

Your Bridge to Success

Analytical Instruments, Lamps & Consumables



AA Spectrometer



TQ GC-MS/MS



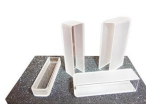
ICP Spectromete



FTIR Spectrometer



HPLC
System



Cells



D2 Lamps



TQ LC-MS/MS

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1 Spectrometer

1.1 UV/Vis Spectrometer

1.1.1 1041 Visible Spectrometer

The Vision 1041 carries on the Buck tradition of building robust & reliable. Visible spectrophotometers. Our touch-button controls are easy to use with gloves. The easy to read LCD displays reading in real time.



1041 Visible Spectrometer

Features

- The vision 1041 has a 1200 line grating which gives it high resolution, high accuracy and low stray light.
- Large sample compartment for up to 100mm long-path length cells.
- Easy to read LCD display for reading absorbance, concentration and transmission.
- The 325-1000nm range captures complete visible spectrum
- 2nm bandwidth optimizes resolution and sensitivity
- 4 display modes (absorbance, transmission etc.) enable diverse analyses
- 1200 line/mm grating provides 0.1nm data interval
- Manual 4-cell changer allows fast sampling
- Oversized 120mm cell holder fits long path lengths
- Intuitive LCD interface and one-touch auto-zero simplifies use
- USB and micro-printer options facilitate data handling

Ordering Information

Part Number	Model number	Unit Price USD
423-314	UV-1041	1,680.00

Accessories

Part Number	Description	Price USD
SPA-1041	SPA PC Software	873.60
20201	Mini Thermal printer	600.00
BUV-9915	Peliter&sipper system	3,388.80
BUV-9904	Adjustable Micro Cell Holder	600.00
50124A	5mm~100mm Universal 4-position manual cell holder	600.00
50050A	Transparent film holder	870.00
50095A	Round test tube holder	960.00
60101	UV-BASIC Software	358.80
406-31-G1	Type 1 Glass Cuvette with 1 mm path length	45.60
406-31-G2	Type 1 Glass Cuvette with 2 mm path length	43.20
406-31-G5	Type 1 Glass Cuvette with 5 mm path length	36.00
406-31-G10	Type 1 Glass Cuvette with 10 mm path length	43.20
406-31-G20	Type 1 Glass Cuvette with 20 mm path length	43.20
406-31-G30	Type 1 Glass Cuvette with 30 mm path length	45.60
406-31-G40	Type 1 Glass Cuvette with 40 mm path length	45.60
406-31-G50	Type 1 Glass Cuvette with 50 mm path length	57.60
406-31-G100	Type 1 Glass Cuvette with 100 mm path length	81.60

1.1.2 3041 Single Beam UV/Vis Spectrometer

The Vision 3041 spectrophotometer features a 7-inch touch-screen for convenient stand-alone use in the laboratory. The large touchscreen allows users to easily view and analyze results without connecting the instrument to a computer. With its 1200 line/mm grating, the Vision 3041 can measure samples over a wide wavelength range directly.



3041 Single Beam UV/Vis Spectrometer

The Vision 3041 spectrophotometer allows full functionality and operation directly from the instrument's icon-driven graphic user interface. Users can access all measurement modes, including reads, scans, curves, and kinetic tests, without the need for an external computer.

Features

- Our large 7" graphical user interface is easy to operate and features snappy performance.
- Access setting, accessories and modes with the tap of a finger.
- GMP and 21 CFR part 11 compliant software, CE certified.
- The Vision 3041 uses a rigid 8mm die-cast aluminum base as its optical mount to ensure instrument stability and reliability.
- Multi functions like spectrum scanning, standard curve, kinetics, multi-wavelength, DNA/RNA/
- Protein testing can be performed directly on the 3041 and all corresponding curves and data can be displayed directly.
- Data output Vision 3041 is equipped with USB port to connect with a PC to display spectrum scanning, kinetics and multi-wavelength testing results on the screen.
- Optional Software for LIMS and CFR 21 Part 11 compliance.

Ordering Information

Part Number	Model number	Unit Price USD
423-315	UV-3041	5,999.00

Accessories

Part Number	Description	Price USD
SPA-1041	VisionLITE Software	750.00
VPRO-3041	VisionPRO CFR Software	1,650.00
BUV-9915	Peliter&sipper system	3,388.80
20201	Mini Thermal printer	600.00
BUV-9904	Adjustable Micro Cell Holder	600.00
50124A	5mm~100mm Universal 4-position manual cell holder	600.00
50050A	Transparent film holder	870.00
50095A	Round Test tube holder	960.00
406-31-Q1	Type 1 Quartz Cuvette with 1 mm path length	108.00
406-31-Q2	Type 1 Quartz Cuvette with 2 mm path length	120.00
406-31-Q5	Type 1 Quartz Cuvette with 5 mm path length	108.00
406-31-Q10	Type 1 Quartz Cuvette with 10 mm path length	96.00
406-31-Q20	Type 1 Quartz Cuvette with 20 mm path length	103.20
406-31-Q30	Type 1 Quartz Cuvette with 30 mm path length	120.00
406-31-Q40	Type 1 Quartz Cuvette with 40 mm path length	127.20
406-31-Q50	Type 1 Quartz Cuvette with 50 mm path length	139.20
406-31-Q100	Type 1 Quartz Cuvette with 100 mm path length	237.60

1.1.3 7041 DoubleBeam UV/Vis Spectrometer

The Vision 7041 is our most advanced double beam UV/Vis spectrophotometer to date.

The 7041 was Designed from the ground up to be easy to use, easy to live with and most importantly the most accurate system we have ever offered.

