nano spectrophotometer with od600 measurement function

It is a nano-spectrophotometer that combines an intelligent operating system with high-precision optical detection technology, and is suitable for rapid concentration measurement of nucleic acids, proteins, bacterial cultures and other samples.

Nano spectrophotometer with android system interface, no need to connect to the computer can independently complete the data acquisition, analysis and storage, suitable for molecular biology, medical testing and university laboratories.

Features of Nano Spectrophotometer

1. intelligent Android system equipped with 7-inch capacitive multi-touch screen, intuitive and smooth operation.
2. with cuvette slot, suitable for OD600 and other bacterial concentration detection.
3. without external computer, stand-alone can complete the sample detection, analysis and data storage.
4. support JPEG image and Excel compatible format export, easy to later statistics and organization.
5. high-precision linear motor drive, to achieve the optical range accuracy of 0.001mm, high measurement repeatability.

6. only 0.5 microliters to 2 microliters of sample is required, and the sample can be recovered after measurement, which is suitable for precious sample experiments.
7. no sample dilution, 2 seconds to 6 seconds to complete the measurement and display the concentration results.
8. the detection concentration up to 50 times the conventional UV spectrophotometer, concentration range is wide, 2ng/uL to 15000ng/uL.
9. both traditional OD600 bacterial concentration measurement function, applicable to a wide range.

Advantages

1. mobile use, without the need for a fixed laboratory computer with.
2. saving samples and reagents, suitable for high value sample analysis.
3. fast detection speed, suitable for high-throughput experiments or teaching scenarios.
4. integrated intelligent platform, data acquisition, processing and export one-stop completion.
5. Automatic output of concentration value, no need to calculate, reduce human error.

Principle

Nano Spectrophotometer is based on the principle of UV-visible absorption spectroscopy, and determines the absorbance of the sample at the specified wavelength through the precision-controlled micro-photoprobe window, thus realizing the quantitative analysis of the target molecules in the sample. Together with the micro sample platform and short optical path structure, it enhances the detection sensitivity and stability, and the linear motor ensures the consistency of the optical path every time to ensure the repeatability and reliability.

Applications

Nano Spectrophotometer is suitable for the determination of DNA, RNA concentration in molecular biology experiments, protein quantification, bacterial culture density detection, clinical sample pre-treatment evaluation, sample monitoring in the process of biopharmaceutical research and development, but also can be widely used in teaching experiments, food and environmental testing and other scenarios.

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Model	**NP20**
Sample Volume	0.5uL to 2uL, recommended 2uL
Wavelength Range	180nm to 910nm, Cuvette Mode, OD Measurement: 600±8nm
Wavelength Accuracy	±1nm
Absorbance Precision	0.002Abs
Light Source	Pulsed xenon lamp
Nucleic Acid Detection Range	2 to 15,000ng per uL dsDNA 1.32 to 9,900ng per uL ssDNA 1.6 to 12,000ng per uL RNA
Absorbance Range	0.04 to 300Abs, Cuvette Mode OD600 Measurement: 0 to 4Abs, Equivalent to 10mm pathlength

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Model	**NP20**
Protein Concentration Detection Range	BSA: up to 400mg per mL IgG: up to 290mg per mL A280: 0.068 to 280mg per mL Lysozyme: 0.026 to 106mg per mL
Sample Stage Material	Quartz fiber and 304 stainless steel
Operating System	Android OS
Pathlengths	0.05mm, 0.2mm, 1.0mm, 1.2mm
Detector	2048-element linear CCD array
Spectral Resolution	⩽1.5nm, FWHM at Hg 253.7nm
Auto Detection Function	Available
Absorbance Accuracy	±1%, 7.332Abs at 260nm

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Model	**NP20**
Measurement Time	less than 6 seconds
Data Output	USB
Input Voltage	12Vdc, 4A
Power Consumption	48W
Dimensions	270x210x196mm
Weight	3.5kg