

XD Series Powder Diffractometer

XRD



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Excellent Design of Mechanical Security

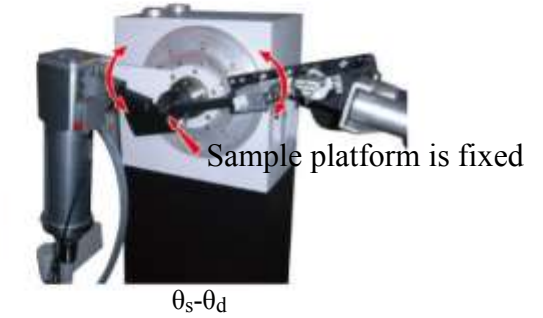


High Performance X-ray Tube Supplied by International Famous Brand



Vertical High Precision Goniometer

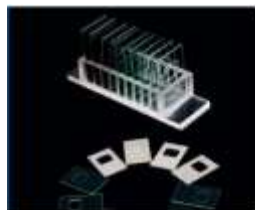
X-ray emission source is fixed



Scintillator Counter



Optional Accessories



Sample tablets



Curved graphite crystal monochromator



Punch machine



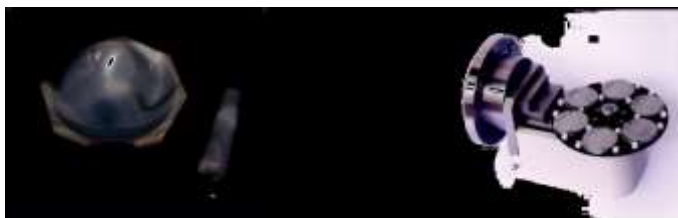
High temperature annex



Φ Scanning Annex



Automatic temperature control of circulating water cooling device



Agate mortar

Rotary sample platform

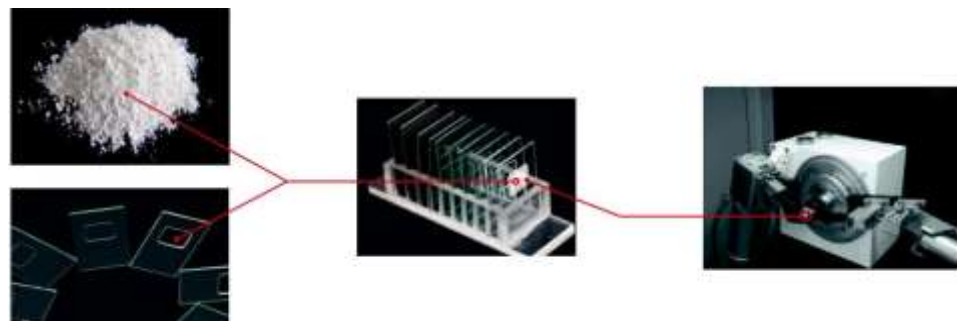


Parallel Beam Membrane

The composition and structure of materials could be studied and identified fundamentally by X-ray powder diffractometer, the applications are showed as follow:

1. The atom arrangement of all kinds of compounds in materials could be determined. Some particular performance of materials is related with atom arrangement.
2. Qualitative & Quantitative phase Analysis.
3. The ratio of all kinds of compounds could be determined.
4. Determine the grain size, stress, texture, orientation and crystallizability.

