

ultra micro uv-vis spectrophotometer with usb data export

Ultra-micro UV-visible spectrophotometer is a highly sensitive optical analyzer designed for the quantitative detection of nucleic acids, proteins and other biological samples.

Ultra-micro UV-visible spectrophotometer integrates modern intelligent operating system and high-precision optical technology, which can quickly and accurately complete the analysis of concentration and purity of trace samples, and it is suitable for scientific research, clinical and industrial fields.

Features of Ultra Trace UV-Vis Spectrophotometer

1. using intelligent Android operating system, equipped with a 7-inch capacitive touch screen, support multi-touch, simple and intuitive interface, easy to operate.
2. boot without warming up, ready for testing, saving experiment time.
3. the sample is directly added to the detection platform, without complex dilution, 2 seconds to 6 seconds to complete the detection.
4. Automatic detection function, the detection arm automatically starts to detect when it is lowered, improving work efficiency.



5. using imported scintillation xenon lamp as a light source, life expectancy of up to 10 years, to ensure stable and reliable light intensity.
6. High-performance linear motor to control the light range, to ensure high repeatability of the detection results.
7. Equipped with cuvette slot to support the determination of bacterial and microbial culture fluid concentration, with stirring and heating function, heating temperature up to 37°C, stirring speed range 100rpm to 900rpm.
8. Built-in printer, convenient for real-time printing of the test results, support for data export in Excel and JPG format, convenient for subsequent analysis.
9. wide range of detection concentration, from 2ng/uL to 37,500ng/uL, with a cuvette detection OD600 function.
10. each time only 0.5uL to 2uL sample, the sample can be recovered after measurement, suitable for the detection of precious samples.

Advantages

1. fast and efficient: no need for preheating and complex preparation, to enhance the experimental efficiency.
2. high sensitivity and precision: advanced optical design and stable light source to ensure accurate and reliable data.
3. Sample saving: Micro sample design saves precious reagents.
4. Multi-functional integration: support a variety of sample types and concentration detection, and also has the function of culture liquid detection.
5. humanized design: intelligent touch system, convenient operation, flexible data management.

Working Principle

Ultra-micro UV-visible Spectrophotometer adopts UV-visible spectrophotometry technology, through the imported high stability xenon lamp sends out a light beam, after the sample absorption by the high-precision photodetector to capture the signal. By adjusting the length of the light path and using high-precision motor control, to ensure the precise change of the light path, to realize the accurate determination of the absorbance of the sample. The data is analyzed and stored by the built-in software, supporting multiple formats for export.

Application Areas

1. Nucleic acid and protein quantification in molecular biology research.
2. Analysis of blood and body fluid samples in clinical diagnosis.
3. Concentration determination of culture fluid in microbiology experiments.
4. Drug development and quality control testing.
5. Analysis of water quality and pollutants in environmental science.
6. Quantitative detection of various types of micro samples in the field of life sciences.

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Model	NP30
Sample Volume	0.5uL to 2uL, recommended 2uL
Wavelength Range	180nm to 910nm
Wavelength Accuracy	±1nm
Wavelength Resolution	≤1.5nm, FWHM at Hg 253.7nm
Absorbance Range	0.04 to 750, at 260nm, equivalent to 10mm optical path
Absorbance Precision	0.002Abs, 1mm pathlength
Absorbance Accuracy	±1%, 7.332 at 260nm
Detection Time	less than 6 seconds
Pathlengths	0.02mm, 0.03mm, 0.1mm, 0.2mm, 1mm
Light Source	Pulsed xenon lamp

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Model	NP30
Light Lifetime	more than 1 billion flashes
Detection Concentration Range	2 to 37,500ng per uL dsDNA 1.32 to 24,750ng per uL ssDNA 1.6 to 30,000ng per uL RNA
Protein Detection Range	BSA: 0.06 to 1119mg per mL IgG: 0.03 to 547mg per mL A280: 0.04 to 750mg per mL Lysozyme: 0.015 to 284mg per mL
Detector Type	2048-element linear CCD array
Sample Stage Material	Quartz fiber and 304 stainless steel
Input Voltage	12Vdc, 4A
Power Consumption	48W

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Model	NP30
Dimensions	270x210x196mm
Weight	3.8kg
OD600 Measurements	
Absorbance Range	0 to 4.000Abs
Absorbance Stability	(0, 3): $\leq 0.5\%$, [3, 4): $\leq 1.5\%$
Absorbance Repeatability	(0, 3): $\leq 0.5\%$, [3, 4): $\leq 1.5\%$
Absorbance Accuracy	(0, 2): $\leq 0.005A$, [2, 3): $\leq 1\%$, [3, 4): $\leq 2\%$
Heating Temperature	37°C
Stirring Speed	9 levels, 100 to 900rpm