



## T6U UV/VIS Spectrophotometer

## T8DCS UV/VIS Spectrophotometer

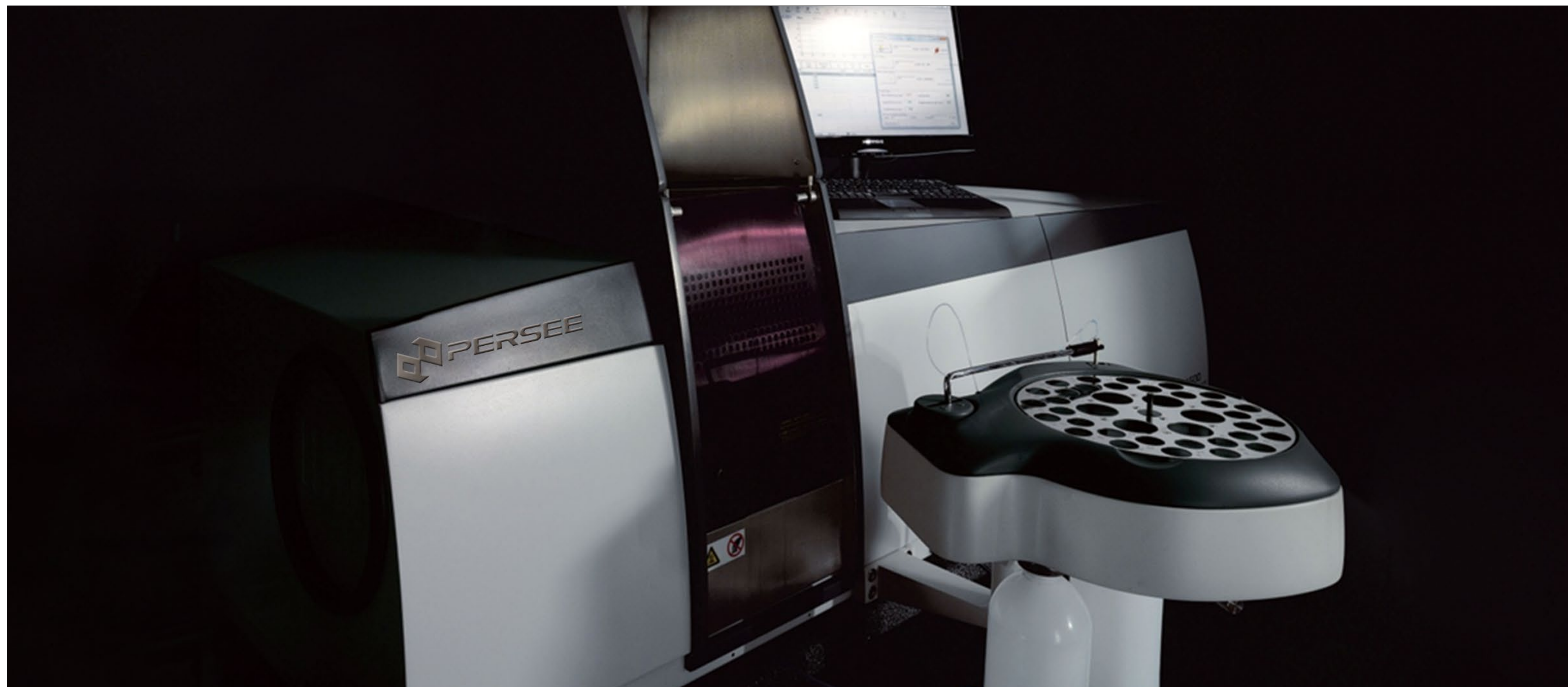
Instrument	T6U	T8DCS
Optics	Split beam Direct Drive	Ture double beam(Czerny-Turner Monochromator)
Working Mode	MCU Mode/PC Mode	PC Mode
Software Support	MCU Software Platform/Spec UV software workstation	Spec UV software workstation
Wavelength range	190nm ~ 1100nm	190nm ~ 900nm
Resolution	0.2nm	0.05nm
wavelength Accuracy	±1.0nm	±0.3nm
Spectral Bandwidth	2nm	Continous Slit 0.1nm ~ 5.0nm with 0.1nm interval
Baseline Flatness	±0.002Abs(200nm ~ 1000nm)	±0.001Abs(200nm ~ 850nm)
Baseline Stability	0.001Abs/h(500nm,0Abs 2nm Spectral Bandwidth,2hr warm-up)	0.0008Abs/h(500nm,0Abs 2nm Spectral Bandwidth,2hr warm-up)
Photometric Method	Transmittance, Absorbance, Reflectance, Energy, Concentration	Transmittance, Absorbance, Reflectance, Energy, Concentration
Photometric Accuracy	±0.002Abs (0Abs ~ 0.5Abs)	±0.002Abs (0Abs ~ 0.5Abs)
	±0.004A (0.5Abs ~ 1Abs)	±0.004A (0.5Abs ~ 1Abs)
	±0.3%T(0 ~ 100%T)	±0.3%T(0 ~ 100%T)
Photometric Reproducibility	±0.001Abs (0Abs ~ 0.5Abs)	±0.001Abs (0Abs ~ 0.5Abs)
	±0.002A (0.5Abs ~ 1Abs)	±0.002A (0.5Abs ~ 1Abs)
	±0.15%T(0 ~ 100%T)	±0.15%T(0 ~ 100%T)
stray light	<0.05%T	0.01%T @ 220nm
Photometric Niose	±0.001Abs/h(500nm,0Abs 2nm Spectral Bandwidth)	±0.0004Abs/h(500nm,0Abs 2nm Spectral Bandwidth)
Absorbance range	-0.3Abs ~ 3Abs	-4Abs ~ 4Abs