Overview

190-1100 wavelength range

Variable slit selection 0.5/1.0/2.0/4.0/5.0 nm

Double Beam optical layout w/ dual detectors

10 inch color touchscreen

One matching set 1-Q-10 Quartz Cuvettes included



7041 DoubleBeam UV/Vis Spectrometer
Note: Images Same as 3041

Features

- Our Double Beam optical layout with dual detectors achieves superior reproducibility and signal to noise ratio for the very best accuracy.
- The 7041 has variable slit selection 0.5/1.0/2.0/4.0/ 5.0 nm which produces excellent resolution.
- Our large 10 inch color touchscreen and easy to use graphical user interface make operating the 7041 easy.
- GMP and 21 CFR part 11 compliant software, CE certified.
- Adjustable spectrum bandwidth at 0.5/1.0/2.0/4.0/5.0nm, is especially suitable for samples with sharp absorption peaks, like penicillin sodium, penicillin potassium, etc.
- The 7041's optics are sealed with a SiO₂ protective film to avoid stray light caused by dust and corrosive vapors.
- We only use top-notch components which greatly reduces the stray light and improves the stability and reliability of the 7041.
- Our 16mm thick stabil-base design plants the instrument on a sure footing. This ensures optical stability despite thermal fluctuations.
- The Tungsten and D2 lamps are long-lasting, much more affordable than xenon lamps and easy to replace.
- Our light-tight optical design eliminates errors caused by light source and sample changes, making the 7041's results more reliable.
- Photometric measurement, quantitative measurement, kinetics, spectral scanning, multi-wavelength analysis, DNA/ Protein test, etc.
- Automatic self-inspection: all system parameters are tested upon start-up. If any error occurs, the system will automatically beep to alarm, and the status indicator of the fault is displayed.
- Wide range of sampling accessories: Auto Cell Changer, ThermoStic Auto-Sampler, Adjustable Micro-Cell Holder, Reflection Accessories and Integrated Sphere.
- Automatic wavelength calibration when power on which promises a long-term stability of wavelength accuracy.
- Adheres to GLP/GMP standards, user management, logging, data tracking and exporting, etc. are all available.

Ordering Information

Part Number	Model number	Unit Price USD
423-316	UV-7041	8,699.00

Accessories

Part Number	Description	Price USD
SPA-1041	VisionLITE Software	750.00
VPRO-7041	VisionPRO CFR Software	1,650.00
BUV-9915	Peliter&sipper system	3,388.80
20201	Mini Thermal printer	600.00
BUV-9904	Adjustable Micro Cell Holder	600.00
50124A	5mm~100mm Universal 4-position manual cell holder	600.00
50050A	Transparent film holder	870.00
50095A	Round Test tube holder	960.00
60101	UV-BASIC Software	358.80
406-31-Q1	Type 1 Quartz Cuvette with 1 mm path length	108.00
406-31-Q2	Type 1 Quartz Cuvette with 2 mm path length	120.00
406-31-Q5	Type 1 Quartz Cuvette with 5 mm path length	108.00
406-31-Q10	Type 1 Quartz Cuvette with 10 mm path length	96.00
406-31-Q20	Type 1 Quartz Cuvette with 20 mm path length	103.20
406-31-Q30	Type 1 Quartz Cuvette with 30 mm path length	120.00
406-31-Q40	Type 1 Quartz Cuvette with 40 mm path length	127.20
406-31-Q50	Type 1 Quartz Cuvette with 50 mm path length	139.20
406-31-Q100	Type 1 Quartz Cuvette with 100 mm path length	237.60

1.2 UV/Vis/NIR Spectrophotometer

1.2.1 LS Series UV-Vis-NIR Spectrophotometers

Precision without boundaries. Performance without compromise.

The LS Series delivers research-grade optical characterization across five distinct performance tiers. From vacuum UV specialist instruments to ultra-broadband NIR systems, each model is engineered for specific analytical demands. Choose S-Series models for cost-effective, reliable performance, or D-Series models for ultimate precision with two-stage holographic grating technology.



LS Series UV-Vis-NIR Spectrophotometers

All LS Series instruments share core advantages: double-beam ratio recording photometry for exceptional stability, socket-type lamps for maintenance-free operation, and intelligent automatic switching between sources and detectors. The difference lies in optical sophistication—single holographic gratings for standard applications, two-stage gratings for demanding research.

Features

- Double-Beam Architecture: Dynamic feedback ratio recording ensures baseline stability and compensates for source fluctuations
- Automatic Switching: Source and detector crossover points user-configurable with 0.05 nm precision
- Maintenance-Free Design: Socket-type lamp holders enable tool-free replacement without optical realignment
- Flexible Sampling: Compatible with full range of integrating spheres and reflectance accessories

Applications by Model

Optical Coatings & Thin Films

Recommended: LS-280D or LS-360D

High-absorbance coatings require D-Series stray light performance. Characterize anti-reflective, high-reflective, and beam-splitter coatings with absolute confidence.

Energy-Efficient Glass Certification

Recommended: LS-3600S or LS-3600D

Solar transmittance and thermal insulation measurements benefit from extended NIR coverage. D-Series recommended for compliance with stringent international standards.

Solar Energy Materials

Recommended: LS-360D

Comprehensive spectral characterization from UV to 3600 nm with research-grade accuracy for photovoltaic and thermal solar optimization.

Polymer & Chemical Manufacturing

Recommended: LS-360S (QC) or LS-360D (R&D)

C-H, N-H, and O-H overtone analysis in the 2800–3600 nm region. S-Series for production control, D-Series for formulation development.

Semiconductor & Vacuum UV

Recommended: LS-UV

The only choice for vacuum UV characterization below 190 nm. Essential for next-generation lithography materials and high-purity gas analysis.

Teaching & Routine Analysis

Recommended: LS-280S

Reliable performance at economical price point. Ideal for educational institutions and industrial QC labs with standard analytical requirements.

