



UV/VIS SPECTROPHOTOMETER

UVISCO

DOMINIQUE DUTSCHER SAS



V-1600 / UV-1600/ V-1800/UV-1800

16/18 Series are simple-to-use instruments with advanced performance. Its stray light is only 0.05%T. The local stand-alone software provides functions of Photometry, Quantitative Test, Kinetics and System Utilities functions.

Features

1. Large LCD screen(128x64 Dots)
2. System can also save the test results, total 200 groups of data 100 standard curves can be saved in the RAM. Convenient for check and reload.
3. Data can be stored after a sudden power out.
4. Auto setting wavelength.
5. Tungsten lamp & deuterium lamp can be turned on/off individually to extend lifetime.
6. The optional application software M.Wave Professional provides complete control of the spectrophotometer from a computer through the Built-in USB port. It can expand to the following functions: Quantitative, Kinetics, Wavelength Scan, Multi-wavelength& DNA/Protein Test.
7. Pre-aligned design makes it convenient to change lamps.
8. Large sample compartment, it can accommodate 5-100mm path length cuvettes with optional holders. A variety of optional accessories are available.

Functions

1. Photometry
Absorbance, Transmittance or Energy measurements. It can display and save 200 groups of data, 5 groups per screen.
2. Quantitative
2.1 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 Memory.
2.2 Coefficient Method
If the coefficients k&b in the formula $C=k \cdot A+b$ is known, you can input them directly by the button, and then 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. It can most record 1000 data.
4. System Utilities
Lamp management, time & date set, obtain dark current, calibrate wavelength, default system, and some other system functions.

Specifications

| Model | V-1600 V-1600PC | V-1800 V-1800PC | UV-1600 UV-1600PC | UV-1800 UV-1800PC |
|--------------------------|------------------------------------|--------------------|------------------------------|----------------------|
| Wavelength Range | 320-1100nm | 190-1100nm | | |
| Spectral Bandwidth | 4nm | 2nm | 4nm | 2nm |
| Optical System | Single Beam, Grating 1200 lines/mm | | | |
| Wavelength Accuracy | ±0.5nm | | | |
| Wavelength Repeatability | 0.3nm | | | |
| Photometric Accuracy | ≤ ±0.5%T or ±0.003A@1A | | | |
| Photometric Range | -0.3 - 3A, 0-200%T, 0-9999Conc. | | | |
| Stray Light | ≤0.05%T@360nm | | ≤0.05%T@220nm, 360nm | |
| Stability | ±0.002A/h @500nm | | | |
| Display | Graphic LCD(128*64dots) | | | |
| Keyboard | 22 Membrane keypad | | | |
| Standard Cell Holder | Standard 10mm pathlength cuvettes | | | |
| Sample Compartment | 4-position 10mm cell changer | | Tungsten & Deuterium lamp | |
| Light Source | | | | |
| Output | USB Port & Parallel(Printer) | | | |
| Power Requirement | AC 110/220V 50/60Hz | | | |
| Dimensions(WxDxH) | 470x370x180mm | | | |
| Weight | 12kg | | 14kg | |

1600/1800 Series Local Control Software

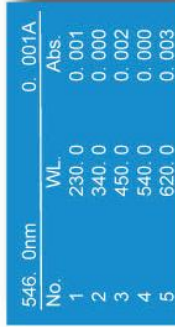
Main Menu

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



1. Basic Mode

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



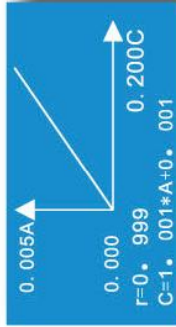
2. Quantitative

2.1 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.

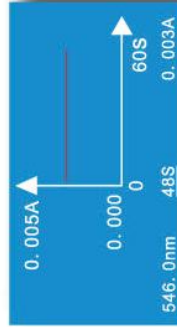
2.2 Coefficient Method

If you have known the coefficient k & b of the formula $C=k \cdot A+b$, 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.



