

DW-K5900F Nano Spectrophotometer

The microvolume Spectrophotometer has become a routine instrument in modern molecular biology laboratories. It is an instrument that conducts quantitative and qualitative analysis of substances using the spectrophotometric method, and is commonly used for nucleic acid and protein quantification, microarray, full-wavelength scanning, and quantitative determination of bacterial concentration, etc. By adding a fluorescence module to the micro spectrophotometer, it is often used for the detection of low-concentration nucleic acids and proteins, greatly expanding the detection range.

Advantage

- Five automatic wavelength conversions, automatically matching the optimal wavelength based on sample concentration, without the need for manual setting;
- Long-life scintillation xenon lamp, with a maximum of 109 flashes;
- Internal display: 10.1-inch touch display, multi-point capacitive touchscreen;
- Has pollutant identification function;
- Operating system: LINUX system;
- Supports languages: 9 languages including Chinese, English, French, German, Arabic, Spanish, Russian, Japanese, and Korean.
- Supports USB data output, can be linked to Ethernet, Bluetooth, and Wi-Fi;



Features

1. Output port: It has 2 USB-A interfaces, 1 Type C interface, 1 HDMI interface, and 1 Ethernet port, enabling connection and use with various devices such as mice, keyboards, desktop computers, etc.
2. It has a one-click export function for the spectral graph of the scanning and detection results.
3. Fluorescence detection has a customizable standard curve module, allowing for more flexible compatibility with more reagent kits and experimental methods.
4. Fluorescence detection has a kinetic module, enabling fluorescence kinetic detection and drawing kinetic curves.
5. Nano Gold mode,Judging Peak,auto search wavelength of different particles
6. STD Curve have mord Fitting method,satisfy diversified experiments requirement.

Specifications

★Optical path	Microvolume module:1、 0.4、 0.1、 0.04、 0.02mm(Auto ranging) Cuvette module:10、 5、 2、 1mm;
Volume requirements	Microvolume module: 0.3~2μL; Cuvette module:≥1000μL(10mm Optical Path),Or the liquid height is ≥ 8.5mm
Light source	Xenon lamp(10 ⁹ flashes)
Detector	2048(cmos)linear imaging sensor
Test wavelength range	Microvolume module:200~850nm;Cuvette module:220~800 nm
Wavelength accuracy	±1nm;
Resolution Spectrum Bandwidth	2nm(FWHM at Hg 254nm);
Absorbance Accuracy	0.002 Abs;
Photometric Accuracy	1%(0.988 Absorbance at 257 nm);
★Abs range	Microvolume module:0~900 Abs(=10mm Optical path) Cuvette module:0~16 Abs(at 1mm Optical path)
★Concentration range	Microvolume module: 2~45000 ng/μL (dsDNA) ; 0.06~1343 mg/mL (BSA) Cuvette module(10mm):0.2~80 ng/μL (dsDNA) ; 0.006~2.38mg/mL (BSA)
Test time	<3s
Test repeatability	0.002A (1mm Optical path) or 1% CV
Dimensions of the instrument(L*W*H)mm	290*340*220
Weight	6.8kg
Operating conditions	Temperature: 10 - 45°C; Humidity: Below 85%
Output	24V 2.5A 60W

Auto test and zero adjustment,after padetal arm down

★It has the function of intelligent sample detection. It can identify pollutants and provide information prompts as well as the type of pollutants. The types of pollutants that can be identified include: protein, nucleic acid, phenol, isothiocyanate guanidine, and hydrochloric guanidine. Moreover, it has the function of result correction, which can provide the original concentration of the sample, the corrected concentration, and the type of pollutants. This ensures the accurate concentration of the sample and the quality of the sample, as well as the accuracy and best experimental results of the experiment.

Nucleic acid testing module	dSDNA, ssDNA, RNA, User settings, oligoDNA, oligoRNA, Gene chip module
Protein detection module	A280、 Polypeptide, protein chip, BCA, Bradford, Lowry, Pierce 660 module
OD600 module	Cell Fluid Module
Custom module	UV-Vis,STD,Nano Gold,Dynamics
STD curve fitting	Linear,Interpolation,2nd/3rd-order polynomial
UV-Vis Cuvette Absorbance	
Fluore dynamics mode,can customzise 5 stages' delay time,interval time,Number of tests	

Fluorescence

Optical source	Long life Xenon flash lamp(109 flashes);
Excitation wavelength range	190nm-1000nm;
Emission wavelength range	280nm-850nm;
Excitation filter	Standard configuration:355nm、 485nm、 544nm、 646nm;
Shutter filter	Standard configuration:460nm、 538nm、 590nm、 678nm;
Detector	Photodiode (320 - 1100nm)
Sample Channel	1
sample volume	1-20 μL;
Tube type	0.5mL pcr tube
Sample volume of tube	≥100 μL
Preheating time	No need for preheating
Measuring speed	3s / tube
Linear	R2≥0.995;
Linear range	5 order of magnitude
Built in reagent calculator to calculate the required amount of dye and buffer for the working solution	
Equipped within fluorescence meter mode,can directly measure the fluorescence intensity of the sample	
Ion Sphere	
Within Fluore STD curve mode,can free choose Ex light source,curve type,STD volume and reagent volume.	
Within Fluore dynamics mode,can customzise 5 stages' delay time,interval time,Number of tests	

Optional

Cuvette stirring	10 speed,time adjustable
Printer	Built-in thermal printer
Liquid column monitoring	which can detect any bubbles or other abnormalities to ensure accuracy
Audit trial	Once enabled,it cannot be disabled.It features hierarchical permissions, with different user groups having different permissions.It can record and query user operation information,meeting customer requirements for electronic record traceability.