Analysis Process Description



Data Acquisition



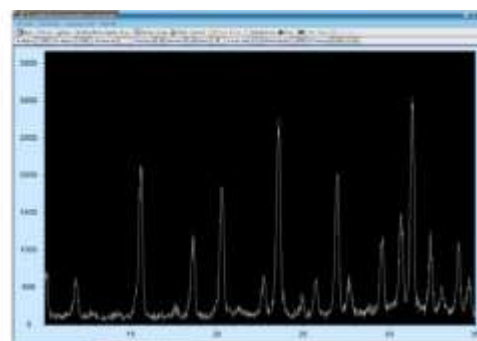
X-ray control



Scan parameters setting

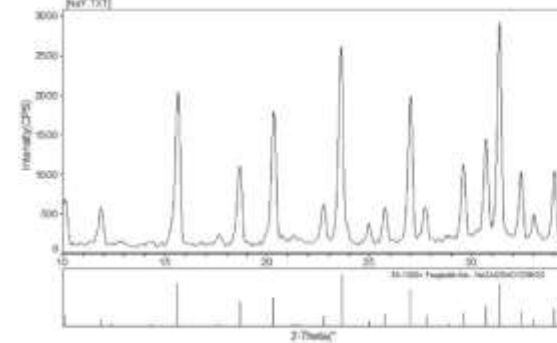


Scan parameters setting

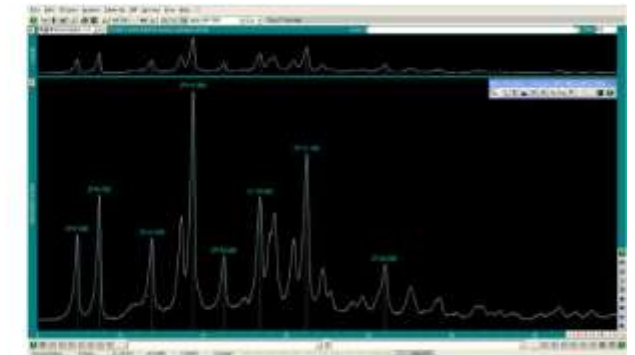


Intensity measurement

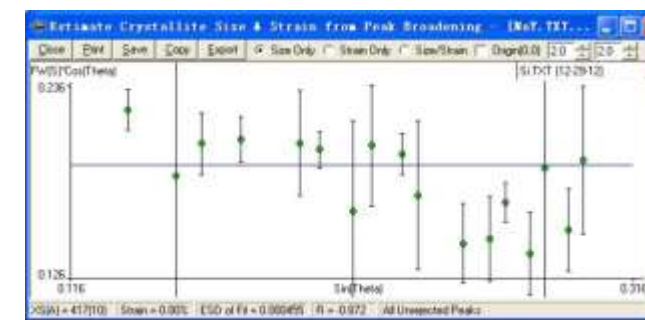
Data Analysis



Qualitative analysis



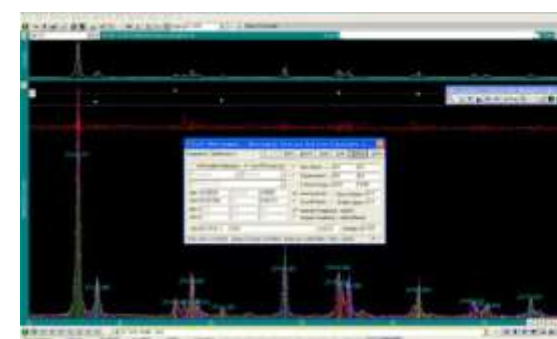
Peak search



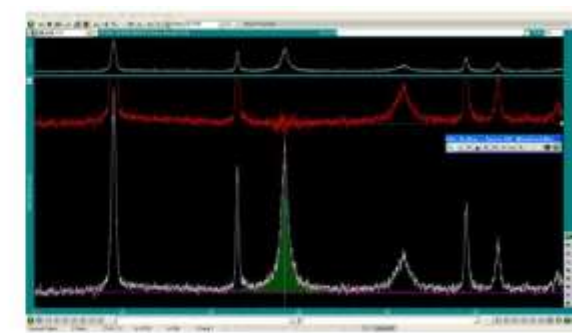
Grain size



Crystallinity



Cell parameters



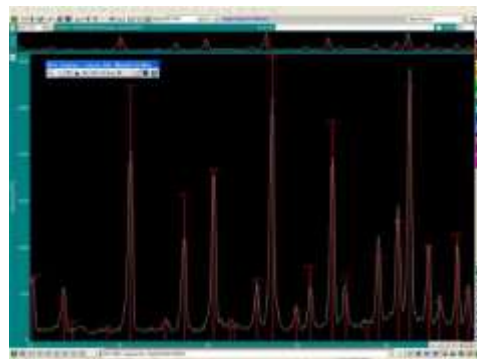
FWHM

Molecular sieves

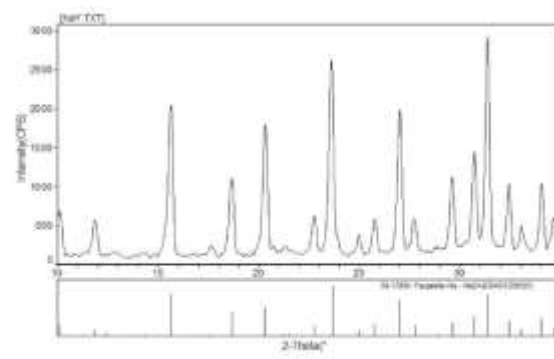
A, Y, ZSM, other types of molecular sieves.