## T7 UV/VIS Spectrophotometer

## T7D UV/VIS Spectrophotometer

Instrument	T7	T7D
Optics	Split beam (Czerny-Turner Monochromator)	Dual beam (Czerny-Turner Monochromator)
Working Mode	MCU Mode/PC Mode	MCU Mode/PC Mode
Software Support	MCU Software Platform/Spec UV software workstation	MCU Software Platform/Spec UV software workstation
Wavelength range	190nm ~ 1100nm	190nm ~ 1100nm
Resolution	0.1nm	0.1nm
wavelength Accuracy	±0.3nm	±0.3nm
Spectral Bandwidth	2nm(Fixed Slit) 0.5nm,1nm,2nm,5nm (Variable Slit)	2nm(Fixed Slit) 0.5nm,1nm,2nm,5nm (Variable Slit)
Baseline Flatness	±0.002Abs(200nm ~ 1000nm)	±0.0015Abs(200nm ~ 1000nm)
Baseline Stability	0.001Abs/h(500nm,0Abs 2nm Spectral Bandwidth,2hr warm-up)	0.0008Abs/h(500nm,0Abs 2nm Spectral Bandwidth,2hr warm-up)
Photometric Method	Transmittance, Absorbance, Reflectance, Energy, Concentration	Transmittance, Absorbance, Reflectance, Energy, Concentration
Photometric Accuracy	±0.002Abs (0Abs ~ 0.5Abs) ±0.004A (0.5Abs ~ 1Abs) ±0.3%T(0 ~ 100%T)	±0.002Abs (0Abs ~ 0.5Abs) ±0.004A (0.5Abs ~ 1Abs) ±0.3%T(0 ~ 100%T)
Photometric Reproducibility	±0.001Abs (0Abs ~ 0.5Abs) ±0.002A (0.5Abs ~ 1Abs) ±0.15%T(0 ~ 100%T)	±0.001Abs (0Abs ~ 0.5Abs) ±0.002A (0.5Abs ~ 1Abs) ±0.15%T(0 ~ 100%T)
stray light	<0.12%T @ 340nm & 220nm	<0.12%T @ 340nm & 220nm
Photometric Noise	±0.001Abs/h(500nm,0Abs 2nm Spectral Bandwidth)	±0.001Abs/h(500nm,0Abs 2nm Spectral Bandwidth)
Absorbance range	-0.3Abs ~ 3Abs	-0.3Abs ~ 3Abs



## A3 ATOMIC ABSORPTION SPECTROMETER

### Optical System

Wavelength Range	190nm ~ 900nm
Monochromator	Czerny-Turner Configuration
Grating Groove	1800/mm
Spectral Bandwidth	0.1nm, 0.2nm, 0.5nm, 1.0nm, 2.0nm (with automatic changeover)
Wavelength Accuracy	±0.15nm
Wavelength Reproducibility	≤0.05nm
Wavelength Resolution	0.2nm±0.02nm
Baseline Stability	±0.005Abs/30min
Background Correction	Deuterium Arc 1.0Abs Self Reversal 3.0Abs

