

YK5800F Micro Spectrophotometer (Fluorescence detection)



Introduction:

Micro spectrophotometer has become a routine instrument in modern molecular biology laboratories. It is an instrument that uses spectrophotometry to perform quantitative and qualitative analysis of substances. It is commonly used for nucleic acid and protein quantification, microarray, full wavelength scanning, and quantification of bacterial concentrations.

Application:

Whether in scientific research fields such as physics, chemistry, biology, medicine, materials science, environmental science, or in modern production and management departments such as chemical industry, pharmaceutical environmental testing, and metallurgy, ultra-trace UV-visible spectrophotometers have extensive and important applications.



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1. Performance parameters (★ as an important indicator)

1. ★ Optical path: 1mm, 0.4mm, 0.1mm, 0.04mm, 0.02mm (optical path automatically converted)
2. Micro sample volume requirement: 0.3~2 μ L
3. Light source: long-life pulsed xenon flash lamp
4. Detector: 2048 (coms) linear image sensor
5. Detection wavelength range: 190~850nm
6. Xenon light intensity range: 190~1100nm
7. Wavelength accuracy: \pm 1nm
8. Wavelength resolution: 2nm (FWHM at Hg 546nm)
9. Absorbance accuracy: 0.002 Abs
10. Absorbance accuracy: 1% (0.76 absorbance at 350nm)
11. Absorbance range: 0~750 Abs, equivalent to 10mm
12. ★ Nucleic acid trace measurement range: 2~37500 ng/ μ l (dsDNA)
13. ★ Protein trace measurement range: 0.06~1120mg/ml (BSA); 0.03mg/ml~547mg/ml (IgG)
14. Sample measurement instrument dimensions: 320mm \times 275mm \times 168mm
15. Instrument weight: 6kg
16. Detection time: less than 3 seconds
17. Working conditions: temperature: 0~45 $^{\circ}$ C; humidity: below 85%; working voltage: 220V \pm 20V
18. All-in-one design, \geq 10.1 inches, resolution not less than 1280 \times 800 high-resolution color display.
19. Multi-point capacitive touch screen; compatible with laboratory gloves
20. Detection repeatability: 0.002A (1mm optical path) or 1%CV
21. With intelligent sample detection function, it gives information prompts and pollutant types when pollutants are found. The types of pollutants that can be identified include at least: protein, nucleic acid, phenol, guanidine salt, guanidine hydrochloride
22. With result correction function, it can give the original concentration of the sample, the concentration after correction and the type of pollutant. Ensure the accurate concentration and quality of the sample, and ensure the accuracy of the experiment and the best experimental results.
23. The equipment has the function of monitoring the sample liquid column, which can monitor bubbles or other abnormalities in the sample liquid column to ensure the reliability of the test. If an abnormality is found, the test will be stopped immediately, and the operator will be prompted to re-sample;
24. The nucleic acid detection module must at least include dsDNA, ssDNA, RNA, user settings, oligoDNA, oligoRNA, and gene chip modules
25. Protein detection must at least include: A280, peptide, protein chip, BCA, Bradford, Lowry, Pierce660 modules
26. Supported languages: Chinese, English and other languages
27. Support USB flash drive, Ethernet, Bluetooth, WI-FI data output



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II. Instrument Features

1. Data output port: It has 2 USB-A ports, 1 Type C port, 1 HDMI port, and 1 Ethernet port, which can be connected to a variety of devices such as a mouse, keyboard, desktop computer, etc.
2. Built-in thermal printer, one-click printing
3. Data storage method: It can directly store measurement result data and custom methods, and the measurement results are automatically saved in spreadsheet mode. Data can be exported via USB or transferred via the network.
4. Supports multiple types of report exports.
5. ★ With automatic measurement and automatic zeroing functions, lower the detection arm to achieve instant detection
6. ★ With a variety of curve fitting functions
7. Compatible with full-wavelength cuvette absorption light detection
8. Comes with a 10.1-inch high-definition display, built-in Linux system full touch operation
9. No need to preheat the machine, it can be turned on and used immediately, and data collection of 190nm-850nm wavelength can be completed in 1 to 5 seconds
10. Cuvette temperature control: heating and cooling are optional, room temperature $-10^{\circ}\text{C} \sim 45 \pm 0.5^{\circ}\text{C}$
11. Cuvette stirring: 5 adjustable stirring speeds, stirring time can be configured by yourself.
12. Can achieve 5 stages of kinetic detection, can customize different delay times, interval times, and detection times.

III. Fluorescence detection

1. Light source: flashing xenon lamp
2. Wavelength range: 185~1100nm
3. Excitation filter: 355nm and 485 nm as standard (other filters can be selected as required)
4. Emission filter: 460nm, 538nm as standard (other filters can be selected as required)
5. Detector: Photodiode (300~1000nm)
6. Fluorescence darkroom: 0.5ml real-time pcr tube
7. Preheating time: no preheating required
8. Measuring speed: 3s