Haier Biomedical
Intelligent Protection of Life Science

Analysis Instruments

Your Haier Biomedical Partner

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HV-5100 Visible Spectrophotometer
HUV-5100 UV Visible Spectrophotometer

HV-5100

HUV-5100

Features

2.5 inches High-Definition LCD Display

Standard curve and test results are clearly displayed.

High-quality Tungsten Lamp and Deuterium Lamp

Longer service life, much more stable.
Lower stray light, higher photometric accuracy.

Quick to Establish Standard Curve

Quick to establish standard curve and measure the unknown samples.

Easy Data Output by USB/Parallel Port

USB Port: Connect to computer and operate through PC software. (PC software is optional.)
Parallel Port: Connect to micro thermal printer to print test data. (Micro thermal printer is optional.)

Multiple Results Readout, Large Storage Capacity

Display 5 lines of results per page, including wavelength, absorbance and transmittance.
Up to 200 groups of test results can be saved in device directly.

Automatic Wavelength Setting

Set wavelength by arrow keys to reduce misoperation.

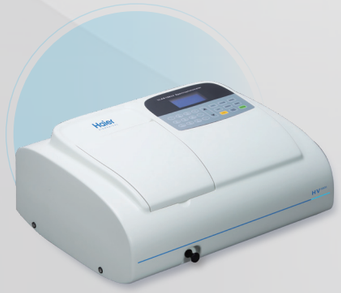
Technical Specification

Model	HV-5100	HUV-5100
Optical System	Single beam, grating 1200 lines/mm	
Wavelength Range	325-1000nm	190-1000nm
Bandwidth	2nm	
Wavelength Accuracy	±2nm	
Wavelength Repeatability	≤0.5nm	
Wavelength Setting	Automatically	
Wavelength Resolution	0.1nm	
Photometric Accuracy	±0.5%T	
Photometric Repeatability	≤0.2%T	
Photometric Range	-0.3-3A, 0-200%T, 0-9999C	
Photometric Mode	T, A, C, F	
Stray Light	≤0.1%T at 360nm	≤0.1%T at 220nm & 360nm
Stability	≤0.002A/30min at 500nm	
Display	128*64 Dots LCD	
Detector	Silicon Photodiode	
Light Source	W Lamp	W Lamp & D2 Lamp
Output	USB port & Parallel Port	
Power Requirements	AC 85~250V	

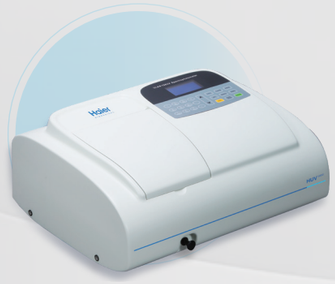
Standard Accessories

Item	Description	Quantity	Unit
1	Spectrophotometer	1	unit
2	1cm Glass cuvette	4	pcs
3	1cm Quartz cuvette (only UV model)	2	pcs
4	Power cord	1	pcs
5	User's manual	1	pcs
6	Dust cover	1	pcs

HV-5800 Visible Spectrophotometer
HUV-5800 UV Visible Spectrophotometer



HV-5800



HUV-5800

Features

Precision Lead Screw Structure

Higher wavelength accuracy and wavelength resolution (0.1nm).

Complete Numerical Keys; Automatic Wavelength Setting

All parameters can be easily set, like wavelength and concentration.

Easy Data Output by USB/Parallel Port

USB Port: Connect to computer and operate through PC software. (PC software is optional.)
Parallel Port: Connect to micro thermal printer to print test data. (Micro thermo printer is optional.)

8mm thick Optical Base

All optical components are fixed on a 8mm thick rigid die-cast aluminum board to promise higher stability and reliability.

Imported Tungsten Lamp and Deuterium Lamp

Longer service life, much more stable.
Lower stray light, higher photometric accuracy.

Quick to Establish Standard Curve

Quick to establish standard curve and measure the unknown samples.

