Novus 2100

Double Beam UV-Vis Spectrophotometer

The Novus 2100 is a state-of-the-art UV-Vis spectrophotometer.

It features a unique wavelength drive that provides seamless transition between the UV and Visible ranges. This advanced technology allows the Novus 2100 to deliver both accurate data and quiet operation.

The instrument's versatility, reliability, and flexibility make it the perfect solution for a wide range of applications.

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Novus 2100

Double Beam UV-Vis Spectrophotometer

Superior Performance & Easy Measurement

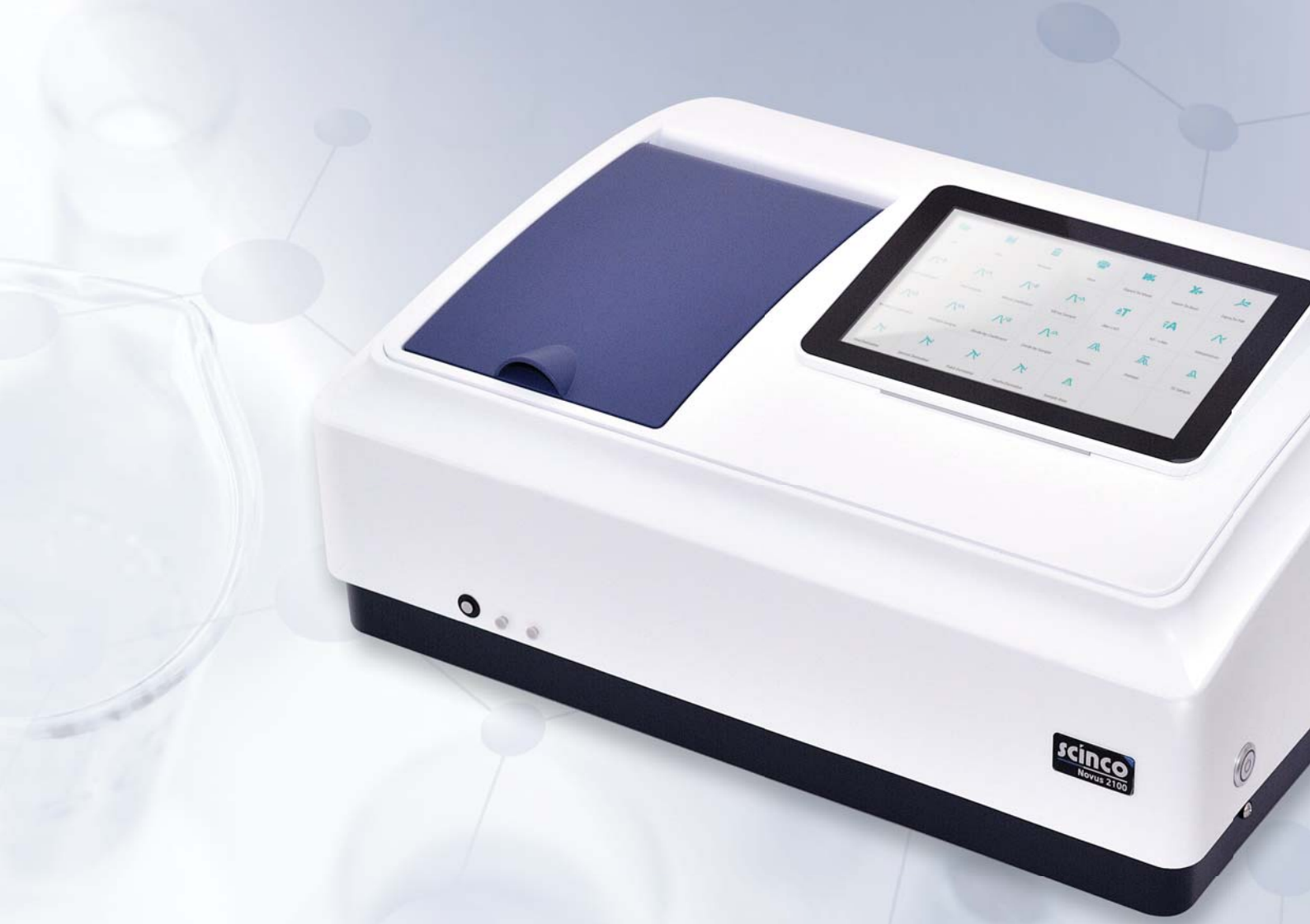
The Novus 2100 is designed with a proven double beam structure and high-quality deuterium and tungsten lamps. These features guarantee accurate and reliable data across the full wavelength range of 190 nm to 1100 nm.