4. System Utilities

Lamp management, time & date set, get dark current, calibrate wavelength, default system, and some other system functions.



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 = $62.9 \cdot A_{260} - 36.0 \cdot A_{300}$

Or $49.1 \cdot A_{260} - 75.8 \cdot A_{300}$

You can also enter other wavelengths and factors to calculate.

UVVis Analyst for UV-3&UV-6 Series

The Windows® based PC application software UVVis Analyst takes the best features of the stand-alone version plus more powerful data processing, expanded data collecting, and storage capability. It comes standard with PC models and is optional to stand-alone models.

The PC application software offers:

1. Photometric Mode
2. Quantitative test(standard curve)
3. Wavelength Scan
4. Kinetics
5. DNA/Protein
6. Multi-Wavelength
7. System Utility



• Kinetics (Abs vs. Time)

The Kinetics mode may be used for time course scanning or reaction rate calculations. Abs Vs. Time graphs are displayed on the screen in real time. Waiting time, measurement time and time intervals may be entered.

Post-run manipulation includes re-scaling, curve tracking and selection of the part of the curve required for the rate calculation. Rate is calculated using a linear regression algorithm before multiplying by the entered factor.



• DNA/Protein

Concentration and DNA purity are quickly and easily calculated. Absorbance ratios 260nm/280nm with optional subtracted absorbance at 320nm.

DNA Concentration = $62.9 \cdot A_{260} - 36.0 \cdot A_{300}$

Protein Concentration = $1552 \cdot A_{260} - 757.3 \cdot A_{300}$

Other wavelengths and factors may be entered.



• Multi-wavelength

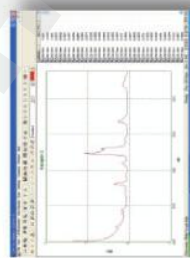
Up to 20 wavelengths can be selected and multiple samples can be measured. (Auto cell changer is required to run multiple samples automatically)



• Quantitative Test (Standard curve)

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

1. Linear fit
2. Linear through zero
3. Square fit
4. Cubic fit



• Wavelength Scan

Automatically record peaks and valleys. The quantity of channels is unlimited; you can simultaneously store as many as desired. Post-run manipulation and processing includes:

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



4-CELL HOLDER FOR 10mm SQ.UVUETTE

900410



4-CELL HOLDER FOR UP TO 50mm SQ.UVUETTE

900420



4-CELL HOLDER FOR UP TO 100mm SQ.UVUETTE

900430



CYLINDRICAL CELL HOLDER

900540



WATER-JACKETED CELL HOLDER

900610



MICRO CELL HOLDER

900210



TEST TUBE HOLDER

900530



8-POSITION AUTO CELL CHANGER

900310



SOLID SAMPLE HOLDER (SINGLE CELL)

900550



10mm WATER-JACKETED 4-CELL HOLDER

900620



SQUARE CUVETTES, GLASS

10mm 916101 20mm 916102
30mm 916103 50mm 916104
100mm 916105



SQUARE CUVETTES, QUARTZ

10mm 916111 20mm 916112
30mm 916113 50mm 916114
100mm 916115



MICRO CELL, QUARTZ

100UL 916121
200UL 916122
500UL 916123



SELF MASKING CONT.FLOWTHROUGH G.CELL

5mm 916131 10mm 916132
20mm 916133 30mm 916134



SELF MASKING CONT.FLOWTHROUGH Q.CELL

5mm 916141 10mm 916142
20mm 916143 30mm 916144



HALOGEN LAMP (PHILIPS)



12V20W: 916634

6V10W: 911634

THERMAL PRINTER

920910



12V20W HALOGEN LAMP (OSRAN)

961634



CONSTANT-TEMPERATURE SIPPER SYSTEM

900130



CONSTANT-TEMPERATURE SYSTEM

900120



SIPPER SYSTEM

900110



MILAS DEUTERIUM LAMP

916633