Technical Specification

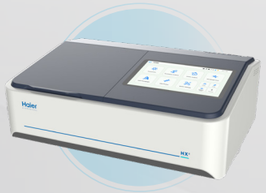
Model	HV-5800	HUV-5800
Wavelength Range	320-1100nm	190-1100nm
Bandwidth	2nm	
Wavelength Accuracy	±0.5nm	
Wavelength Repeatability	≤0.2nm	
Wavelength Setting	Automatically	
Photometric Accuracy	±0.2%T	
Photometric Repeatability	≤0.1%T	
Photometric Range	-0.3-3A, 0-200%T, 0-9999C	
Stability	≤0.001A/30min at 500nm	
Stray Light	≤0.05%T at 360nm	≤0.05%T at 220nm & 360nm
Output	USB port & Parallel Port	
Display	128*64 Dots LCD	
Light Source	W Lamp	W Lamp & D2 Lamp
Detector	Silicon Photodiode	
Power Requirements	AC110/220V, 50/60Hz	

Standard Accessories

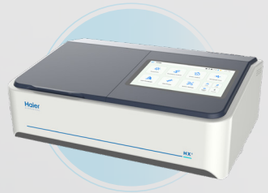
Item	Description	Quantity	Unit
1	Spectrophotometer	1	unit
2	1cm Glass cuvette	4	pcs
3	1cm Quartz cuvette (only UV model)	2	pcs
4	Power cord	1	pcs
5	User's manual	1	pcs
6	Dust cover	1	pcs

Single/Double Beam UV Visible Spectrophotometer
Double Beam Variable bandwidth UV Visible Spectrophotometer

HX-6



HX-8



HX-9

Scope of application

Detection of concentration and purity of biomolecules such as proteins, nucleic acids, and enzymatic reactions; Quality control of pharmaceutical/chemical products; Analysis of pollutant concentrations in soil/water/gas, additives and harmful substances in food/agricultural products.

Applicable scenarios

Biopharmaceutical companies, universities, molecular research laboratories,food processing plants, environmental protection departments, livestock stations, farms etc.

Features

Large HD Smart Touch Screen
High sensitivity and user-friendly UI for easy operation.

Stand-Alone System with Multi Functions
Spectrum scanning, standard curve, kinetics, multi wavelength, DNA/protein test can be operated directly on device without PC software.

Automatic 8-position Cell Holder
Higher efficiency of experiment to save time.

Easy Printing
Available to connect with general office printer directly (HP DeskJet 1111/1112/2723).

USB Port, Fast Data Output
All test data can be exported to USB disk directly.

Optional Bluetooth Module and PC software
Bluetooth function and PC software are optional to meet different applications.

High-quality Grating with High Performance
Lower stray light, higher stability and reliability.

Large Sample Chamber, Multi Options of Accessories
1-10cm universal cell holder, test tube holder, film holder, integrating sphere, specular reflectance accessory, peltier/sipper system, etc.

16mm-thick Optical Base, Rigid Structure
All optical components are fixed on a 16mm thick rigid die-cast aluminum board to promise higher stability and reliability.

Double Beam UV Visible Spectrophotometer

HQ-6

Features

High Stability and Reliability
- An extra mercury lamp equipped, one-key calibration for wavelength accuracy.
- High-quality deuterium lamp and tungsten lamp, longer service time and higher stability.
- Premium lens and lens coating, higher repeatability.
- Real-time automatic calibration of dark current.

Adjustable Bandwidth
Continuous adjustable spectral bandwidth from 0.1 to 5.0nm. 0.1nm interval, suitable for various applications, especially suitable for samples with sharp absorption peaks, like penicillin sodium, penicillin potassium, etc.