Ordering Information

Part Number	Model number	Unit Price USD
423-317	LS-UV	POR
423-318	LS-280S	POR
423-319	LS-360S	POR
423-320	LS-280D	POR
423-321	LS-360D	POR

Accessories

Part Number	Accessory Type	Key Features & Specifications	Applications & Recommendations	Price USD
403-316	150mm Integrating Sphere	BaSO ₄ coating >9% reflectivity (210-2600nm), stable optical performance, 150mm inner diameter, 0°/8° incident angle, direct diffuse/total reflectance measurement, liquid/solid transmission testing, compatible with powder sample holder	Solar radiation absorption coefficient, solar heat gain coefficient profile, ASTM and CIE colorimetry	POR
403-317	5° Specular Reflectance Accessory	Imported reflectance mirrors, dust-proof and moisture-proof, 99% reflectance, max sample 300×300×50mm, min detection diameter 6mm	Semiconductor, optical materials, architectural glass, coatings and thin films, specular reflectance specimens	POR
403-318	Absolute Reflectance Accessory	5° measurement angle (±1.5%), 200-3600nm wavelength, 100% horizontal sample, single-point V-H method, sample size 15-200mm	High-precision absolute reflectance measurements	POR
403-319	Fully Automated Variable Angle Accessory	Software-adjustable incident angle, ±5° to 85° range, automatic rotation control	Angular-dependent optical measurements	POR
403-320	General Transmission Accessory	Adjustable width, accommodates various test specimens and cuvettes	General transmission measurements, standard sample analysis	POR

1.3 Microvolume UV/Vis Spectrophotometer

1.3.1 8041 Micro Sample Single Beam UV/Vis spectrophotometer with fiber optic ATR

Our Microdrop 8041 is a micro-volume UV-Vis spectrophotometer that delivers full-spectrum results in under four seconds while using minimal sample volume. Each measurement requires just 1–2 μL , helping conserve valuable samples and enabling quicker analysis—without the need for cuvettes.



8041 Micro Sample Single Beam UV/Vis spectrophotometer

Features

- Stand-alone touchscreen operation: No external computer required, saving valuable bench space.
- Dual measurement modes: Supports both microvolume (pedestal) and standard cuvette formats.
- Full-spectrum range: Measures continuously from 190 to 1100nm with $< 1.8\text{nm}$ spectral resolution.
- Wide detection range: dsDNA quantification from 2 $\text{ng}/\mu\text{L}$ to 37,500 $\text{ng}/\mu\text{L}$.
- Precision light source: Xenon flash lamp combined with a 2048-element linear CCD array and advanced software ensures high accuracy and reproducibility.
- Minimal sample volume: Requires only 0.5–2 μL for rapid measurement of nucleic acid and protein concentration and purity.
- Rapid measurement cycle-Provides results in under 4 seconds in pedestal mode and cuvette mode.
- Compact and portable design: Lightweight and space-saving footprint for easy placement and mobility in the lab.
- Flexible output options: Export results in multiple file formats for streamlined data management and reporting.
- Sample retention system: Magnetic light-blocking cap and patented design minimize evaporation and ambient light interference

Ordering Information

Part Number	Model number	Unit Price USD
443-340	UV-8041	12,500.00

Accessories

Part Number	Description	Price USD
804-1001	Xenon Lamp	2,400.00
804-1002	Single Channel Pipette	366.00
804-1003	Multi Channel Pipette (Available in 8 or 12 channel version)	408.00
804-1010	Lint-free wipes: 3009 ultra-fine, 10cm, (400 count)	45.60
406-31-Q10	Type 1 Quartz Cuvette with 10 mm path length	90.00
406-39-Q10	Type 9 Quartz Cuvette with 10mm path length	150.00
406-318-Q10	Type 18 Quartz Cuvette with 10mm path length	200.00

1.4 Spectrometer Sensor

1.4.1 SR20 Compact Spectrometer

Powerful spectral analysis in a compact form factor with the SR20. Designed for easy integration into

portable devices and equipment with limited space, this miniature spectrometer combines exceptional optical and electrical performance with our Technology's proprietary chromaticity dynamic library algorithm.

Features

- Miniature Design
- Broad Application Coverage
- Rapid Data Acquisition
- Simplified Integration
- Advanced Color Analysis
- Exceptional Stability
- Cost-Optimized Solution

Application

Color Science; Light Measurement; Environmental Monitoring; Integrated Systems;

Resolution

Wavelength Range	Wavelength Resolution (nm)	30 μm slit	40 μm slit	50 μm slit	60 μm slit	70 μm slit	100 μm slit	150 μm slit	200 μm slit
200-500nm	0.22	1.00	1.10	1.20	1.40	1.60	2.10	3.20	4.20
200-850nm	0.45	2.00	2.20	2.30	2.70	3.20	4.20	6.40	8.40
350-1100nm	0.61	3.20	3.40	3.60	4.00	4.30	5.60	8.30	11.2

1.4.2 SR30 Spectrometer for Wafer testing

SR30 Designed and developed specifically for industrial application customers. Its notable features include high-speed spectral output, high-speed sampling, and high-speed transmission. This model spectrometer has a stable structure and low drift characteristics, which support large-scale industrial customized OEM applications. It supports cross-platform secondary development packages (SDK), and customers can complete rapid development and application by using the provided function libraries.

Features

- High sensitivity
- High-speed chromatogram output: up to 10 MHz
- Ultraviolet response: 200 - 1000nm
- High-speed sampling: up to 0.8 ms per frame
- Low stray light
- One low drift characteristic
- One automatic zeroing function
- High cost-effectiveness
- Simplified Integration

Application

Wafer inspection; Optical spectroscopy inspection; Online high-speed spectroscopy; Inspection - Film transmittance inspection ;Industrial integration inspection;Teaching and research;

Resolution

Wavelength Range	Wavelength Resolution (nm)	30 μm slit	40 μm slit	50 μm slit	60 μm slit	70 μm slit	100 μm slit	150 μm slit	200 μm slit
200-500nm	0.32	0.80	1.00	1.10	1.20	1.40	2.10	3.00	4.00
350-950nm	0.66	1.20	2.00	2.20	2.40	2.80	3.80	5.80	7.70
600-1100nm	0.64	1.20	3.00	2.20	2.40	2.80	3.80	5.80	7.70

1.4.3 SR40 Spectrometer for Nanodrop

The series of miniature fiber optic spectrometers feature a compact and small appearance, are plug-and-play, easy to operate, and support high-speed data transmission via USB 2.0. Combined with various optical platform components, light sources, and sampling fibers, they can be used to build test solutions for thousands of applications involving absorption, reflection, transmission, etc.