### Flame Analysis

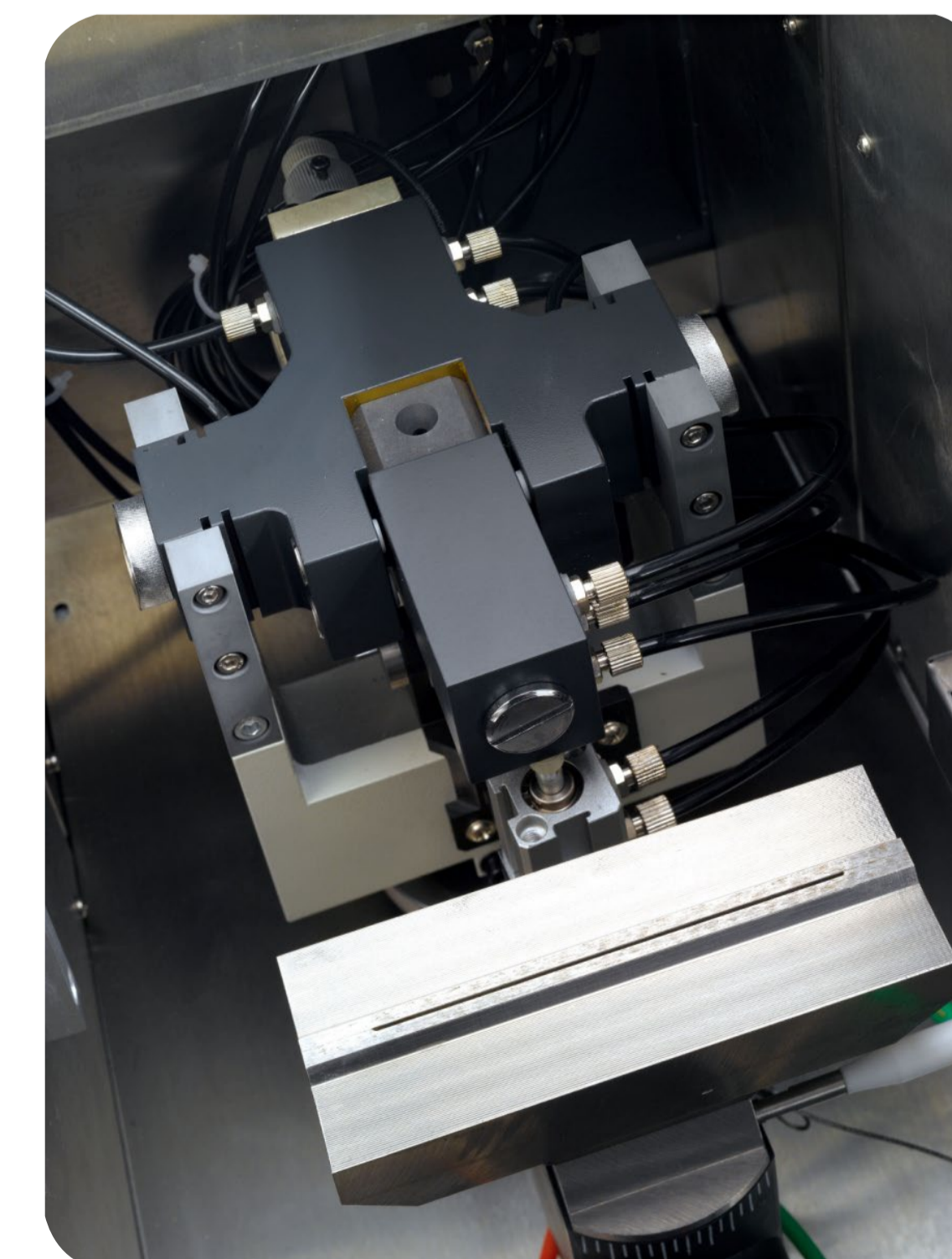
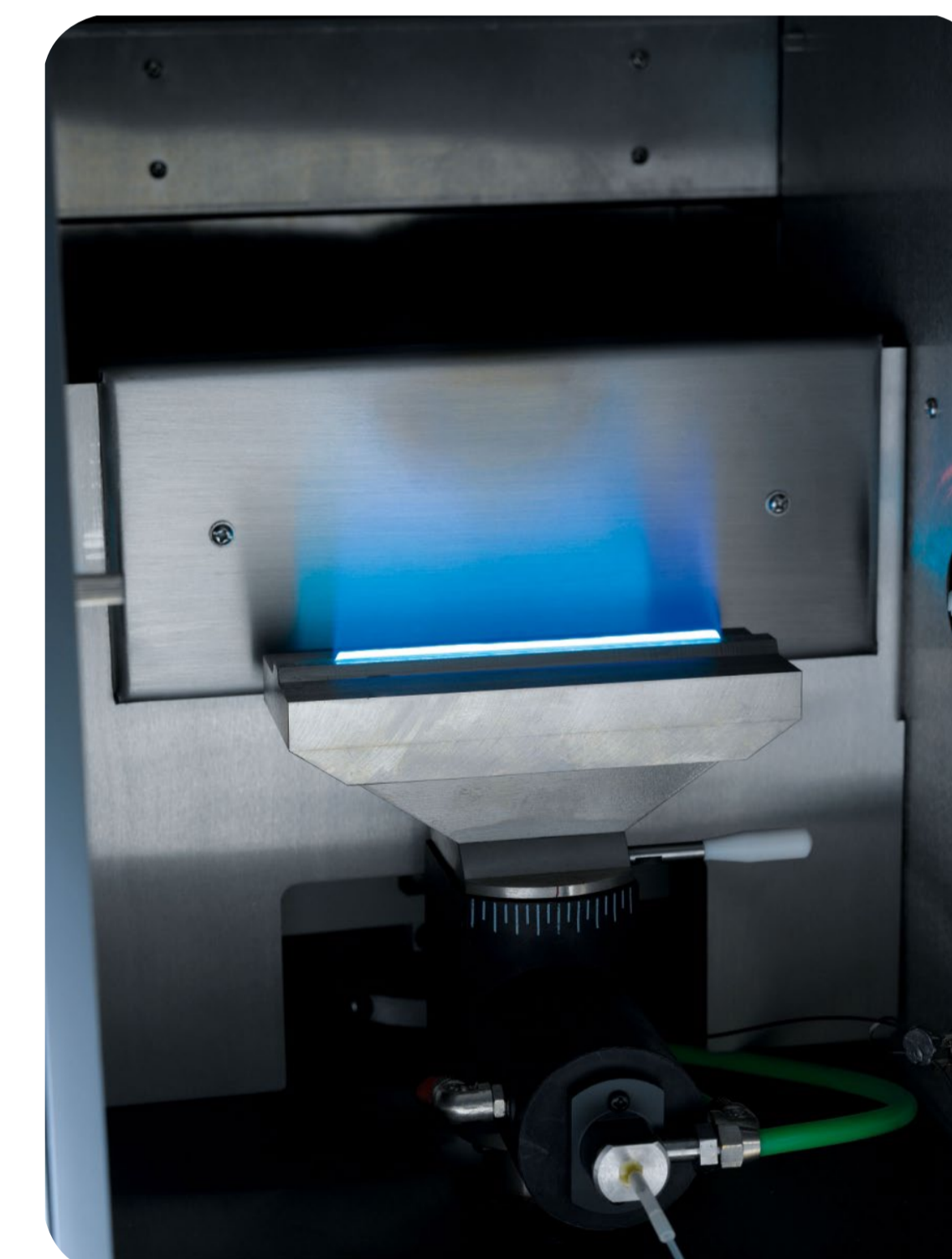
Flame Types	Air/Acetylene; Nitrous Oxide/Acetylene; Air/Propane(LPG)
Characteristic Concentration	Cu<0.02µg/ml/1% (Air/Acetylene) Ba<0.15µg/mL/1% (Nitrous Oxide/Acetylene)
Detection Limit	Cu≤0.004µg/ml
Burner	Metal Titanium Alloy Burner
Repeatability	Cu<0.6% ( Air/Acetylene method) Ba<1.0% (Air/Acetylene method)
Sensitivity	Cu 2ug/ml Absorption>0.28Abs
Nebulizer	High-efficiency glass nebulizer, Acid proof available as an option
Atomization Chamber	Corrosion-resistant material
Safety	Various auto safety functions