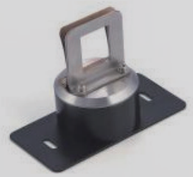
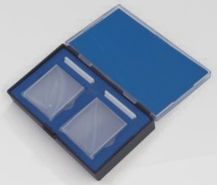
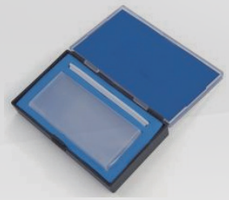
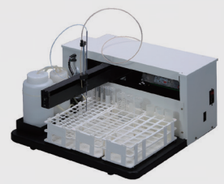
Sensitive Detection
- High-quality Photomultiplier, fast response and high sensitivity.
- Especially suitable for weak radiation energy detection.

Larger Sample Chamber, Multi Functions
Various optional accessories: auto 8-position cell holder, autosampler, thermostatic cell holder, integrating sphere and specular reflection accessory, etc.

PC Software Controlled
User-friendly UI, simple operation and clear display.

Easy Maintain and Lower Cost
Independent modular design, lower maintenance cost. Socket type of lamps, easy to replace and no need to adjust optical path.

Optional Accessories

		
Holder for Film (Angle Adjustable)	Reflection Accessory	Holder for Glass/Film (Angel Fixed)
		
Holder for Test Tube	Holder for Micro Cuvette	Holder for Water Bath
		
5cm Cuvette	10cm Cuvette	Micro Cuvette (100/200/500/700uL)
		
Thermal Micro Printer	Peltier/Sipper System	Autosampler (for Q series)

UV-SPA
Analysis Software
PC Software
(HX-6)

UV-DPA
Analysis Software
PC Software
(HX-8 HX-9)

Technical Specification

Model		HX-6	HX-8	HX-9	HQ-6
Light Source		W Lamp & D2 Lamp			W Lamp & D2 Lamp & Mercury Lamp
Wavelength Range		190-1100nm			190-900nm
Bandwidth		1.8nm	1.8nm	0.5/1/2/4 nm	Continuously adjustable from 0.1nm to 5nm, 0.1nm interval
Optical System		Single Beam	Double Beam	Double Beam	Double Beam
Display		7-inch Touch Screen	10-inch Touch Screen		/
Wavelength Accuracy		±0.5nm	±0.1nm at D2 656.1nm, ±0.3nm at full range		±0.3nm
Wavelength Repeatability		≤0.2nm	≤0.1nm		≤0.1nm
Photometric Accuracy		±0.3%T (0-100%T); ±0.002Abs (0-0.5Abs); ±0.004Abs (0.5-1.0Abs)			±0.3%T
Photometric Repeatability		≤0.1%T (0-100% T); ≤0.001Abs (0-0.5Abs); ≤0.002Abs (0.5-1.0Abs)			
Stability		≤0.001A/h@250nm & 500nm, 2hrs warm-up			≤0.0001A/h
Photometric Range		-0.3-3A, 0-200%T, 0-9999C			-4 - 6 Abs, 0-1000000%T
Stray Light		≤0.05%T at 220nm & 360nm			≤0.005%T at 220nm & 360nm
Control Mode		Stand-alone System or PC Software (Optional)			PC Software Controlled
Data Output		USB Port or Bluetooth (Optional)			PCO
Power Requirement		AC 110/220V, 50/60Hz			AC110/220V, 50/60Hz
Standard Accessories	Spectrophotometer (unit)	1			1
	PC software (set)	/			1
	1cm Glass cuvette (pcs)	4			4
	1cm Quartz cuvette (pcs)	2			2
	Power cord (pcs)	1			1
	User's manual (pcs)	1			1
	Dust cover (pcs)	1			1

Total Organic Carbon Analyzer

HTOC-1500
HTOC-1700 (Online Model)

Scope of application

Water quality testing for deionized water, injection water, ultrapure water, and cleaning water.

Applicable scenarios

Applicable scenarios: biopharmaceutical companies, semiconductor companies, power plants.