Features

- Broad spectral range: 200 - 1100nm
- High sensitivity in ultraviolet
- Low drift: 0.1 pixel/°C
- Low noise: < 50 RMS (ADmax = 65535)
- with low stray light
- Automatic zero adjustment
- High cost-effectiveness
- Multiple communication methods
- External trigger function

Application

Water quality analysis; Smoke gas detection; Biomedical; Teaching and research;
Food, medicine and chemical industry; Reflection/Transmission test; Lens inspection;
Automobile exhaust detection;

Resolution

Wavelength Range	Wavelength Resolution (nm)	30 μm slit	40 μm slit	50 μm slit	60 μm slit	70 μm slit	100 μm slit	150 μm slit	200 μm slit
200-500nm	0.17	0.80	1.00	1.10	1.20	1.40	2.10	3.00	4.00
200-850nm	0.33	1.20	2.00	2.20	2.40	2.80	3.80	5.80	7.70
200-1100nm	0.45	1.70	2.20	2.70	3.20	3.60	5.00	7.20	9.70

1.4.4 SR50 Spectrometer for Raman spectrometer

Your Reliable Spectrometer for Industrial Applications. The SR50 series miniature fiber optic spectrometer is engineered for demanding industrial environments. Its rugged design and stress-free components ensure long-term stability. Ideal for OEM integration and process control, it delivers accurate and consistent measurements, including CIE color parameters.

Features

- High Chromaticity Stability
- High-Speed Operation
- Industry-Standard Colorimetric Accuracy
- Extensive Light & Color Dynamic Library
- Low Stray Light
- Low-Temperature Drift
- High Value/Cost Ratio

Application

LED Spectral Analysis; Wafer Quality Control; Environmental & Chemical Combustion Analysis; Light Source Color Parameter Measurement; Color Measurement & Quality Control; Fiber Optic Transmittance Testing; Educational & Research Applications;

Resolution

Wavelength Range	Wavelength Resolution (nm)	30 μm slit	40 μm slit	50 μm slit	60 μm slit	70 μm slit	100 μm slit	150 μm slit	200 μm slit
350-950nm	0.33	1.20	2.00	2.20	2.40	2.80	3.80	5.80	7.70
350-1000nm	0.45	1.70	2.20	2.70	3.20	3.60	5.00	7.20	9.70

1.4.5 SR58 Spectrometer for Ethernet 100-channel testing

The series of micro spectrometer is a network port version of spectrometer developed specifically for industrial on-site testing and applications requiring long-distance communication transmission. It supports three communication methods: Ethernet, USB, and serial port. When using Ethernet communication, multiple devices can be integrated through a switch, with a maximum of 100 devices being able to be used simultaneously online, making it highly suitable for multi-channel testing requirements.

Features

- Semiconductor testing
- Film thickness measurement light
- Light intensity detection performance
- Online component detection in biomedicine communication
- Fruit sugar content detection
- Teaching and research integration capabilities

Application

Low drift; Low stray light; Higher cost performance; Network interface communication; Long-distance data transmission; Multiple integration capabilities;

Resolution

Wavelength Range	Wavelength Resolution (nm)	30 μm slit	40 μm slit	50 μm slit	60 μm slit	70 μm slit	100 μm slit	150 μm slit	200 μm slit
200-500nm	0.17	0.80	1.00	1.10	1.20	1.40	2.10	3.00	4.00
350-950nm	0.33	1.20	2.00	2.20	2.40	2.80	3.80	5.80	7.70
350-1100nm	0.45	1.70	2.20	2.70	3.20	3.60	5.00	7.20	9.70

1.4.6 SR60 Spectrometer for LIBS

SR60: The High-Resolution Spectrometer You Can Scale.

The SR60 series offers unmatched flexibility: combine multiple units to cover your precise wavelength range, all while maintaining high spectral resolution. Its long optical path, high-groove density grating, and synchronized multi-channel operation deliver the performance of a large benchtop system in a compact, customizable form factor.

Features

- Ultra-High Resolution
- Flexible Configuration
- High-Speed Data Acquisition
- Synchronous Control
- Low Stray Light
- Low Temperature Drift

Application

Laser Peak Detection ; Gas Absorption Detection; Raman Spectroscopy ; Environmental Monitoring; Material Composition Analysis; Metrology Instrument Applications; Metal Composition Analysis; Biological Research; Gemstone Identification; LIBS / Plasma Emission Detection

Resolution

Wavelength Range	Wavelength Resolution (nm)	30 μm slit	40 μm slit	50 μm slit	60 μm slit	70 μm slit	100 μm slit	150 μm slit	200 μm slit
200-330nm	0.06	0.03	0.45	0.50	0.60	0.70	1.08	1.50	2.20
200-500nm	0.19	0.70	1.00	1.20	1.40	1.90	2.70	3.85	5.50
380-800nm	0.25	0.90	1.10	1.20	1.85	2.00	3.50	5.50	7.20
800-900mm	0.07	0.40	0.45	0.50	0.75	0.90	1.30	1.50	2.50

1.4.7 SR63 Spectrometer for Cooling Raman

SR63 Series Miniature Fiber Optic Spectrometer: High Sensitivity, Compact Design

The SR63 series represents a new generation of high-sensitivity, compact fiber optic spectrometers. Featuring a back-thinned, cooled detector, the SR63 is ideally suited for demanding applications such as fluorescence and Raman spectroscopy.

Advanced circuit design allows the detector to be cooled to 20°C below ambient temperature, effectively suppressing dark current noise and maximizing signal-to-noise ratio. The SR63 offers an exceptional balance of price and performance, making it an ideal choice for integration into high-end instrumentation.

Features

- High Signal-to-Noise Ratio
- Two-Stage Cooling
- Back-Thinned CCD Detector
- High Precision Spectroscopic Performance
- Enhanced UV Response
- Low Stray Light
- Superior Low-Temperature Stability

Application

Raman Spectroscopy; Materials Characterization; Life Science Instrumentation;
Laboratory Standard Instrumentation; General Scientific Research; Microscopy Spectroscopy;
Environmental Monitoring; Angle-Resolved Spectroscopy;

Resolution

Wavelength Range	Wavelength Resolution (nm)	30 μm slit	40 μm slit	50 μm slit	60 μm slit	70 μm slit	100 μm slit	150 μm slit	200 μm slit
200-500nm	0.20	0.70	0.90	1.00	1.10	1.20	1.90	2.80	3.70
380-800nm	0.26	0.90	1.20	1.50	1.70	2.00	3.00	4.00	6.00
350-1100nm	0.40	1.40	1.60	1.80	2.10	2.50	3.50	5.00	7.00

1.4.8 SR65 Spectrometer for Scientific Grade

SR65 Series: High-Performance Micro Spectrometer for Scientific Research

The SR65 series micro fiber optic spectrometer sets a new standard for scientific-grade performance. Engineered for demanding research applications, the SR65 boasts ultra-low stray light, exceptional signal-to-noise ratio, and high quantum efficiency. Its superior spectral response makes it an ideal choice for astronomy, Raman spectroscopy, fluorescence measurements, and comprehensive material characterization. A deep-cooled CCD detector provides stable operation at temperatures down to 40°C below ambient, extending its capabilities across diverse research environments.