### Graphic Furnace Analysis

Temperature Range	Ambient ~ 3000°C
Detection Limit	Cd≤0 .004ng/ml
Repeatability	Cu<2%, Cd<2%
Heating Methods	Advanced graphic furnace horizontal heating
Temperature Control Precision	<1%
Background Correction	(Deuterium Lamp Background Correction and Self-reversal Background Correction ) >55 times

### Data Processing

Operating Program	AAWin software
Measuring Methods	Flame AA, Flame AE, Graphic Furnace, Hydride Generation
Concentration Methods	Multi-Standard Calibration, Standard Addition, Interpolation





## T3 Compatible Visible Spectrophotometer

### Optical System

Wavelength Range	380nm ~ 800nm
Spectral Bandwidth	4.0nm±0.8nm
Wavelength error of indication	±1.0nm
Wavelength reproducibility	≤0.1nm
Baseline Flatness	±0.005Abs
Noise	≤0.5%
Drift	≤1.0%/30min
Stray Light	≤0.5%
Transmittance indication error	±1.0%
Photometric reproducibility	≤0.3%
Light Source	Convergent tungsten lamp, 5000hr of service life
Measurement Modes	Spectrum scan, Quantitative measurement, Kinetics measurement, Photometric measurement
Monochromator	Flat-field holographic concave grating
Detector	CCD 1L×511 2048 pixel
Measurement Parts	Insert optic fiber probe, 10 mm optical path, 20 mm optical path (replaceable); cuvette, long-path length, accessory, Test tube accessory
Power Supply	Built-in battery, can work continuously for 6 hours after being charged Vehicle power supply adapter (non-standard accessory) Battery charger (90AC ~ 240AC)
Printer	Micro printer (Optional), support USB printer (PCL language)
Operating System	Completely embedded operating system, integrated 2G memory, with timing function
Input/Display	Large touch screen, 480 × 272 matrix, touch operation or mouse operation



## XD Series X-Ray Powder Diffractometer

FULL SPECIFICATIONS	XD2	XD3	XD6
X-ray Tube	Cu Target,NF Model		
X-ray Generator			
Maximum Power	3 KW		4 KW
X-ray Tube Voltage	15kV ~ 60kV		
Tube Voltage Step Width	1kV		
X-ray Tube Current	6mA ~ 50mA		6mA ~ 80mA
Tube Voltage,Tube Current Stability	≤0.01%(Supply Voltage Fluctuations 10%)		
Alarm Device	kV Low,kV Over Top, mA Overload, Water Discharge,Temperature		
Ray Power Protection	0.35kW,0.7kW,1.0kW,1.5kW,2.0kW,2.7kW Six Grade		
Goniometer			
Goniometer Type	Vertical( $\theta$ -2 $\theta$ )		Vertical( $\theta$ - $\theta$ )
Scanning Radius	180mm		150mm ~ 285mm Continuously Adjustable
Scanning Mode	$\theta$ -2 $\theta$ Linkage Or $\theta$ ,2 $\theta$ Single Move		$\theta$ s- $\theta$ d Linkage Or $\theta$ s, $\theta$ d Single Move
Measurement Range	-182° ~ 182°( $\theta$ ) -30° ~ 160°(2 $\theta$ )	-30° ~ 80°( $\theta$ s)	-30° ~ 160°( $\theta$ d)
Maximum Speed	120°/min		1800°/min
Operation Mode	Continuous Scanning ,Timing Step Scanning, Constant Step Scanning		
Continuous Scanning Speed	0.125°/min ~ 120°/min		
Angle Repeatability	≤0.0006°		≤0.0005°
Measurement Accuracy	0.001°		≤0.001°
Minimum Step Size	0.00025°		0.0001°
Divergence Slit(DS)		1/6°, 0.5°, 1°, 2°	
Anti-scattering Slit(SS)		0.5°, 1°, 2°	
Receiving Slit(RS)	0.1nm, 0.15nm, 0.3nm, 0.45nm, 0.6nm, 1nm, 2nm		
Zero Dedicated Slit	0.02mm		
Detection·Counter	Scintillator Counter		
Filter·Monochromater	Ni Corresponding Cu Target		
Integrated Whole Stability	≤0.3%		