1. Qualitative & Quantitative phase Analysis.
2. The ratio of all kinds of compounds could be determined. E.g. Si-Al ratio.
3. Determine the grain size, cell parameters, and crystallinity etc.

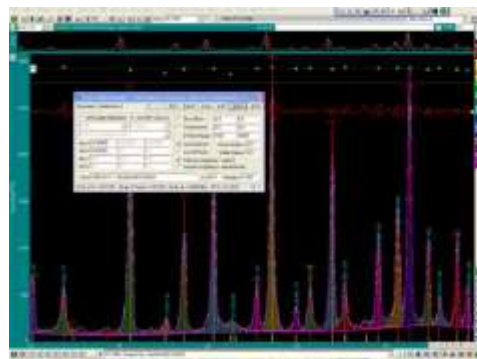
Data Analysis



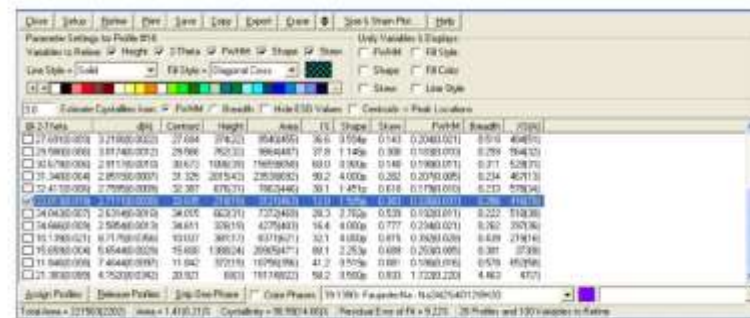
Qualitative analysis



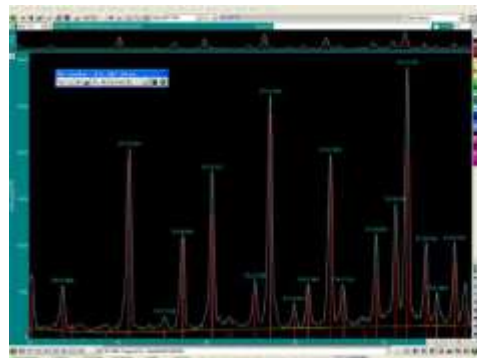
Qualitative analysis



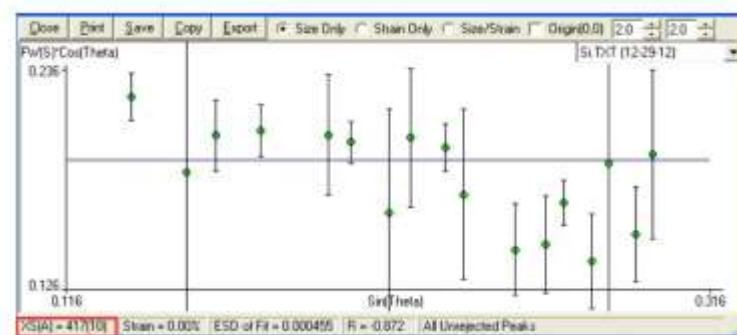
Cell parameters



Crystallinity



Peak search



Grain size

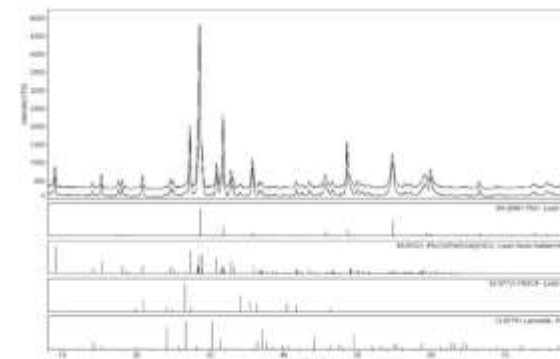
Battery

Battery: Lithium, lead, NI-MH battery, other types of battery;