Features

- High Signal-to-Noise Ratio (SNR)
- Two-Stage Cooling
- Back-Illuminated CCD
- High Precision
- High UV Response
- Low Stray Light
- Low-Temperature Drift

Application

Fluorescence Spectroscopy; Raman Spectroscopy; Microscopy Spectroscopy;
Astronomy; Environmental Monitoring; Materials Science; General Spectroscopy;

Resolution

Wavelength Range	30µm	40µm	50µm	60µm	70µm	100µm	150µm	200µm
200-480nm	2.6	2.9	3.3	3.7	4.1	4.5	5.8	6.8
380-800nm	1.6	1.8	2	2.2	2.5	3	4	5
450-1100nm	2.6	2.9	3.3	3.7	4.1	4.7	5.8	6.8

1.4.9 SR68 NIR Spectrometer

Achieve unparalleled NIR analysis with the SR68 series of miniature fiber-optic spectrometers. Equipped with a two-stage cooled InGaAs detector, these spectrometers deliver high-speed, accurate results in the 900-2500nm range. Ideal for demanding industrial online monitoring and precise agricultural analysis.

Features

- Multiple near-infrared bands are available.
- Two-stage cooling
- InGaAs detector
- Low noise
- High signal-to-noise ratio
- Low temperature drift characteristics

Application

Water Content Analysis • Raman Spectroscopy • Fruit Detection • Life Science Instruments •
Crop Detection • Scientific Experiments • Communication Laser Wavelength Detection •
Environmental Detection • Online Component Analysis • Infrared Light Source Detection •
Chemical Concentration Online Detection

Resolution

Spectrometer Type	Wavelength Range	30	40	50	60	70	100	150	200
		μm slit	μm slit	μm slit	μm slit	μm slit	μm slit	μm slit	μm slit
SR68(256pixels)	900-1700	6.5	7.0	8.0	9.0	10.0	11.0	12.5	14.0
	1430-1700	3.2	3.5	4.0	4.5	5.0	5.5	6.3	7.0
	900-2500	15.0	16.0	17.0	18.0	19.0	22.0	24.5	27.0
SR68(512pixels)	900-1700	5.0	5.4	5.8	6.0	6.3	7.8	10.5	13.5
	1430-1700	2.5	2.9	3.3	3.7	3.9	4.5	5.7	7
SR68(1024pixels)	900-1700	2.6	3.1	3.3	3.6	3.8	4.8	7.8	10.3

1.4.10 All Model Order Information

Part Number	Model Number	Unit Price (USD)
423-322	SR20	\$1,350.00
423-323	SR30	\$1,350.00
423-324	SR40	\$1,350.00
423-325	SR50	\$1,350.00
423-361	SR58	\$1,600.00
423-326	SR60	\$1,378.00
423-327	SR63	\$6,500.00
423-328	SR65	\$14,000.00
423-329-1	SR68 (256 pixels) 900-1700nm	\$9,150.00
423-329-2	SR68 (256 pixels) 1430-1700nm	\$9,150.00
423-329-3	SR68 (256 pixels) 900-2500nm	\$18,500.00
423-329-4	SR68 (512 pixels) 900-1700nm	POR
423-329-5	SR68 (512 pixels) 1430-1700nm	POR
423-329-6	SR68 (1024 pixels) 900-1700nm	POR

1.4.11 Model Images



1.4.12 Spectrometer Sensor Accessories

Part Number	Description	Price USD
403-335-1	Collimators	150.00
403-335-2	Reflection Test Holders	750.00
403-335-3	Four-Way Cuvette	750.00
403-335-4	Two-way Cuvette	POR
403-335-5	Transmittance Measurement Devices	650.00
403-335-6	Standard Light Sources	250.00
403-335-7	Light Attenuators	150.00
403-335-8	Light Attenuators	POR
403-335-9	White/Black Reference Panels	500.00
403-335-10	Xenon Pulsed Light Sources	1,200.00
403-335-11	Tungsten Light Sources	1,200.00
403-335-12	LED Light Sources	1,500.00
403-335-13	Portable Calibration Light Sources	750.00
403-335-14	Deuterium-Tungsten Light Sources	3,500.00
403-335-15	Mercury Lamp Light Sources	750.00
403-335-16	Detectors	250.00

2 Infrared & Near Infrared

2.1 FTIR & FT-NIR Spectrometer

2.1.1 IR540 SpectraMax FT-IR Spectrometer

The SpectraMax FTIR offers the unparalleled reliability, ease of use and affordability that you have come to expect from Buck. Our IRIS software offers a simple set of search and comparison tools for a wide array of analysis. In regulated settings, built-in controls keep records organized and make audits straightforward. With accessories for every type of sample, the SpectraMax is a powerful tool for qualification and quantification of solids, liquids, gasses, and films.



IR540 SpectraMax FT-IR Spectrometer

Features

- Robust sampling: Universal compatibility with common solid, liquid, film, and gas accessories
- Low maintenance design: Sealed optical components with humidity & temperature monitoring
- IRIS Software: Integrated search features & automatic spectra comparison, compatible with industry standard libraries such as Bruker.
- Compliance: GMP and 21 CFR part 11 compliant software, CE certified
- Fast. Stable. Connected: The SpectraMax FTIR delivers results in 5 seconds with reliable, sealed optics and built-in Wi-Fi.