Moreover, the Novus 2100 incorporates new technologies to facilitate easy measurement.

The user-friendly LuxTouch software, combined with a 10.1-inch bright IPS color LCD touch screen, makes measurement and data management efficient.

With easy access to software navigation through the LCD touch screen, the Novus 2100 can perform as a versatile standalone instrument. Researchers can quickly and easily run measurement modes such as photometry, multi-wavelength, kinetics, time scan, quantitation, and DNA/Protein analysis.

The Novus 2100 is the perfect combination of reliable traditional design and modern technologies.



Ergonomics & Durable Design

The Novus 2100 features an ergonomic and compact case design. The slightly curved case top makes it easy to measure and check data through the large touch screen.

Its standalone capability allows users to take measurements at any location where it may be needed. This flexibility makes it the ideal choice for analytical, industrial, and educational laboratories seeking to deploy multiple units.

The durable case ensures robustness over an extended lifetime of use.

Quiet Like Silence

Thanks to its unique wavelength drive design, the Novus 2100 not only delivers superior accuracy and reproducibility but also operates with unparalleled quietness. Compared to traditional double beam UV-Vis spectrophotometers, the Novus 2100 excels with its remarkably silent operation and provides a smooth transition between UV and visible ranges.

With the Novus 2100, experiments are no longer interrupted by loud noises and distractions.

Outstanding Expandability

The Novus 2100 incorporates cutting-edge smart device technologies.

The instrument can operate as a standalone device with remarkable expandability. The built-in computer offers ample 64GB storage, and users can easily expand storage through USB memory, SD cards, and microSD cards as needed.

The instrument supports various connectivity options, including 3 USB-A ports, 1 USB-B port, RJ-45, VGA, HDMI, Bluetooth, and Wi-Fi. Users can operate the instrument seamlessly with a wireless mouse and keyboard, eliminating the need for a PC.

With its expandability, the Novus 2100 is the perfect space-saving solution for any laboratory.

In short, the Novus 2100 provides three ways to operate:

1. Standalone operation with a touch screen
2. Standalone operation with a wireless mouse and keyboard
3. Operation via PC

Wide Range of Applications

Novus 2100 is a ideal choice for:

Academia

- Regular lab experiments
- Identification and detection of compound

Chemical

- Monitor chemical reactions and chemical processes

Life Science

- Quantification of DNA / proteins
- DNA melting experiments
- Solvent analysis

Food

- Packing characterization
- Intensity analysis
- Purity Analysis

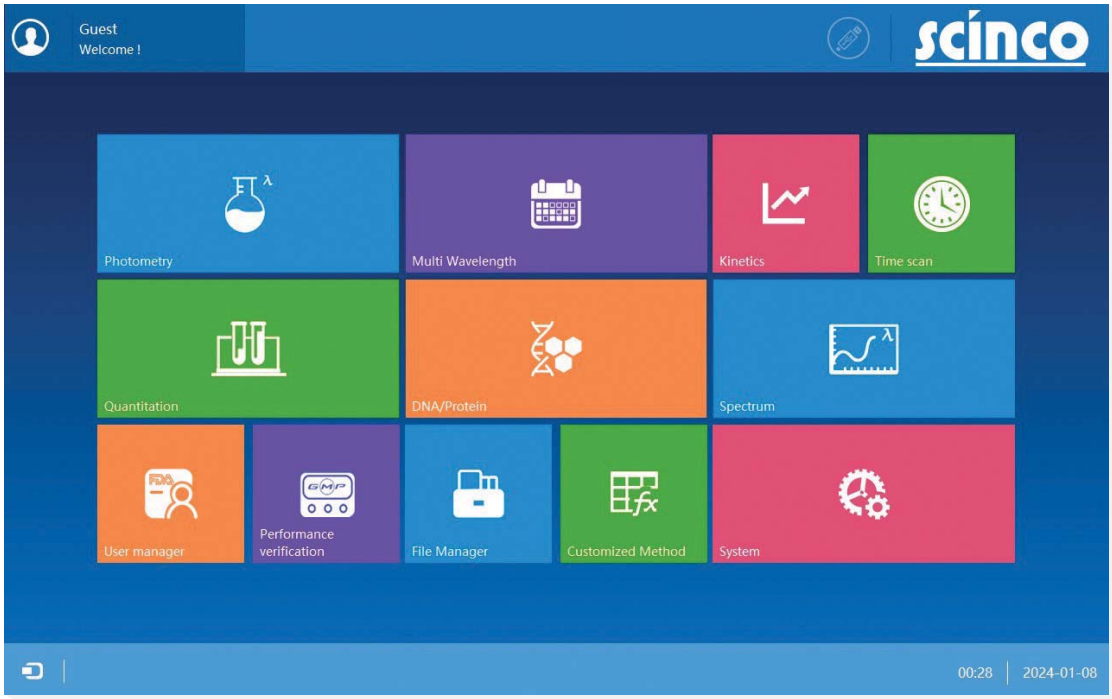
Environment

- Qualification of heavy metals in water, air, soil
- Organic material analysis
- Water and wastewater analysis

