



## UV/V-1200 Spectrophotometer

The 1200 series spectrophotometer have the most attractive cost performance. Using your standard sample solutions, you can get a standard curve on the large LCD screen by the local control software, also you can print the curve through the parallel port.

They are widely used in colleges and enterprises for general quantitative analysis and experiments.

### Functions

#### 1. Basic Mode

Absorbance, Transmittance or Concentration measurements.

#### 2. Quantitative

##### I) Standard Curve

At most 9 standard samples can be used to establish a standard curve, the curve and the curve equation will display on the screen simultaneously. You can measure your unknown concentration solutions by the curve.

##### II) Coefficient Method

If you have known the coefficient  $k$  &  $b$  of the formula  $C=kA+b$ , you can input the value directly by the button, Then to test your unknown solutions.

### Features

- Large LCD screen (128x64 Dots). Can display total 50 groups of data, 3 groups per screen. Can display standard curve and the curve equation.
- System can also save the test result, total 50 groups of data and 100 standard curves can be saved in the RAM. Convenient for check and reload.
- Data can be restored after a sudden power cut.
- Auto setting wavelength.
- Tungsten lamp & deuterium lamp can be turned on/off individually to extend lifetime.
- The UVisco application software M.Wave Professional provides complete control of the spectrophotometer from a computer through the Built-in USB port. You can achieve the following functions: Quantitative, Kinetics, WL.Scan and Multi-wavelength.
- Pre-aligned design makes it convenient to change lamps.
- Large sample compartment, It can accommodate 5-100mm path length cuvettes with optional holders. A variety of optional accessories are under your choice.



## Specifications

Model	V-1200	UV-1200
Wavelength Range	325-1000 nm	200-1000 nm
Spectral Bandwidth	4 nm	
Optical System	Single Beam, Grating 1200 lines/mm	
Wavelength Accuracy	$\pm 2$ nm	
Wavelength Repeatability	0.8 nm	
Photometric Accuracy	$\pm 0.5\%$ T	
Photometric Repeatability	0.3 % T	
Photometric Range	-0.3-3.0 A, 0-200 % T	
Stability	$\pm 0.002$ A/h @ 500 nm	
Detector	Silicon Photodiode	
Stray Light	0.3 % T	
Sample Compartment	Standard 10 mm path length cuvette	
Light Source	Tungsten lamp	Tungsten & Deuterium lamp
Output	USB Port Parallel Port (printer)	
Power Requirement	AC 220 V/50 Hz or AC 110 V/60 Hz	
Dimensions (W x D x H)	470 x 370 x 180 mm	
Weight	12 kg	12 kg

## Main Menu

Move the cursor on the function menu you want, then press ENTER key to go into the corresponding interface.

● Basic Mode	
○ Quantitative	
○ Kinetics	08:00
○ Utility	01/01

## 1. Basic Mode

Absorbance, Transmittance or Concentration measurements. It can display and save 200 groups of data, 5 groups per screen.

546.0nm		0.001A
No.	WL.	Abs.
1	230.0	0.001
2	340.0	0.000
3	450.0	0.002
4	540.0	0.000
5	620.0	0.003

## 2. Quantitative

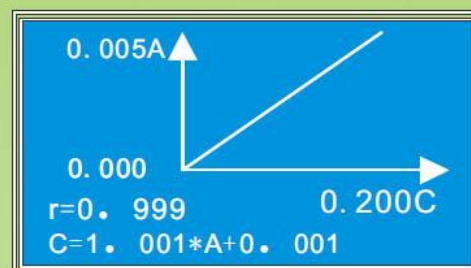
### i) Standard Curve

At most 9 standard samples can be used to establish a standard curve. The curve and its equation will be displayed on the screen simultaneously. You can measure your unknown concentration solutions by the curve.

Total 100 curves can be saved in the RAM.

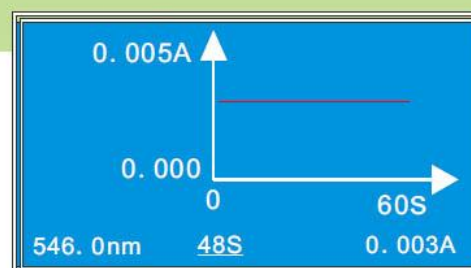
### ii) Coefficient Method

If you have known the coefficient  $k$  &  $b$  of the formula  $C=kA+b$ , you can input the value directly by the button, then to test your unknown solutions.



## 3. Kinetics

This mode may be used for time course scanning or reaction rate calculations. Abs. Vs time graphs is displayed on the screen in real time. Test time up to 12,000 seconds may be set.



M.Wave basic for data acquisition is included

M.Wave Pro for spectra acquisition is in Option



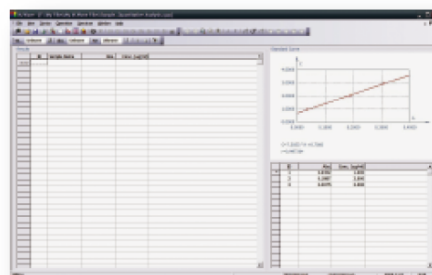
## M.Wave Professional PC-Control Software

M.Wave Professional application software is based Microsoft Windows®, the instrument can be controlled by PC software through the built-in USB communication port, which makes the UV/V-1 Series with more functions and easy to control.

### Quantitative

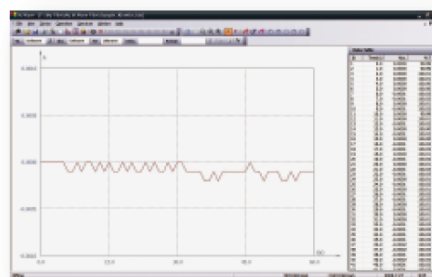
Use up to 20 standards to establish standard curve. Three methods for fitting a curve:

- 1-Linear fit
- 2-Linear through zero
- 3-Square fit



### Kinetics

The Kinetics mode may be used for time course scanning or reaction rate calculations. Abs. Vs. Time graphs is displayed.

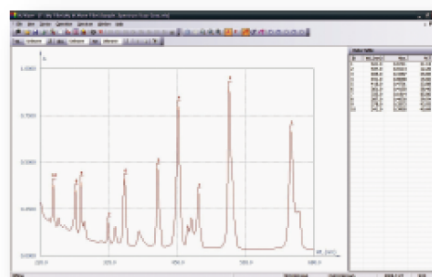


### Wavelength Scan

Automatically records peaks and valleys. The quantity of the curves stored is unlimited.

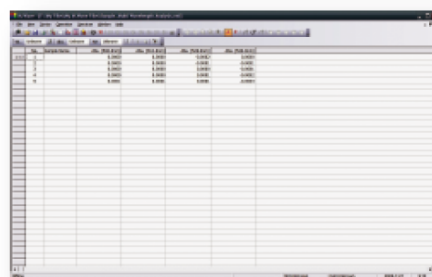
Post-run manipulation and processing includes.

1. Re-scaling axes, curve
2. Smoothing, combination, zooming, overlap...
3. 1st to 4th derivative



### Multi-wavelength Test

You can set up to 20 wavelengths to measure a sample.



### DNA/Protein Test

Optional two formulas:

DNA Concentration =  $62.9 \cdot A_{260} - 36.0 \cdot A_{280}$

Or  $49.1 \cdot A_{260} - 75.8 \cdot A_{230}$

You can also enter other wavelengths and factors to calculate.