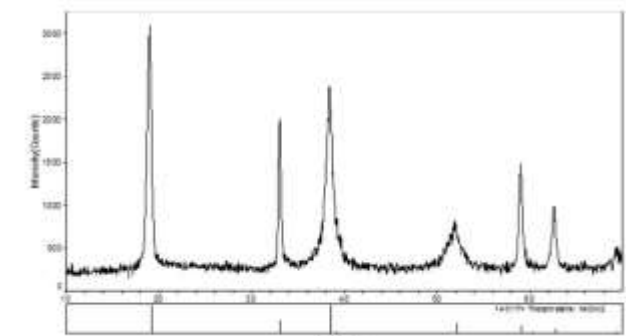
Battery material: e.g. graphite.

1. Qualitative & Quantitative phase Analysis.
2. Graphitization degree.

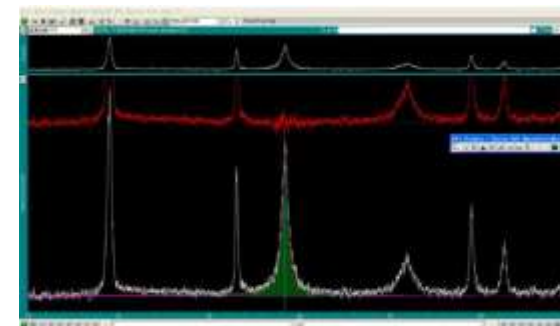
Data Analysis



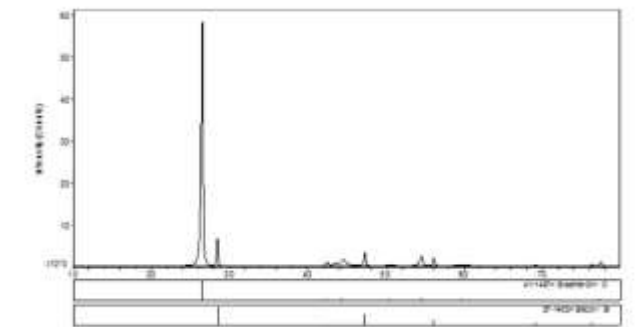
Qualitative analysis (lead battery)



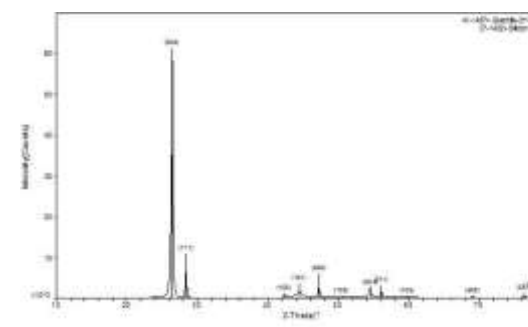
Qualitative analysis (NI-MH battery)



FWHM (lead battery)



Qualitative analysis (graphite)

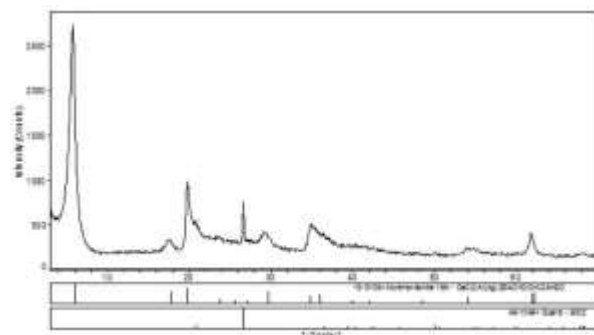


Graphitization degree

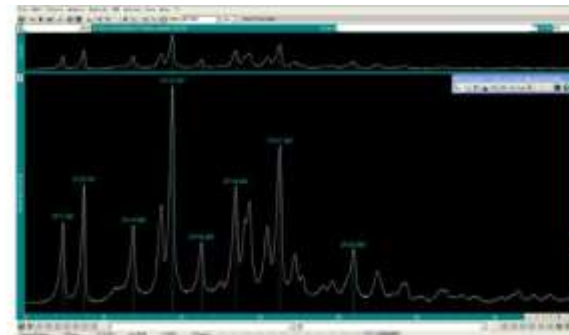
Pharmaceuticals

1. Qualitative analysis of pharmaceutical raw materials.
2. Identification of impurities.
3. Determine the grain size, crystal form, and crystallinity etc.

