.0 mm path length
844-00222-0	Standard Cuvette Adapter for ScanDrop ² Adapter for up to 8 Standard Cuvettes (10 mm) and UVVIS measurements using ScanDrop ²

Headquarters

Analytik Jena AG
Konrad-Zuse-Str. 1
07745 Jena · Germany

Phone +49 3641 77 70
Fax +49 3641 77 9279
info@analytik-jena.com
www.analytik-jena.com

Pictures: Analytik Jena AG
Subject to changes in design and scope of delivery as well as further technical development.