Industrial

- QA / QC in the development and production

LuxTouch Software



LuxTouch Software is developed with a user-centered approach,
providing an essential tool for precise measurement and efficient data management.
Available in two versatile versions—built-in touchscreen and external
PC—LuxTouch empowers users to choose their ideal method of instrument control.

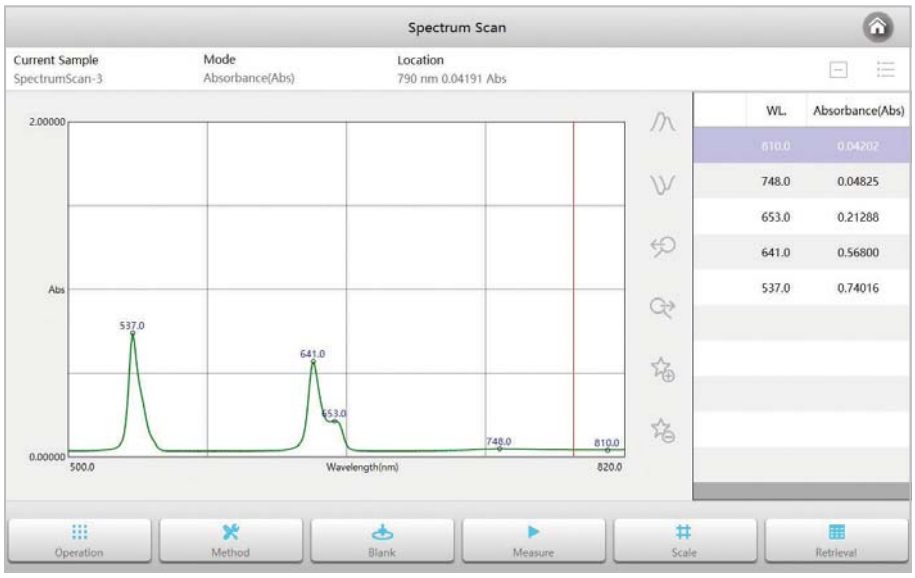
Experience the core advantage of LuxTouch – easy navigation.
Its graphical interface with intuitive icons provides quick access to commonly performed tasks.
Users can easily create, store, and manage methods and data with LuxTouch.

LuxTouch Software offers excellent connectivity with various accessories,
including multi-cell holders, Peltier systems, and sippers.

LuxTouch Software

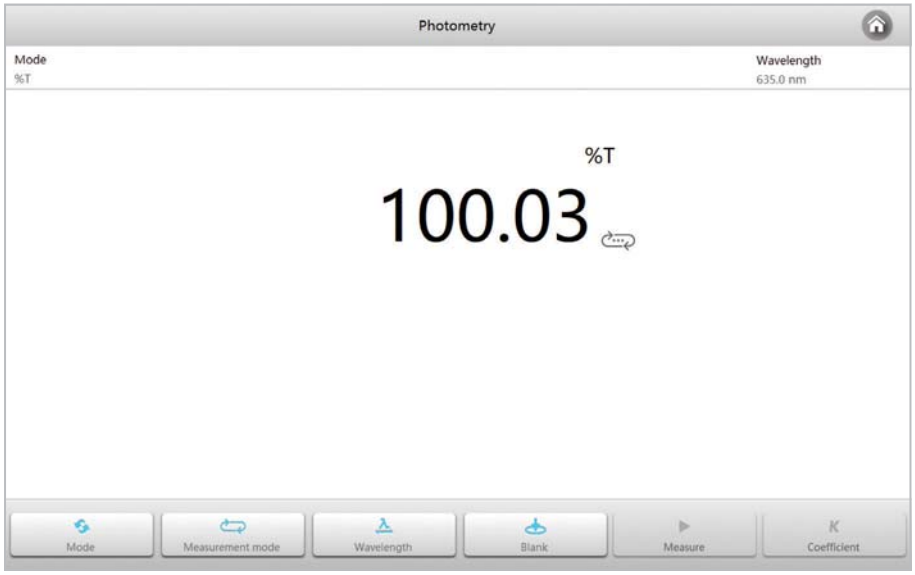
Spectrum Scan

· Measuring the photometric curve of a sample over a range of spectra
· Find the peak automatically
· Variable math functions (Arithmetic operation, Derivation, Area and 3D map)
· Curves and data can be saved and printed in Excel, Word, PDF, etc.