Data Analysis



Qualitative analysis (Montmorillonite Powder)

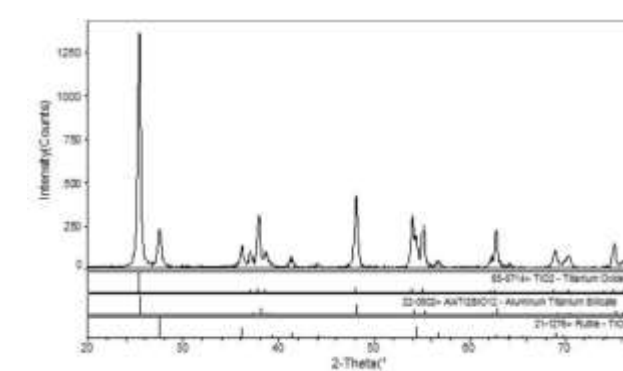


Peak search

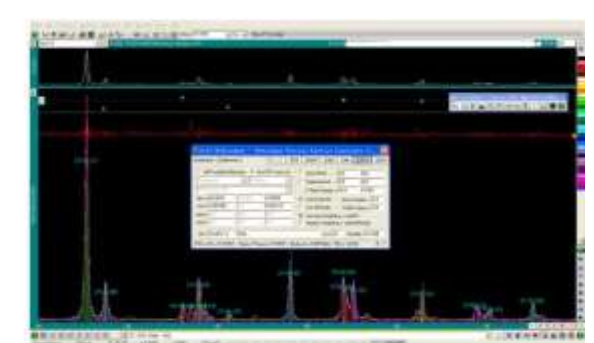
Titanium dioxide

1. Qualitative & Quantitative phase Analysis.
2. The ratio of all kinds of compounds could be determined.
3. Determine the grain size, crystal form, and cell parameters etc.

