

Double Beam Spectrophotometer

TS 2080



**Touch
Screen
TS 2080**

- Double Beam Optical system
- 8 inch multi color tough screen
- Thermal plotter optional
- Automatic wavelength settings
- Equipped with USB port

Features:

- 1) TS 2080 Spectrophotometer adopt double beam survey optical system, and blazed holographic gratings. They have outstanding test precision and very competitive prices.
- 2) 8-inch multi color touch screen cutting-edge user interface, powerful functions and easy operation.
- 3) Monochromator with high end optics(Double beam czerny turner/hollow graphic gratings 1200 lines/mm)
- 4) With powerful functions, the equipment shows great performance in qualitative and quantitative testing. such as

- Full-spectrum scanning
- Detailed spectrum scanning
- Time-based kinetics determination
- GOTO λ
- Linear regression
- Concentration direct reading
- Peak/Valley detecting
- Multi-wavelength simultaneous measurement

4) The equipment is designed with sophisticated power protecting system. With high capacity of internal memory, it can store testing results, scanned images, regression equations and Correction data. Therefore, it follows a fast initialization when power on.

5) The instrument can be connected with dedicated printer, which can print testing results, or draw curve from spectral scanning. fixed wavelength time-based scanning, and linear regression.

6) There is a USB port on the device, and UVwin-8 Software is optional to order. The device be connected to a PC, which can not only enhance the performance in data testing and spectrum scanning, but Iso expand the memory to save more testing results.

Operating Modes

Measuring %T, ABS and CONC at a Single, specified Wavelength Spectrum Scan Measuring % T and ABS Time Scan, Wavelength Scanning with automatic wavelength calibration and selection

Specification:

Model	TS 2080
Operation and display	LCD 8 inch Touch Screen
Light Source	Philip halogen, deuterium lamp (2000h) (Xenon flash lamp optional
Light Source change over	330nm to 350nm)
Spectral Bandwidth	1nm
Wavelength range	190-1100nm
Wavelength Accuracy	± 0.1 nm or better
Wavelength Repeatability	±0.1nm
Wavelength Display	0.1nm increments Wavelength Setting 0.1nm increments
Measurement modes	Absorbance,% Transmittance,Concentration
Resolution	0.2
Photometric range	-3 to +3Abs/0 to 300%
Absorbance resolution	0.001 Abs
Photometric Repeatability	±0.001Abs at 1Abs
Photometric Accuracy	±0.002A at 0.5A, ±0.004A at 1.0A, ±0.004A at at 1.0-2.0Abs
Photometric Reproducibility	0.001Abs
Noise level	0.00005A at 700nm
Photometric Readability	%T0.01 Abs 0.0001
Baseline stability	< 0.0003Abs/hour at 700nm
Transmittance MPE	±0.3%T
Transmittance Repeatability	≤0.15%T
Transmittance Measuring Range	0.0%-200.0%T
Absorbance Measuring Range	-0.301-4.000 (A)
Stray Light	less than 0.02% at 220nm (NAI) less than 0.02% at 340nm (NaNO ₂ 50g/l) less than 0.5% at 198nm (KCL)
Slew speed	12000nm/min
Concentration(CONC)	Concentration (CONC) by K-Factor and Multi-Standard with facility for automatic concentration
Drift	≤0.0005A/hour (250nm/500nm. 2h warm up)
Detector	Dual Silicon Photodiodes
Signal Noise	100%T noise ≤0.15%T 0%T noise < 0.10%T
Baseline Flatness	±0.0002A (190-1100nm)
Scan Speed	Max 10000nm/min
Overall Dimensions	600(L) x 450(w) x 200(H)mm
Weight	23kg
Power	230 ±5V 50Hz

Standard Accessories

User Manual	1 pc
1cm quartz cuvette	2 pcs
Power cable	1 pc

Optional Accessories

Thermal plotter
UVwin8 software

UV SPECTRA™ Control Software

The Analytical windows based PC application software UV/Vis analyst takes the best features of the stand alone version plus more powerful data processing, expanded data collection and storage capability. It comes standard with Analytical PC models and is optional to stand alone models.

The PC application software offers:

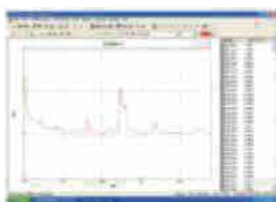
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|---------------------------------------|---------------------|
| 1. Photometric Mode | 5. DNA/Protein |
| 2. Quantitative tast (standard curve) | 6. Multi-Wavelength |
| 3. Wavelength Scan | 7. System Utility |
| 4. Kinetics | |



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

Quantitative tast (standard curve)



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.

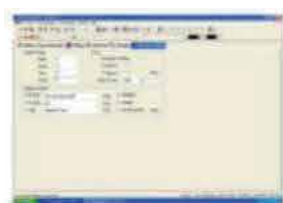


KINETICS (ABS VS. TIME)

The kinetic 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 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 enterd factor.



DNA / PROTEIN

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

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

Protein Concentration = $1552 \times A_{260} - 757.3 \times A_{280}$

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)

Optional Accessories



4-Cell Holder For 10mm Swu.Cuvette



4-Cell Holder For 50mm Swu.Cuvette



4-Cell Holder For 100mm Swu.Cuvette



Cylindrical Cell Holder



Water jacketed Cell Holder



Micro Cell Holder



Test Tube Holder



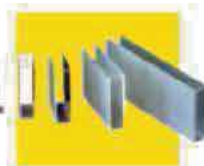
8 - Position Auto Cell Changer



Solid Sample Holder (single Cell)



10mm Water jacketed 4 Cell Holder



Square Cuvettes Glass
10mm, 20mm, 30mm, 50mm, 100mm,
Square Cuvettes Quarts
10mm, 20mm, 30mm, 50mm, 100mm



Micro Cell Quartz
100ul, 200ul, 500ul



Self Masking Cont. Flow Through G.cell
5mm, 10mm, 20mm, 30mm,
Self Masking Cont. Flow Through Q.cell
5mm, 10mm, 20mm, 30mm



Halogen Lamp
6V10w
12V20w



12V20W HALOGEN LAMP
6V10W, 12V20W



Constant temperature Sipper System



Constant temperature System



Sipper System



Thermal Printer



Deuterium Lamp

Support & Services

HPLC Servicing, Validation, Trainings and Preventive Maintenance :

HPLC Servicing	:We have team of service engineers who can attend to any make of HPLC promptly @the most affordable cost.
Trainings	:We also take up preventive Maintenance to reduce downtime of HPLC's
AMC's/CMC	:We offer user training both in-House and at customer sites on HPLC principles, operations, troubleshooting.
Validations	:We have protocols for carrying out periodic Validations as per GLP/GMP/U SFDA norms
Instruments	:We offer instruments / Renting Services Modules like pumps, detector etc. on Rent.



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About Analytical Technologies



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**Analytical
Foundation**

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2. Improving quality of life by offering YOGA Training courses, Work shops / Seminars etc.

3. ANALYTICAL FOUNDATION aims to DETOXYFY human minds, souls and body by means of Yoga, Meditation, Ayurveda, Health Care, Awards, Media, Events, Camps etc.

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