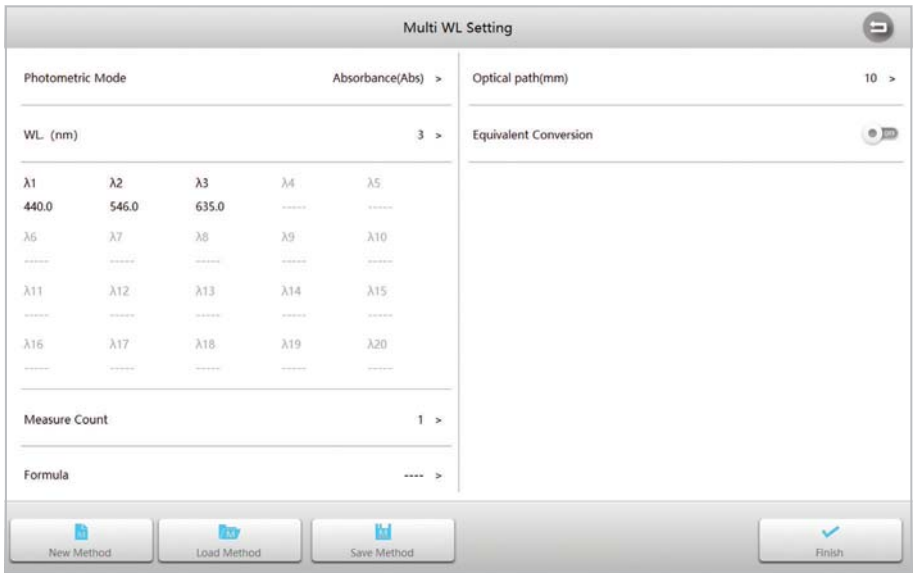
Photometry

· Measuring the photometric value of a sample at a single wavelength
· A / %T Conversion available



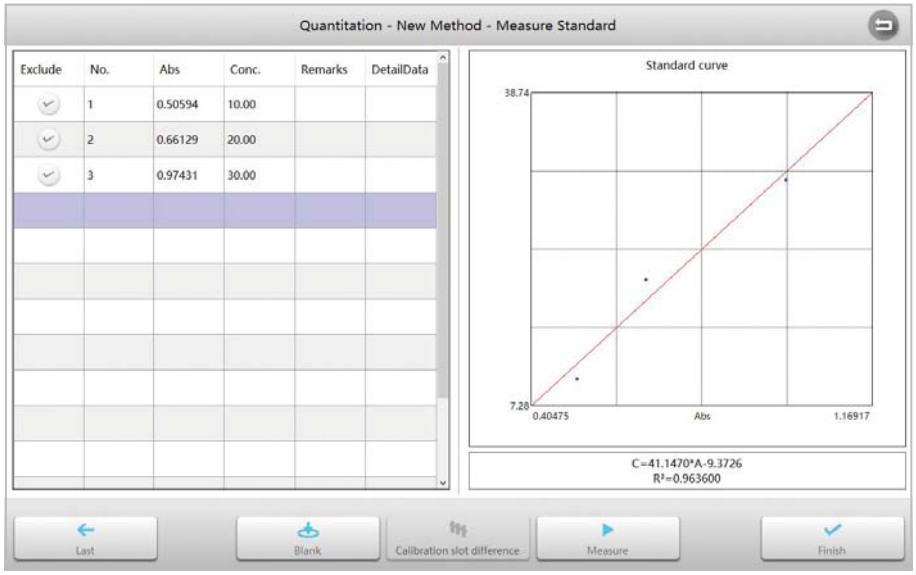
Multi Wavelength

· Measuring the photometric value up to 20 wavelengths at a time
· User-selectable one point measurement times (1-50 times)
· Customize formulas for data calculation