Data Analysis



Qualitative analysis

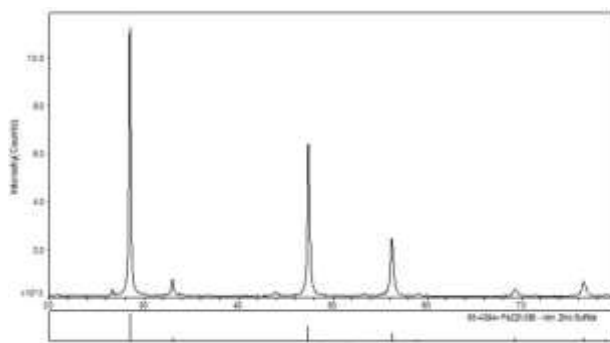


Cell parameters

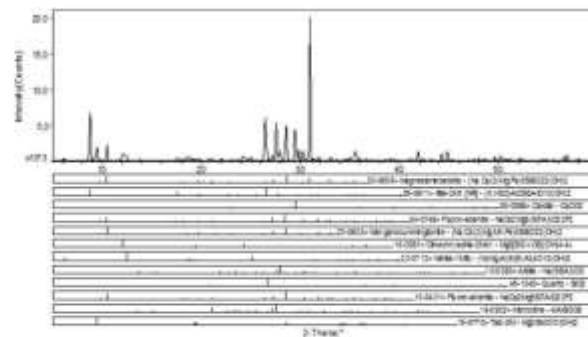
Mineral

1. Qualitative & Quantitative phase Analysis.

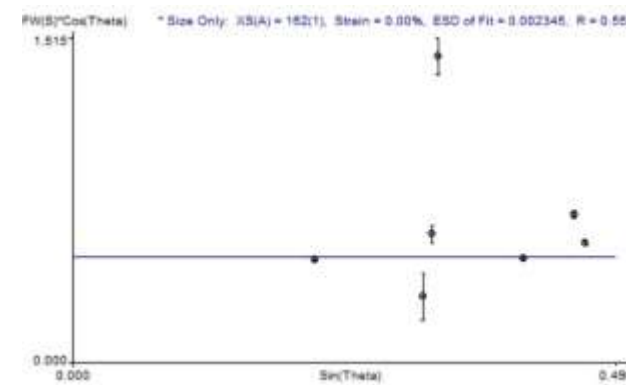
Data Analysis



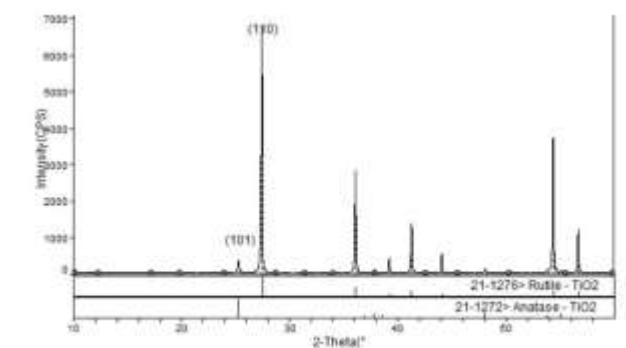
Qualitative analysis (zinc concentrate)



Qualitative analysis (amphibole)



Grain size



Qualitative analysis

Specifications

XD series x-ray powder diffractometer main unit

Item	XD-2	XD-3	XD-6
X-ray Tube			
Type	Cu Target,NF Model		
Focus Dimensions	1.0×10mm ²		
Maximum Power	2 KW		
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 Current Step Width	1mA		
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(θ-2θ)		Vertical(θ-θ)
Scanning Radius	180mm		150mm ~ 285mm Continuously Adjustable
Scanning Mode	θ-2θ Linkage Or θ,2θ Single Move		θ _s -θ _d Linkage Or θ _s ,θ _d Single Move
Measurement Range	- 182° ~ 182°(θ) - 30° ~ 160°(2θ)		- 30° ~ 80°(θ _s) - 30° ~ 160°(θ _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)	0.1mm, 0.15mm, 0.3mm, 0.45mm, 0.6mm, 1mm, 2 mm		
Zero Dedicated Slit	0.02mm		
Detector Counter			
The Type Of Detector	Scintillator Counter		
Crystal Type	NaI		
Pulse-height Analyzer(PHA)	Output High Voltage 0V ~ 1000V Stability ≤0.01%(8h)		
Machine Cabinet			
Cabinet Size(in)	48(L)×32(W)×73(H)		
Machine Weight(lb)	1100		
Observation Window(in)	24(L)×16(W)×0.4(T) Lead Glass		
X-ray Leakage	≤0.1μ Sv/h (Non Deduction Natural Background)		
Safety Precautions	Door Interlock Protection(The door to a designated location, light gates open only to produce X-ray)		
Filter			
Ni Filter	Corresponding Cu Target		
Integrated Whole Stability	≤0.3%		

Automatic temperature control of circulating water cooling device (indoor unit +outdoor unit)

Model	CW-2F
Cooling Power(W)	4000
Power Supply	220V,50Hz
Input Power(W)	1800
The Largest Dimensions(in)	Indoor Unit Outdoor Unit 24(L)×16(W)×38(H)
Weight(lb)	Indoor Unit Outdoor Unit 110
Noise(dB)	Indoor Unit Outdoor Unit ≤55 ≤65
Cooling Water Pressure(Mpa)	0 ~ 0.7
Coolling Water Flow(L/min)	≥3.5
Ambient Temperature	5°C ~ 40°C
Temperature Control Range	- 49°C ~ 50°C
Temperature Control Accuracy	±1°C
Warning Device	Temperature, Water Shortage

Company Overview



Persee Analytics Inc. is a world-leading manufacturer of analytical instrumentation. We develop and manufacture innovative products for laboratories in industry, science and governmental institutions. With our customer-oriented strategy and our high-quality service, we strive to be a World market leader.

Our technology is aimed at customer needs; it serves the well-being of people and is in accordance with ethical values, environment and nature. Our products lines include analytical systems for spectroscopy (UV/Vis, AAS and AFS), Liquid Chromatography, X-Ray Powder Diffractometer, X-Ray Fluorescence Spectrometer with a focus on environmental analysis.

Persee Analytics Inc. has organically grown as a company since its conception in 1991 and its technical know-how is based on a rich historic development and a worldwide network, which is strong advantage for each of our customers. Our main offices are in China, UK and USA. Our distribution offices in 76 countries with a total of 1100 employees guarantee that we are within close reach of our customers.