Features

- Ideal choice to measure microelectronics water, purified water, ultra pure water and water for injection, etc.
- UV Oxidation by UV Lamp, no need to add acid, gas or catalyst, greatly reduced experiment cost.
- Online mode to realize real-time monitoring (HTOC-1700).
- Optional PC software, comply with FDA 21 CFR Part 11 requirements and USP, EP, ChP and JP.
- 8 GB large storage capacity, no restriction of data and time.
- Smart 7 inches touch screen with user-friendly UI, easy to operate and read data.
- Equipped with sensitive conductivity detector to quantify TOC concentration accurately.
- One button sampling, less sample contamination, no harm on operator and environment.
- Optional 20-position autosampler.
- All historical records can be traced by searching test date.

- Data can be retrieved and saved to USB disk directly.
- Equipped with bluetooth printer for quick data printing.
- Modular design for quick installation and easy maintenance.

Technical Specification

Model	HTOC-1500	HTOC-1700
Measurement Range	1-1500ppb	
Detection Limit	1ppb	
Max Tolerance	±5%	
Analysis Time	3 min	
Response Time	within 10 min	
Sample Flow Speed	2mL/min	
Repeatability Tolerance	≤ 3%	
Power Requirement	AC110/220V, 50/60Hz, 100W	

HTOC-3000

Features

- NDIR detector, high sensitivity and stability.
- Automatic leakage detection system not only avoids the misoperation, but also improves device performance and safety.
- Optional autosampler.
- Multi-functional PC software.
- Precise gas flow control technology improves accuracy.
- Modular design, simplifying device operation and maintenance.

HTOC-5000

Features

- Auto sample dilution, auto acid-adding and auto gas purging
- 680°C catalytic oxidation technology with platinum catalyst, especially for seawater test.
- NDIR detector, high sensitivity and stability.
- Optional autosampler.
- Multi-functional PC software.
- Precise gas flow control technology improves accuracy.
- PID temperature controlling technology, ensure higher accuracy.
- Unique three-stage dehydration technology improves drying efficiency.
- Personalized standard curve management provides great convenience for users.
- Consumables management reminds users to replace consumables in time.
- Modular design, simplifying device operation and maintenance.

Technical Specification

Model	HTOC-3000	HTOC-5000
Measurement Method	Wet Chemical Oxidation by UV	High Temperature Catalytic Combustion
Detector	NDIR	NDIR
Analysis Parameter	TC, TIC, TOC, NPOC	TC, TIC, TOC , NPOC
Control Mode	PC Control	PC software controlled
Gas Requirement	Nitrogen, purity ≥99.995%	Oxygen, purity ≥99.995%
Sample Type	Liquid Sample	Liquid sample (AS-W20 is optional.) Solid sample (AS-S200 is needed.)
Measurement Range	0-10000mg/L (ppm)	0-1000mg/L, can extend to 0-100,000mg/L (Automatically dilution)
Detection Limit	5μg/L (ppb)	TC: 50μg/L IC: 20μg/L
Measuring Time	/	TC: around 4min IC: around 3min
Max. Permissible Error	/	TOC: ± 5% IC: ± 4%
Injection Volume	/	TC: 100-500μL IC: 100-2000μL
Repeatability	3%	≤3%
Maximum Salinity	85g/L	/
Power Requirement	AC110/220V, 50/60Hz, 200W	AC110/220V, 50/60Hz, 700W

Optional Accessories

Autosampler HAS-W20

Technical Specification

Model	HAS-W20
Sample Type	Liquid sample
Max. Number of Samples	19 sample positions an 1 cleaning position
Volume of Sample Bottle	60mL
Ambient Temperature	0-40 °C
Relative Humidity	≤85%
Power	AC100-240V, 50/60 Hz, 120W

Autosampler HAS-S200

Technical Specification

Model	HAS-S200
Sample Type	Solid or suspension liquid sample
Control Mode	PC software controlled
Analysis Parameter	TC, TIC, TOC (TC-IC)
TC Measurement Method	High temperature catalytic combustion (900°C, Max.1000°C)
TIC Measurement Method	Acidification at 200°C
Sample Carrier	Quartz boat
Gas Requirement	Oxygen, purity≥99.995% (TOC analyzer provides) Flow rate: 500mL/min
Measurement Range	0.1-30.0mg
Max. Sample Volume	Solid: 1.0g TC liquid: 0.5mL IC liquid: 0.3mL
Measurement Time	5-8min
Power	AC100-240V, 50/60 Hz, 1000W

Microwave Digestion System

HMWD-500

Scope of application

Food, environmental samples (sewage, soil, exhaust gas), agricultural products, pharmaceuticals, geological samples, minerals, cosmetics, fertilizers, batteries, plastics, daily necessities, etc.