Quantitation

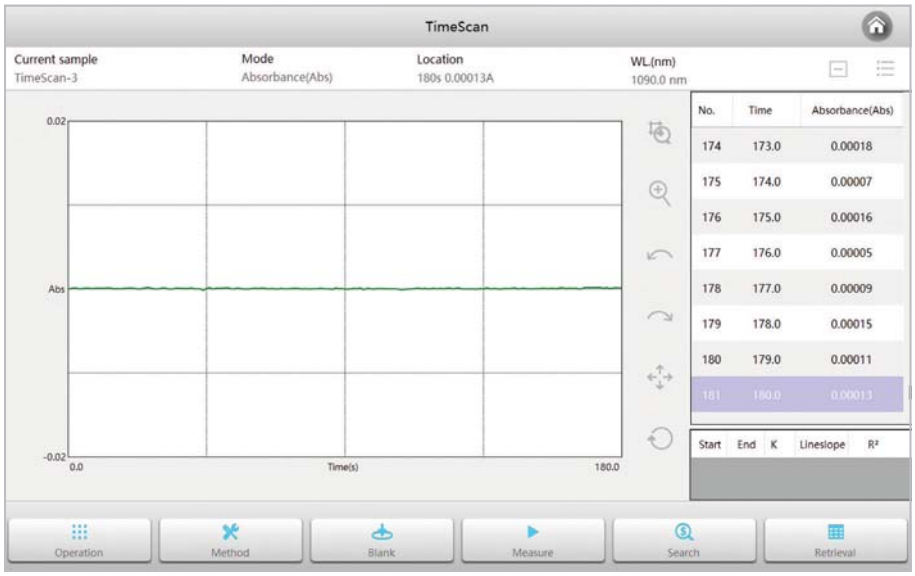
· Establish a standard curve and measure the concentration of the sample using a standard curve.
· Single wavelength, dual wavelength (difference, ratio), three wavelength and custom methods.
· 3 ways to create a standard curve (input coefficients, measure 2~20 standard samples or input absorbance and concentration values of standard samples)
· Provide 4 fitting methods (Linear through zero, Linear, Quadratic and Cubic)



LuxTouch Software

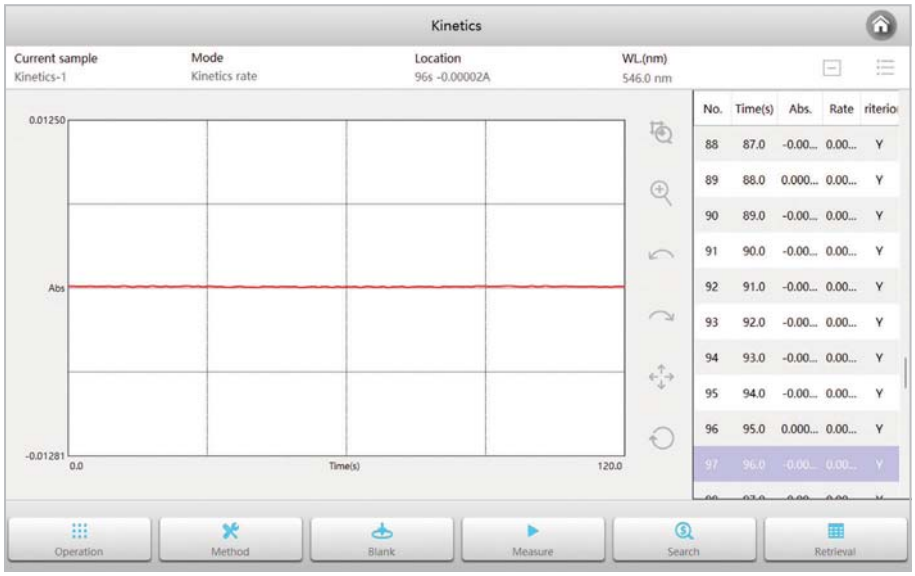
Time Scan

· Measuring the change of photometric value with time at a single wavelength.
· Unlimited scanning time



