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Nano Spectrophotometer

DW-K5800N DW-K5800CN DW-K5800TN DW-K5800F DW-K5800FTN

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 optical path automatic conversion, automatically matching the best optical path according to the sample concentration without manual setting.
- Long-life flash xenon lamp, with up to 10° flashes.
- Full wavelength mode for cuvette detection, with a detection range of 190-850nm.
- Cuvette temperature control function, capable of heating and cooling, 10-45℃ (±0.5℃).
- Absorbance range up to 750Abs
- Internal display: 10.1-inch touch display, multi-point capacitive touch screen.
- Has pollutant identification function.
- Optional liquid column monitoring function.
- Operating system: LINUX system.
- Supported languages: 9 languages including Chinese, English, French, German, Arabic, Spanish, Russian, Japanese, and Korean.
- Supports U disk data output, can be connected to Ethernet, Bluetooth, and Wi-Fi.
- Can be equipped with a printer, with an internal printer for direct printing of test results.
- Has user login and user permission management functions.
- Can be equipped with an audit trail function.

Features

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

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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	Long life 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:0~750Abs(=10mm Optical path) Cuvette module:0~15Abs(at 1mm Optical path)
★Concentration range	Microvolume module:2~37500ng/μl(dsDNA); 0.06~1119mg/mL(BSA); Cuvette (10mm):0.2~75ng/μl(dsDNA);0.006~2.23mg/mL(BSA);
Test time	＜3s
Test repeatability	0.002A (1mm Optical path) or 1% CV
Dimensions of the instrument(L*W*H)mm	270*340*190
Weight	4.5kg
Operating conditions	Temperature: 10 - 45℃; Humidity: Below 85%
Output	24V 2.5A 60W

Fluorescence

Light source	Blue LED、 Red LED
Ex filter	Blue Ex 430~495nm,Red Ex 590~640nm;
Em filter	Green Em 510~580nm, Red Em 660~725nm;
Detector	Photodiode (320~1100nm);
Sample Channel	1
Sample volume	1-20μL
Tube type	0.5mL pcr tube
Tube need volume	≥100μL
Preheat time	No need
Test speed	3s/tube
Linear	R^2≥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	
lon 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	

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Optical path	1、0.4、0.1、0.04、0.02mm				
Detector	2048(cmos)linear imaging sensor				
Display	10.1’ touch screen				
Cuvette	/	√	√	√	√
Fluorescence	/	/	/	√	√
Automatic detection	√	√	√	√	√
Stir	/	Optl	Optl	Optl	Optl
Temperature control	/	/	√	/	√
Identification of pollutants	√	√	√	√	√
Printer	Optl	Optl	Optl	Optl	Optl
Liquid column monitoring	Optl	Optl	Optl	Optl	Optl
Audit trial	Optl	Optl	Optl	Optl	Optl