Applicable scenarios

University laboratories, third-party testing institutions, disease control centers, quality inspection departments, environmental supervision departments, food processing plants, cosmetics processing plants, sewage treatment plants.

Features

- Compatible with 6/8/10-position sample rotor.
- Germany contactless IR sensor and pressure sensor, real-time display the temperature and pressure of sample solution **(NOT Vessel Wall)** in each vessel and show T&P scanning curve.
- No consumables, e.g. bursting disk, sealing cup, etc. lower maintenance cost.
- Equip with smart 7 inches touch screen, user-friendly UI.
- Pre-installed multiple international application methods. Users can also edit, modify and delete the methods.
- Equip with 316L stainless explosion-proof cavity, coated with multi-layer anti-corrosive and heat resisting coatings, which greatly prolongs its service life and ensure the safety of operation.
- High power turbulent air cooling design makes fast cooling.
- Professional electromagnetic protection design, compatible with high-level microwave leakage protection standards.

Technical Specification

Model	HMWD-500		
Vessel Quantity	6	8	10
Pressure Monitoring	Contactless pressure sensor All vessels scanning monitoring		
Max. Working Pressure Range	6MPa		
Temperature Monitoring	Contactless IR sensor All vessels scanning monitoring		
Max. Working Temperature	250°C		
Temperature Accuracy	±0.1°C		
Vessel Volume	100mL		
Display	7 inches Color Touch Screen		
Rotation	360° continuous rotation		
Microwave Power	0-1000W (Adjustable)		
Microwave Frequency	2450MHz		
Cavity Volume	35L		
Microwave Leakage	<5mW/cm2		
Power	AC 220V±10%, 10A, 50/60Hz		

HMWD-600

Features

Compatible with 6/8/10/12-position sample rotor.

Imported contactless IR sensor and pressure sensor, real-time display the temperature and pressure of sample solution (NOT Vessel Wall) in each vessel and show T & P scanning curve.

No consumables, e.g. bursting disk, sealing cup, etc. lower maintenance cost.

Equip with smart 7 inches touch screen, user-friendly UI.

Pre-installed multiple international application methods. Users can also edit, modify and delete the methods.

Equip with 316L stainless explosion-proof cavity, coated with multi-layer anti-corrosive and heat resisting coatings, which greatly prolongs its service life and ensure the safety of operation.

High power turbulent air cooling design makes fast cooling.

Professional electromagnetic protection design, compatible with high-level microwave leakage protection standards.

HMWD-700/750

Features

Special Designed Sample Digestion Vessel

The auto vent and self-resealing design ensures digestion vessels can automatically release pressure and instantly reseal when a sudden over-pressure situation occurs. It reduces waste of batch samples and also avoids vessel damage.

Contactless Temperature and Pressure Monitoring System

The imported contactless IR sensor can measure the real-time temperature of sample solution (NOT Vessel Wall) in each digestion vessel. Meanwhile, the contactless pressure sensor can monitor the real-time pressure of each vessel. It avoids sample cross-contamination, and the real-time temperature and pressure value in each vessel are displayed during the whole digestion process and enables a clear check of digestion condition.

Large Storage Capacity

Up to 255 kinds of method programs can be edited and saved, each method program can set with max. 10 steps and parameters (temperature, pressure, time, microwave power).

Safety Protection System

The double locked security door, the separate protection vessel frame, the real-time temperature and pressure monitoring system, the auto adjustment of over-pressure and over-temperature system and the abnormal sound monitoring ensure that a highly safe operation environment.