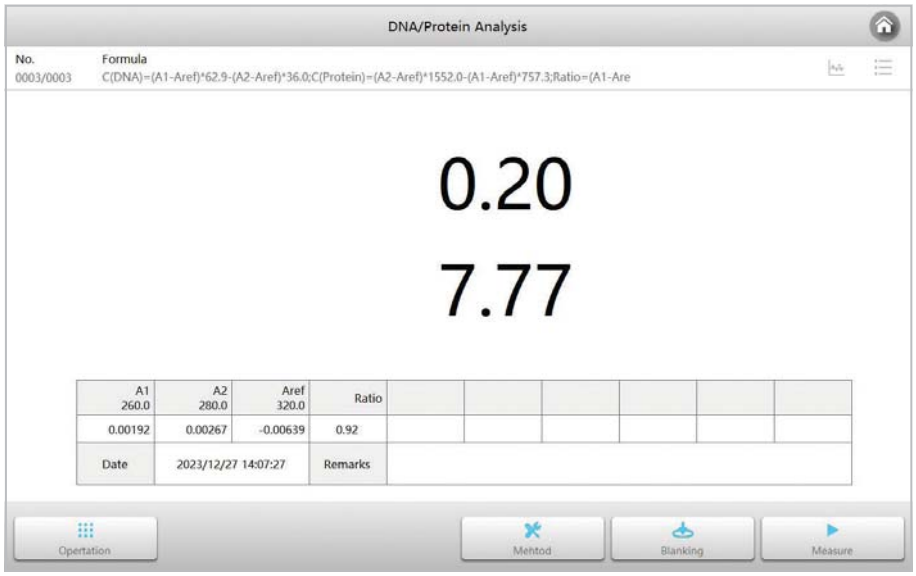
Kinetics

· Measuring the change in absorbance or absorbance change rate over time at a specified wavelength.
· Unlimited scanning time
· Delay time and interval can be customized
· Automatically calculate kinetic rates



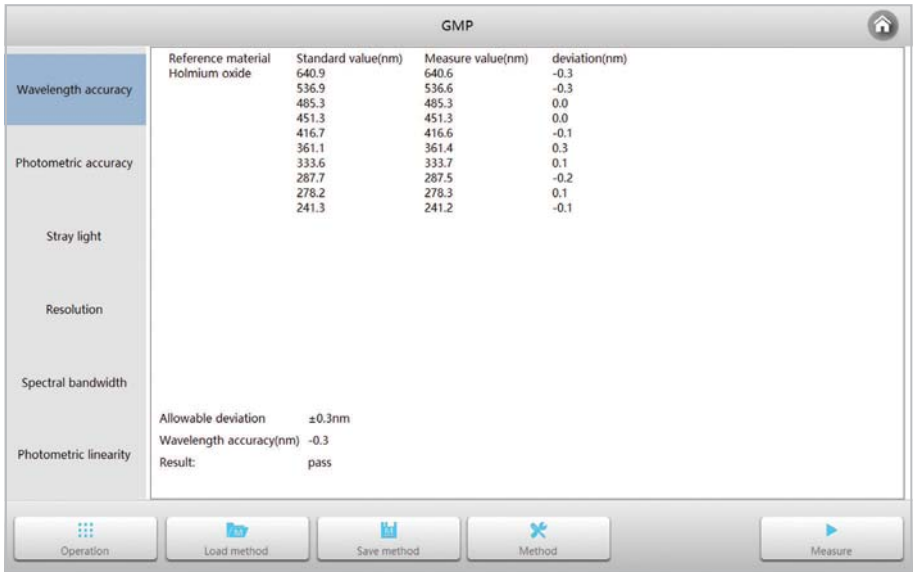
DNA Protein Analysis

· Measuring DNA, RNA and Protein concentrations using built-in methods or new methods.
· 7 built-in methods (260/280, 260/320, Biuret, Lowery, BCA, CBB, Direct UV method)and custom calculation
· Display the distribution map of the measured values and automatically determine the results



Performance Verification

· Verify the technical performance of the instrument
· Wavelength, Photometric, Resolution, Stray Light and Linearity test are performed.



Specifications

Novus 2100	
Optical System	Double Beam
Source Lamp	Deuterium & Tungsten Lamp
Detector	Dual Silicon Photodiode
Wavelength Range	190 ~ 1100 nm
Bandwidth	0.5, 1, 2, 4, 5 nm Adjustable
Wavelength Accuracy	±0.3 nm, 0.1 nm at 656.1 nm
Wavelength Repeatability	≤ 0.1 nm
Photometric Range	-4 ~ 4 A，0 ~ 400 %T，0 ~ 9999.9 C
Photometric Accuracy	±0.002 A @ 0.0 ~ 0.5 A ±0.004 A @ 0.5 ~ 1 A ±0.3 %T @ 0 ~ 100 %T
Photometric Repeatability	≤0.001 A @ 0.0 ~ 0.5 A ≤0.002 A @ 0.5 ~ 1 A ≤0.15 %T @ 0 ~ 100 %T
Noise	≤0.00005 A @ 0.0 A (500 nm, RMS)
Drift	≤0.0003 A/h @ 500 nm, 2 hours after preheating
Baseline Flatness	±0.0005 A
Stray Light	≤1 %T@ 198 nm (KCl) ≤0.03 %T@ 220 nm (NaI) ≤0.03 %T@ 340 nm (NaNO2)
Scan Speed	20 ~ 4200 nm/min
Interface	USB-A × 3, USB-B × 1, RJ-45 (Ethernet) × 1, VGA × 1, HDMI × 1, Extensible Bluetooth, WIFI
Display	10.1 Inch IPS color LCD with touch screen (1280×800)
Storage	64GB (built-in), Unlimited (USB Storage SD card, network storage device)
Dimensions	580(W) x 420(D) x 235(H) mm
Weight	18 kg
Power Requirements	100-240V, 50/60Hz, 140W

Diverse Accessories

The Novus 2100 comes with a comprehensive range of accessories to support diverse applications. Each accessory is crafted from the highest-quality materials to ensure durability and precision. Smart and intuitive design allows easy and quick changing and removal of accessories, which enables users to seamlessly transition between experiments.