Application

Environmental: Water & soil screening; and more

Manufacturing & QA/QC: Raw material ID; lot release testing

Academia & Education: Teaching spectra; research projects

Optics & Electronics: Glass/plastic films; contamination checks

Food & Agriculture: Oils/fats profiling; adulteration screening

Energy & Petrochemical: Lubricants/fuels analysis; contamination checks

Pharma & Chemical R&D: Reaction monitoring; raw material ID

Automotive & Aerospace: Paints/coatings on parts; incoming QA

Ordering Information

Part Number	Model number	Unit Price USD
443-350	IR540	22,300.00

2.1.2 IR250 FT-NIR Spectrometer for Milk, Grain and Feed

FT-NIR Spectrometer with Integrating Sphere: Rapid Analysis of Solids and Semi-Solids

Non-destructive analysis in seconds. The FT-NIR integrating sphere system delivers rapid, accurate measurement of food, agricultural, and industrial samples in diffuse reflection—no sample preparation required.



IR250 FT-NIR Spectrometer

Designed for high reproducibility with heterogeneous samples, this system combines an optional sample rotator with advanced interferometer technology to ensure representative measurements every time. From origin verification to quality control, the FT-NIR system meets the rapid detection requirements for the majority of food and agricultural products, enabling qualitative analysis of properties such as origin, type, and quality with laboratory-grade precision.

Features

- Intelligent Dynamic Interferometer: DSP-controlled electromagnetic drive with permanently aligned optics for exceptional stability and minimal maintenance
- High-Stability Solid-State Laser: Long-life laser source ensuring consistent spectral output
- Optimized CaF₂ Beamsplitter: Multi-layer coated for maximum near-infrared throughput
- Auto Background Correction: Intelligent monitoring eliminates environmental interference from temperature/humidity fluctuations
- Integrated OQ/PQ Validation: Built-in compliance with international standards
- Automated Model Optimization: Proprietary software ranks results by RMSECV for rapid method development
- Performance Specs: 12,000–3,800 cm⁻¹ range, ≤1 cm⁻¹ resolution, ±0.02 cm⁻¹ accuracy

Application

Dairy: Milk powders, infant formulas, ice cream : Fat, protein, moisture, lactose, sucrose, ash, acidity

Feed & Nutrition: Soybean meal, DDGS, fish meal, corn gluten : Fat, protein, moisture, ash, Ca, P, salt, amino acids

Oilseeds: Soybeans, rapeseed, cottonseed : Moisture, protein, oil content, ash

Ordering Information

Part Number	Model number	Unit Price USD
443-301M	IR250-M	42,900.00
443-301G	IR250-G	43,600.00

2.1.3 IR850 Field FT-IR Spectrometer for gas analysis

FT-IR8500 is a purpose-built FT-IR gas analyzer for continuous on-line monitoring of flue gas, green gas and VOC emissions from fixed sources (coal-fired power plants, steel mills, cement works, waste-to-energy and chemical plants). Covering 500–5000 cm^{-1} , it delivers ppm-% sensitivity, simultaneous quantification of up to 50 gases per scan, and calibrated models for 300+ compounds with expandable concentration ranges — new gases can be added without hardware changes.



IR850 Field FT-IR Spectrometer

It ensure reliable, real-time performance in high-temperature, high-humidity and corrosive flue gas environments for compliance, process control and emissions reduction.

Features

- DTGS detector, no cooling required
- Beam splitter: uses moisture-proof window material
- Wavenumber range : 500 cm^{-1} to 5000 cm^{-1}
- Sample chamber heating temperature: not lower than 180°C
- Total optical path length should be no less than 4.5 meters
- Sample gas chamber volume should be less than 1.0 liter
- The inner walls of the sample gas chamber and the inner walls of the reflecting mirror have anti-corrosion coatings to prevent erosion by corrosive gases and can be used to measure gases with high temperature, high humidity, and strong corrosiveness
- Scanning frequency should be no less than 5 times/second
- Spectral resolution: 4 cm^{-1} or 1 cm^{-1} (optional)

Application

Emissions Monitoring & Compliance: Continuous monitoring of SO_2 , NO_x , CO, CO_2 , HCl, HF, NH_3 , and particulate precursors for regulatory compliance with EPA, EU, and local standards. Real-time data logging for environmental reporting and carbon trading.

Process Control & Optimization: Real-time feedback for combustion optimization, denitrification (De NO_x), desulfurization (FGD), and ammonia slip control. Improve efficiency while minimizing reagent consumption and emissions.

Waste-to-Energy & Incineration: Comprehensive monitoring of complex flue gas compositions including dioxin precursors, heavy metal indicators, and total organic carbon. Ensure safe, efficient waste destruction.

Chemical & Petrochemical: VOC monitoring for process safety, leak detection, and product quality. Benzene, toluene, xylene (BTX) measurement for worker protection and environmental compliance.

Cement & Steel Production: High-dust, high-temperature flue gas analysis for kiln optimization and emissions control. Reliable operation in abrasive, corrosive environments.

Ordering Information

Part Number	Model number	Unit Price USD
443-302	IR850	110,000.00

2.2 Infrared Oil Analyzer

2.2.1 HC-404 Total Petroleum Hydrocarbon (TPH) Analyzer

The Model HC-404 is a fixed wavelength infrared spectrometer designed for rapid accurate analysis of total petroleum hydrocarbons in water, soil and sludge samples.



HC-404 Total Petroleum Hydrocarbon (TPH) Analyzer

The HC-404 TPH Analyzer is perfect for ASTM method D 7066-04, EPA method 418.1 & EPA method 413.2

Features

- Fixed wavelength 2930 cm⁻¹ (3.42μ) allows for quick analysis without unnecessary scanning.
- Digital readout in %T and absorbance, or in concentration mode for direct ppm readings.
- Accommodates 10, 50, or 100 mm quartz cells for analysis to 1ppm or lower detection levels.
- Built-in scale expansion and extended linear range for high concentration, using a simple 3-step calibration.
- Peltier cooled PbSe detector provides greater than 2500 to 1 signal to noise ratio, resulting in the very best detection levels and excellent instrument stability.
- Small foot print requires minimal lab space.
- Hot quartz halogen source for the highest output possible.
- Instrument simplicity. Intuitive controls allow for immediate operation.
- Made In the USA