## L600 High Performance Liquid Chromatography

### L600 Pump

Flow Rang	0.001ml/min ~ 10.000ml/min, 0.001ml/min increment
Maximum Operation Pressure	40MPa, upper and Lower limits settable, automatic alarm
Pressure Ripple	≤1%(1ml/min, water)
Flow Precision	≤0.075% RSD(based on retention time)
Flow Accuracy	±1%
Gradient Accuracy	≤1%
Gradient Precision	≤0.2%



### L600UV Dtdector

Wavelength Range	190nm ~ 800nm
Wavelength Accuracy	±1nm deuterium lamp
Wavelength Precision	≤0.2nm deuterium lamp
Linear Range	≥10 <sup>4</sup>
Noise	±0.75×10 <sup>-5</sup> AU
Minimum Detection Concentration	≤5×10 <sup>-9</sup> g/ml
Flow Cell Volume	10ul



### L600 Auto sampler

Loop Range	1ul ~ 5000ul, 1ul increment (10ml loop optional)
Injection Reproducibility	Full loop<0.3% Partial<0.5% Pickup mode<1%



Carry Over	<0.05%
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L600 Column oven  
ELSD Detector Chromachem

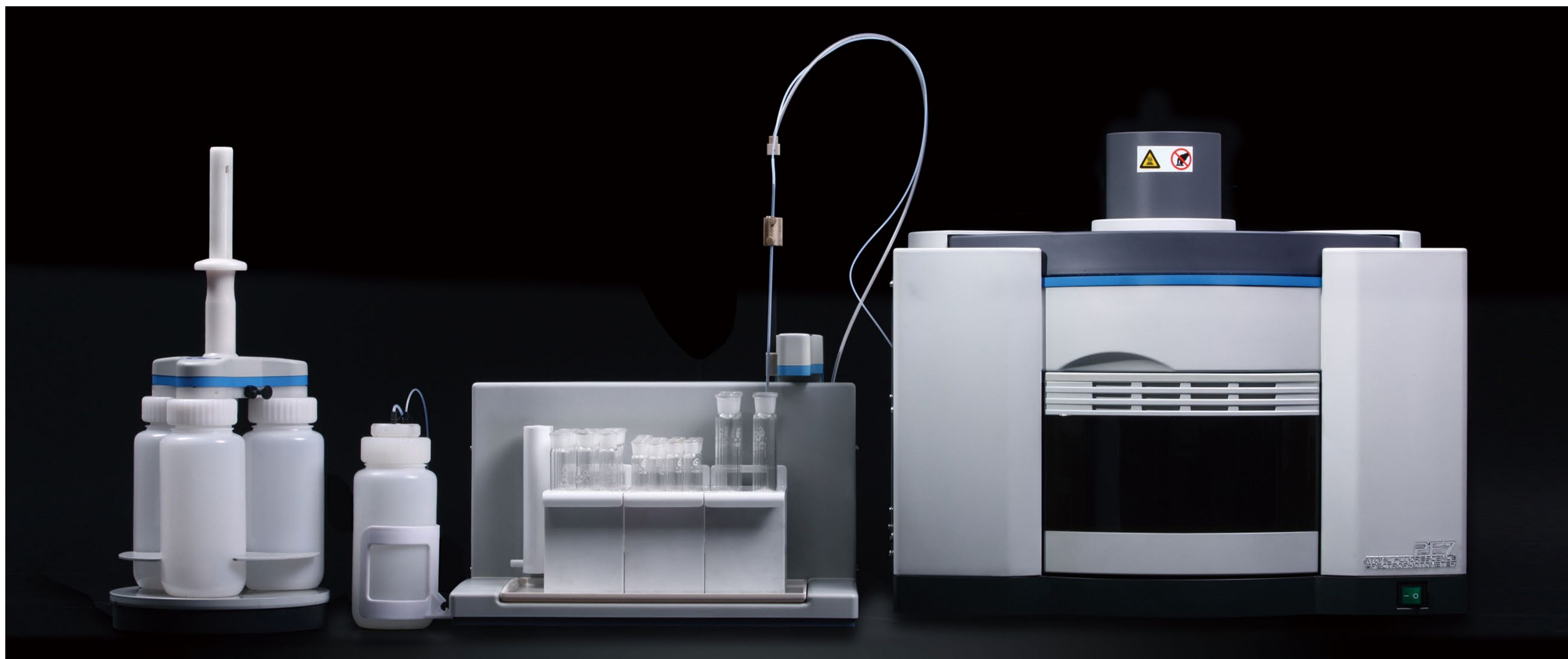
LC600 Degasser  
RI Detector 201H

DAD Detector  
Fluorescence Detector RF-20A/20Axs



## M7 Single Quadrupole GCMS

Item	Specification
GC&MS Interface	Capillary direct interface, independent temperature control, 50-300°C
Filament	Dual for EI, maximum emitting current 300uA
Ionization Energy	10eV ~ 100eV adjustable
Ion Source Temperature	Independent temperature control, maximum 350°C , adjustable
Mass Analyzer	High precision metal Molybdenum Quadrupole with pre-quadrupole
Backing Pump	Mechanical pump, geometric pumping speed 165 l/min
Turbo Pump	Turbo molecular pump, pumping speed 71 l/s, 260 l/s optional
Detector	Electron multiplier
Mass Range	1.5u 1050u
Mass Accuracy	±0.1u
Resolution(R)	Unit mass resolution 1pg OFN full scanning, at m/z 272 S/N≥150:1 100fg OFN selective ion scanning, at m/z 272 S/N≥150:1
Signal to Noise Ratio (EI)	±0.1u/48hr
Maximum Scanning Speed	11000u/s
Wide Application Area	
Manufacturing	Education and Research Institute