The automated multi-cell holders significantly enhance efficiency by enabling the rapid measurement of multiple samples in a short time.

Whether operating in research or routine analysis, the Novus 2100's accessories ensure that users consistently achieve the best results.

Solid Sample Cell Holder

Automated 5-Position Multi-Cell Holder

Automated 8-Position Multi-Cell Holder

10mm Water Jacketed 1-Cell Holder

Peltier / Sipper System

5° Reflectance Accessory

Nano Stick

Nano Stick
for Novus 2100

Micro Volume Sample Measurement

The Nano Stick is a specialized sampling device designed by SCINCO for measuring micro volumes of samples, as low as 2 µL, in life science laboratories. Its simple design makes it easy to use, quick to clean, and provides better accuracy by reducing sample volume. The Nano Stick is particularly useful for analyzing DNA, RNA, and protein samples and offers a complete solution for these types of experiments.

Features

. Simple analysis with an innovative solution
. Compatible with the majority of UV-Vis. Spectrophotometers
. Provides superior accuracy and reproducibility
. Allows sample size as small as 2 µL, conserving precious samples
. Durable design

Nano Stick-S makes the process as simple as pipette, measure, and wipe clean. By reducing sample waste and providing greater accuracy, Nano Stick-S offers a complete solution to analyze DNA, RNA and proteins.

Pipette the Reference / Sample in turn.

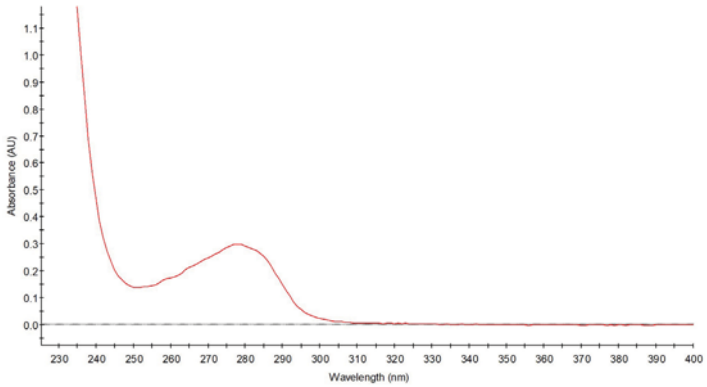
Assemble the upper plate to the other half.

Measure and Collect data.

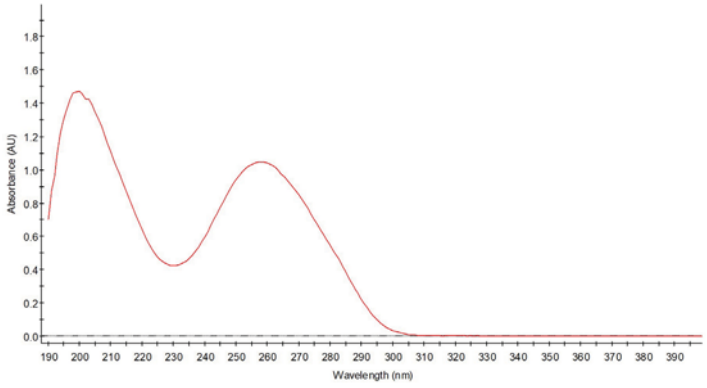
Simply wipe clean for next sampling.

Applications

- DNA and RNA measurement
- DNA Quantification
- Protein Concentration Measurement
- High Concentration Sample Measurement
- Micro-volume Sample Measurement