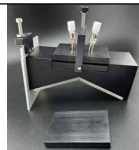
Ordering Information

Part Number	Model number	Unit Price USD
423-360	HC-404	9,699.00


2.3 FTIR Spectrometer Accessories

2.3.1 IR540





Part Number	Images	Description	Price USD
BA-1C	-	Sampling Accessories Kit	3,000.00
6500C		Demountable Cell Holder Kit	264.00
6500S		Circular Demountable Cell Holder Kit	252.00
6401		Beta Cell Kit	100.80
018-4041		Mini Cell Kit	630.00
5231		KBr Powder	240.00
6109		Nujol Oil	36.00
6200		Solid Quick Press	1,434.00
4350		12-ton Hydraulic Press	4,314.00
0016-009		Evacuatable 13mm KBr Die	1,494.00
6801		Beta Gas Cell 10cm	315.60

Part Number	Images	Description	Price USD
6802		Beta Gas Cell 5cm	283.20
23-I-5	-	5mm Infrasil Cuvette with Stopper	230.40
PLC-11M		PLC-11M Single Reflection Prism Cell	3,462.00


Transmission Accessories

Part Number	Images	Description	Price USD
540-0012		Removable Liquid Cell	400.00
540-0013		Transmission	200.00

Reflection Accessories

Part Number	Images	Description	Price USD
540-0001		Reflection	20,000.00
540-0002		Multi-bounce Reflection	75,000.00
540-0003		UPIR Diffuse Reflection	12,000.00
540-0004		Gold plated diffuse reflection	12,000.00



Gas Analysis



Part Number	Images	Description	Price USD
540-0006		Gas Cell 5m	8,600.00
540-0010	Same as 540-0006	Gas Cell 10m	19,300.00
540-0011	Same as 540-0006	Gas Cell 20m	27,900.00

ATR Accessories

Part Number	Images	Description	Price USD
540-0009		ZnSe ATR	6,400.00
540-0007	Same as 540-0009	Diamond ATR	9,400.00
540-0014	-	In-situ Reaction Cell ATR for Powder	17,000.00
540-0008		In-situ Reaction Cell ATR for high and low temp. Morphology Analysis	28,000.00

General Accessories



Part Number	Images	Description	Price USD
403-314	-	Desiccant Chamber	1,100.00
500A1		NaCl IR Windows (13 x 2 mm Discs)	34.80
500C1	Same as 500A1	KBr IR Windows (13 x 2 mm Discs)	51.60
500D1	Same as 500A1	CaF2 IR Windows (13 x 2 mm Discs)	67.20
500E1	Same as 500A1	BaF2 IR Windows (13 x 2 mm Discs)	150.00
500K1	Same as 500A1	ZnSe IR Windows (13 x 2 mm Discs)	216.00
500A3		NaCl IR Windows (25 x 4 mm Discs)	55.20
500C3	Same as 500A3	KBr IR Windows (25 x 4 mm Discs)	64.80
500D3	Same as 500A3	CaF2 IR Windows (25 x 4 mm Discs)	128.40

500E3	Same as 500A3	BaF2 IR Windows (25 x 4 mm Discs)	222.00
500K3	Same as 500A3	ZnSe IR Windows (25 x 4 mm Discs)	312.00
500A4		NaCl IR Windows (32 x 3mm Discs)	66.00
500A4D	Same as 500A4	NaCl IR Windows (32 x 3mm Discs)	70.80
500C4	Same as 500A4	KBr IR Windows (32 x 3mm Discs)	60.00
500C4D	Same as 500A4	KBr IR Windows (32 x 3mm Discs)	69.60
500D4	Same as 500A4	CaF2 IR Windows (32 x 3mm Discs)	132.00
500D4D	Same as 500A4	CaF2 IR Windows (32 x 3mm Discs)	152.40
500E4	Same as 500A4	BaF2 IR Windows (32 x 3mm Discs)	288.00
500E4D	Same as 500A4	BaF2 IR Windows (32 x 3mm Discs)	226.80
500K4	Same as 500A4	ZnSe IR Windows (32 x 3mm Discs)	338.40
500K4D	Same as 500A4	ZnSe IR Windows (32 x 3mm Discs)	362.40
511A3		NaCl (38 x 19 x 4 mm Rectangles)	81.60
511A3D	Same as 511A3	NaCl (38 x 19 x 4 mm Rectangles)	93.60
511C3	Same as 511A3	KBr (38 x 19 x 4 mm Rectangles)	78.00
511C3D	Same as 511A3	KBr (38 x 19 x 4 mm Rectangles)	84.00
511D3	Same as 511A3	CaF2 (38 x 19 x 4 mm Rectangles)	124.80
511D3D	Same as 511A3	CaF2 (38 x 19 x 4 mm Rectangles)	150.00
511K3	Same as 511A3	ZnSe (38 x 19 x 4 mm Rectangles)	332.40
511K3D	Same as 511A3	ZnSe (38 x 19 x 4 mm Rectangles)	351.60








Core Component



Part Number	Images	Description	Price USD
403-315-1	-	DTGS detector	including
403-315-2	-	He-Ne laser	including
403-315-3	-	beam splitter	including
403-315-4	-	light source	including
403-315-5	-	Moving mirror	including
403-315-6	-	Fixed mirror	including
403-315-7	-	motherboard	including
403-315-8	-	Window panel	including
403-315-9	-	Magnetic levitation device	including

Other options

Part Number	Images	Description	Qty	Price USD
TL-02		Removable liquid reservoir (zinc selenide) ZnSe window (imported laser-grade), water-resistant, wavelength range 4000nm-650nm	1 set	POR
TL-03		Removable liquid reservoir (calcium fluoride) CaF2 window, non-hygroscopic, transmittance at 4000 cm-1 to 1000 cm-1	1 set	POR