HMWD-800

Features

Up to 40 Vessels, suitable for batch experiment.

Special Designed Sample Digestion Vessel

The auto vent and self-resealing design ensures digestion vessels can automatically release pressure and instantly reseal when a sudden over-pressure situation occurs. It reduces waste of batch samples and also avoids vessel damage.

Large Storage Capacity

Up to 255 kinds of method programs can be edited and saved, each method program can set with max. 10 steps and parameters (temperature, pressure, time, microwave power).

Contactless Temperature and Pressure Monitoring System

The imported contactless IR sensor can measure the real-time temperature of sample solution **(NOT Vessel Wall)** in each digestion vessel. Meanwhile, the contactless pressure sensor can monitor the real-time pressure of each vessel. It avoids sample cross-contamination, and the real-time temperature and pressure value in each vessel are displayed during the whole digestion process and enables a clear check of digestion condition.

Safety Protection System

The double locked security door, the real-time temperature and pressure monitoring system, the auto adjustment of over-pressure and over-temperature system and the abnormal sound monitoring ensure that a highly safe operation environment.

Technical Specification

Model	HMWD-600				HMWD-700	HMWD-750	HMWD-800
Vessel Quantity	6	8	10	12	12	18	40
Microwave Power	0-1000W (Adjustable)				0-2000W (Adjustable)	0-3000W (Adjustable)	
Temperature Monitoring	Contactless IR Sensor Temperature Monitoring Each Vessel Temperature Controlled Temperature Controlling Range: 50-400°C Max. Working Temperature: 250°C Temperature Accuracy: ±0.1°C						
Pressure Monitoring	Contactless Sensor Pressure Monitoring Each Vessel Pressure Controlled Pressure Controlling Range: 0-15MPa Max. Working Pressure: 6Mpa Pressure Accuracy: ±0.01MPa						
Vessel Volume	100mL						50mL
Sample Vessel Material	Imported TFM						
Protection Vessel Material	PEEK+Glass Fiber						
Display	7 inches Color Touch Screen						
Rotation	One Direction 360° continuous rotating						
Microwave Cavity	316L stainless steel cavity with corrosion-proof coating						
Microwave Leakage	<5mW/cm²						
Air Exhaust	High power corrosion-proof air blower						
Power	AC 220V±10%, 10A, 50/60Hz						

Nano UV VIS Spectrophotometer

HB-600

Scope of application

Detection of Enzyme activity, protein content, nucleic acid concentration.

Applicable scenarios

Modern production and management departments such as food, chemical, pharmaceutical, environmental testing, metallurgy and modern molecular biology laboratories, disease control centers, etc

Features

- High-quality flash Xenon lamp.
- High resolution CCD detector provides rapid repeatable readings.
- 7 inches LCD color touch screen.
- User-friendly UI design, simple and clear.
- 1-2μl Sample test volume.
- Nucleic acid , protein, kinetics, spectrum scanning, end-point and OD600 measurement.
- User upgradable software, low maintenance cost.
- USB data export.
- Two USB ports for data transmission and input peripherals.
- Standalone, no PC required.

Operation Interface

Technical Specification

Model	HB-600
Generation Specification	
Light Source	Xenon Lamp
Detector	CCD (2048 Pixels)
Wavelength Range	190-1100nm
Wavelength Accuracy	±1nm
Spectral Resolution	0.3nm
Dimension	230*290*220mm
Weight	3kg
Operating Voltage	12V DC
Power Consumption	18W
Nano Volume Specification	
Absorbance Precision	1%@100ng/μl
Absorbance Range	0-200Abs (10nm equivalent)
Detection Limit	2ng/μl (dsDNA)
Max. Concentration	15000ng/μl（dsDNA）
Measurement Time	5s
Min. Sample Volume	1μl
Path Length	0.01-1.2mm (auto-ranging)
Cuvette Specification	
Beam Height	8.5mm
Absorbance Range	0.002-2.0Abs
Measurement Time	3s
Path Length	10mm