BSA spectrum



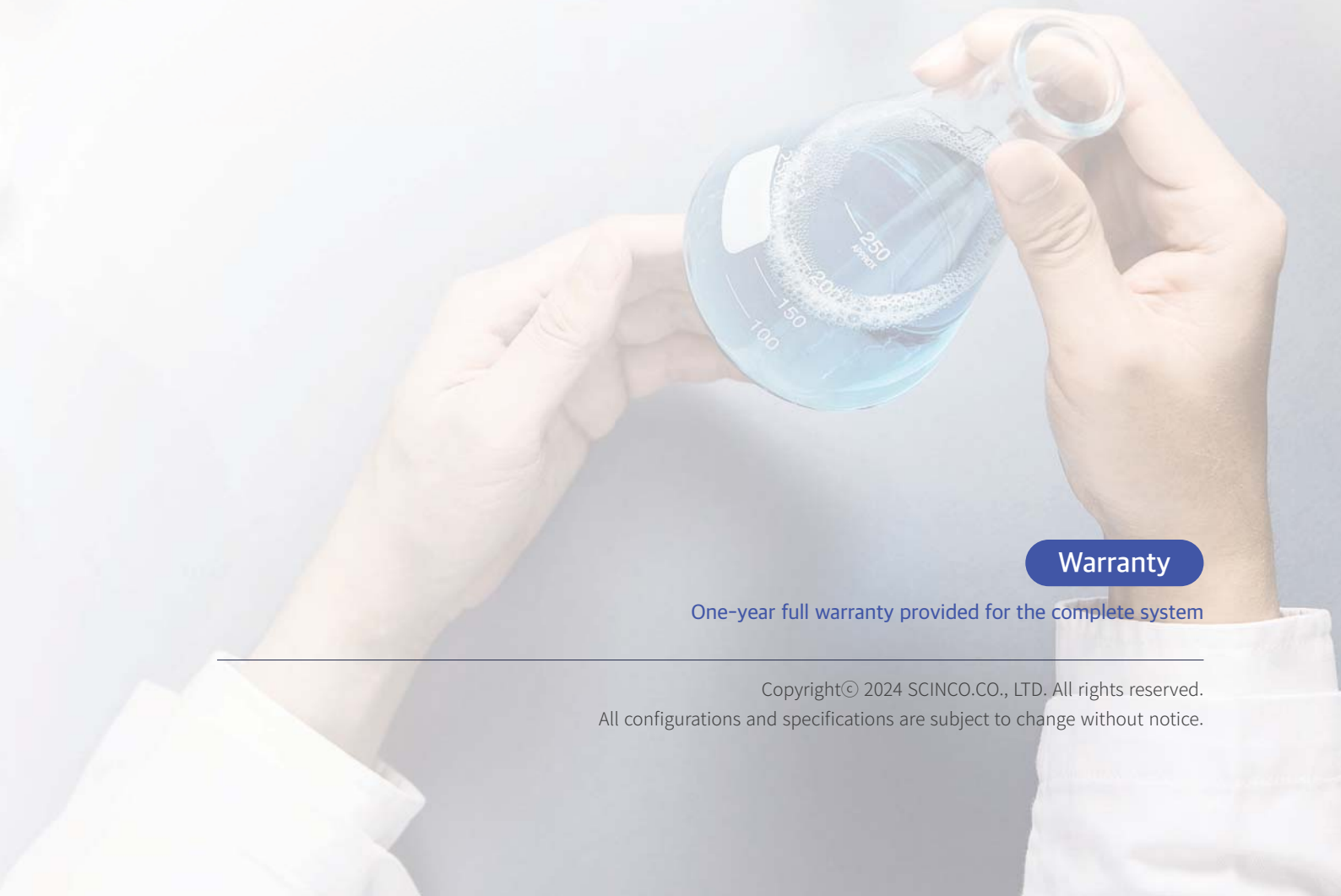
ds DNA spectrum

Specifications

Nano Stick	
Pathlength	0.5 mm
Physical Dimensions	12.5×12.5×60 mm (WDH)
Beam Height (Z-Dimension)	15 mm
Minimum Sample Volume	2 µl
DNA Detection Limit	1.1 ng/µl
DNA Maximum Concentration	3000 ng/µl
DNA Reproducibility at 100 ng/µl	±1.0 ng/µl
DNA Reproducibility at 1000 ng/µl	±3.0 ng/µl
Protein Detection Limit	0.06 mg/ml
Protein Maximum Concentration	100 mg/ml
Protein Reproducibility at 2 mg/ml	±0.02 mg/ml
Protein Reproducibility at 10 mg/ml	±0.05 mg/ml

Ordering Information

ORDERING INFORMATION (0.5 mm pathlength)	
NS-S/0.5/15/BK	Nano Stick-S, Z 15, Black
NS-S/0.5/15/BL	Nano Stick-S, Z 15, Blue
NS-S/0.5/15/R	Nano Stick-S, Z 15, Red
NS-S/0.5/15/G	Nano Stick-S, Z 15, Gold
NS-S/0.5/15/S	Nano Stick-S, Z 15, Silver



Warranty

One-year full warranty provided for the complete system

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