Used for process control and finished product inspection, eg food additives, fragrance ingredient analysis in cosmetics	Used for experiments, research, teaching and presentations in colleges, vocational institutes of technology
Quality Inspection	Environmental Monitoring
Used for quality inspection in quality monitoring, import and export inspection and quarantine, quality supervision sector	Used for monitoring of soil, water quality, air, indoor environment, eg VOC, PAH, PCB, OCP etc.
Petrochemical	Pharmacy
Used for process control, quality control and finished product inspection in oil exploration, oil processing industry	Used for quality control of drugs, drug raw material in pharmaceutical industry, and determination of solvent residues.
Agriculture and Animal Husbandry	Other Areas
Used for pesticide residue, veterinary drug residue testing, eg clenbuterol detection	Used for water quality monitoring in water plant, drug testing in public security system



## PF7 Atomic Fluorescence Spectromete

### Specification

Optics	Double beam
Detection limit	As, Sb, Bi $\leq 0.01$ ng/ml; Hg $\leq 0.001$ ng/ml
RSD	$\leq 1.0\%$
Channel interference	$\pm 2\%$
Noise	$\leq 1.5\%$
Communication mode	RS232, CAN, USB

### Charactors



Gas drive pipeline system without any trouble of sipper pump  
Take Argon gas as the source of driving, sampling, measuring and purging totally automatica, without any manual maintainence. Fully-sealed reservoir bottle to slow up the decomposing speed of reducer, and to last the life time of solution.



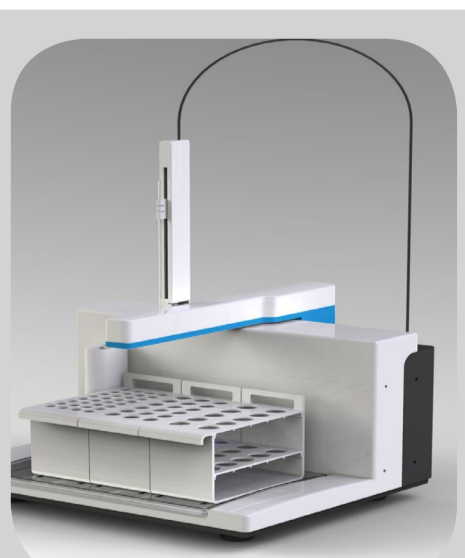
Plume type gas liquid seperator  
Plume formed from magnetic stirring, which make the mix of sample and reducer even, and increase the repeatability of result.



Adjustment free Hollow Cathod Lamp Assembly  
Without any adjustment, insert to use directly. Auto identification. Support hot plugging.



Scientific structure design  
Two level of exhaust gas proposal design, fully-sealed atomization compartment design to bring the gas into the exhaust system, fully-sealed reservoir bottle to avoid volatilization, special made of reagent bag to absorb the poisonous element, gold mesh in chimney makes the mercury into gold amalgam.



Auto sampler  
Carrier liquid online quantify supply, special design to provide fresh carrier liquid and avoid pollution.  
The injection needle takes stainless steel as holder, needle and tube all-in-one, avoid the shortage of glass one, like fragile and easy pollution, also the inner wall and outer wall can be wash meanwhile.



Ultra trace mercury in water measurement accessory  
Used for the ultra trace mercury measurement in sea water and underground water.





## T9DCS/T10DCS Double monochromator UV/VIS spectrophotometer

Model	T9DCS	T10DCS
Optical System	Dual Monochromator Double Beam	Dual Monochromator Double Beam
Light Source	D2 Lamp/W Lamp/ Hg Lamp	D2 Lamp/W Lamp/ Hg Lamp
Wavelength Range	185 ~ 900nm	185 ~ 900nm
Wavelength Accuracy	±0.2nm	±0.2nm
Wavelength Reproducibility	≤0.1nm (D2 lamp)	≤0.1nm (D2 lamp)
Bandwidth	±20% (0.1 – 5nm Continually Adjustable)	±20% (0.1 – 5nm Continually Adjustable)
Stray Light	≤0.0001%T (NaI,220 nm) ≤0.0001%T (NaNO <sub>2</sub> ,360 nm)	≤0.00004%T (NaI,220 nm) ≤0.00002%T (NaNO <sub>2</sub> , 360 nm)
Photometric Range	-6.0Abs ~ 6.0Abs	-8.0Abs ~ 8.0Abs
Photometric Accuracy	±0.004A @2.0A ±0.003A @1.0A ±0.002A @0.5A ±0.3%	±0.004A @2.0A ±0.003A @1.0A ±0.002A @0.5A ±0.3%
Photometric Reproducibility	≤0.002A @2.0A ≤0.0008A @1.0A ≤0.0004A @0.5A ≤0.1%	≤0.002A @2.0A ≤0.0008A @1.0A ≤0.0004A @0.5A ≤0.1%
Baseline Flatness	±0.0008Abs	±0.0005Abs
Noise	0% Noise:≤0.01% 100% Noise:≤0.1%	0% Noise:≤0.01% 100% Noise:≤0.1%
Communication port	RS232C,USB, Wi-Fi	RS232C,USB, Wi-Fi



## XRF6 Energy Dispersive X-ray Fluorescence Spectrometer

Item	Specifications
Element range	Al ~ U
Content range	1ppm ~ 99.99%
Stability	< 0.1% (content > 96%)
Repeatability	< 0.03% (content > 96%)
Detector energy resolution	< 170eV
Test object	Solid, powder, liquid
Test time	60 ~ 100s
Test limit (Plastic)	Cr:5,Br:2.5,Cd:4,Hg:3.5,Pb:2.5 (ppm)
Test limit (Aluminum)	Cr:8,Mn:3.5,Sr:3,Sn:6,Pb:4 (ppm)
Tube voltage	5kV ~ 50 kV
Tube current	50μA ~ 1000μA
Weight	37kg
Temperature	0-40 °C
Humidity	<80%
Power	AC 110V/220V, 5A

## PERSEE GROUP

Persee Analytics Inc. (North America)

PG Instruments Ltd. (Europe, India, Mid-East)

Beijing Purkinje General Instrument Ltd. (Other area)

Beijing Senmai Technology Ltd. (Mobile Lab in China)

Ultra Test Technical Service (Beijing) Ltd (Commercial Test Lab)

PG Scientific Inc. (R&D center in U.S.)

## PRODUCTS

UV-Vis Spectrometer

Atomic Absorption Spectrometer

Heavy Metal Analyzer/Speciation Analyzer

Liquid Chromatography

Gas Chromatography

GCMS

LCMSMS

XRF/XRD

ELISA Test Kits

Colloidal Gold Test Kits

Bacterial Counter

Sample Pretreatment Equipment

Accessories

Consumables

Sample Test Service

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