Part Number	Images	Description	Qty	Price USD
TL-10		fixed liquid pool (potassium bromide) KBr window, water-resistant, wavelength range 4000 cm ⁻¹ to 400 cm ⁻¹ , thickness 0.1mm	1 set	POR
TL-11		fixed liquid pool (zinc selenide) ZnSe window (imported laser-grade), water-resistant, wavelength range 4000 cm ⁻¹ to 650 cm ⁻¹ , thickness 0.1mm	1 set	POR
TL-12		fixed liquid pool (calcium fluoride) CaF ₂ window, non-hygroscopic, transmittance range 4000cm ⁻¹ to 1000cm ⁻¹ , thickness 0.1mm	1 set	POR
DW-25K		KBr window KBr window, diameter 25*4 mm, water-resistant, wavelength range 4000 cm ⁻¹ to 400 cm ⁻¹	2 pcs	POR
--		ZnSe window Imported laser-grade zinc selenide, flat sheet, diameter 25*4mm	1 piece	POR
RS-01		ATR appendix (Absorption-Transmission-Reflection) attachment: A germanium crystal, primarily used for measuring high-refractive-index materials such as black rubber.	1 set	POR
RS-03		ATR appendix Diamond crystal, imported from Specac UK, is primarily used for testing samples of plastics, rubber, resin, nylon, asphalt, and adhesives.	1 set	POR
--		Zinc Selenide Crystal Plate Applicable to RS-01 ATR accessory, ZnSe crystal (imported)	1 set	POR
--		germanium crystal disk Germanium crystal (imported), primarily used for the detection of high refractive index materials such as black rubber.	1 set	POR
RH-01		multiple plane reflection attachment ZnSe crystal is mainly used for the detection of asphalt and oil samples.	1 set	POR

Part Number	Images	Description	Qty	Price USD
RH-02		multiple plane reflection attachment GE crystal, mainly used for the detection of asphalt, oil products and other samples.	1 set	POR
RA-02		planar reflection accessory Gold-plated standard specimen, for glass and mirror surface testing	1 set	POR
custom made		Modular Scalable Special Accessories for Optical Materials with High Transmittance Description 1: The modular design of the multifunctional transmittance test accessory enables the measurement of transmittance for rectangular planar optical materials, circular planar optical materials, and hemispherical optical materials. Description 2: Capable of measuring transmittance for rectangular, circular, and hemispherical optical materials. The hemispherical sample holder module is replaceable and expandable, enabling testing of samples of varying sizes. Measurable sample diameter range: $\Phi 30\text{mm}$ to $\Phi 94\text{mm}$. The X-axis movement range of the hemispherical sample holder: -50mm to 0mm , continuously adjustable.	1 set	POR
TGS-50		gas cell 50mm optical path, for gas detection	1 set	POR
TGS-100		gas cell 100mm optical path, for gas detection	1 set	POR
TCP-01		temperature controlled hot press Operating temperature: 25°C to 300°C . Mold dimensions: inner diameter $\Phi 18\text{mm}$, outer diameter $\Phi 25\text{mm}$, available in thicknesses: 0.1mm, 0.2mm, 0.3mm, 0.5mm.	1 set	POR
TMF-01		Multifunctional Transmission Sample Stage Place the sheet sample (customizable according to the size and shape of the client's sample)	1 set	POR

Part Number	Images	Description	Qty	Price USD
TH-02		cell rack Place the cuvette	1 set	POR
EMB-01		Electronic moisture-proof box External dimensions: 650*590*360mm Internal dimensions: 540*460*290mm Weight: 20.65KG Reduce the environmental humidity of the instrument, improve the testing environment grade, extend the maintenance time of the instrument, and avoid moisture exposure.	1 set	POR

2.3.2 IR250

Part Number	Description	Qty	Price USD
443-301	Portable FT-IR analyzer (DTGS detector, 500–5000 cm ⁻¹ , heated sample chamber ≥180°C, anti-corrosion coatings)	1 set	POR
403-321	Sampling System Heated probe (1m) + heated lines (5m + 1m) + sampling device (Temperature ≥180°C, triple-stage filtration)	1 set	POR
403-322	2× primary, 2× secondary, 2× tertiary	6 pcs	POR
413-302	Software & Library Multi-language quantitative analysis software	1 set	POR
413-303	Software & Library Certified quantitative spectral library	1 set	POR
413-304	Software & Library 200+ compounds qualitative/semi-quantitative	1 set	POR
403-323	Computing & Power Field computer (i7/32GB/1TB/14" 2.5K touchscreen)	1 unit	POR
403-324	Portable power supply (24V 55Ah, 1500W rated, 5000W peak, ≤8kg)	2 units	POR
403-325	Sample conditioning system (Semiconductor cooling, 0.1µm filtration, phosphoric acid titration)	1 set	POR
403-326	Field report printing	1 unit	POR
403-327	Protective carrying case	1 unit	POR

2.3.3 IR850

Part Number	Description	Qty	Price USD
443-302	FT-NIR Spectrometer Main Unit	1 set	POR
403-328	Sample Rotator	1 pc	POR
403-329	Sample Cup	2 pcs	POR
403-330	Sample Tube	1 box	POR
403-331	Trans-Reflectance Block	1 pc	POR
403-332	Background Correction Accessory	1 set	POR
413-305	Measurement & Analysis Software	1 set	POR

2.3.4 HC-404

Part Number	Description	Price USD
BS 21-I-10	Infrasil quartz cuvette rectangular, 10mm pathlength	101.00
BS 21-I-10-6	Above cuvette in a package of 6	600.00
5708	10mm cuvette holder	174.00

Part Number	Description	Price USD
BS 34-I-50	Infrasil quartz cuvette cylindrical, 50mm pathlength	210.00
5710	50mm cylindrical cuvette holder	174.00
BS 34-I-100	Infrasil quartz cuvette cylindrical, 100mm pathlength	230.00
5707	100mm cylindrical cuvette holder	174.00
404-11	Freon Method EPA Method 413.2 / 418.1 TPH (used to make you own standards)	438.00
	Freon Method Reference Standard with gravimetric and I.R.	
	Freon Method Photometric certification. (NIST/USFDA,ASTM)	
404-13	Vessel Cell for Non-Freon Method	264.00
404-14	Calibration Standards in Hexane 50ml. (10, 50, 250ppm)	894.00
6105	Holder for Vessel Cell	90.00
404-1032	Spare Parts Drive Belts (5pack)	50.40
404-1004	Spare Parts Source lamp (new lamp will not fit into old holder as of serial # 990)	56.40
404-1004A	Spare Parts Upgrade holder with Lamp, one time purchase for Serial # 989 or earlier	63.60
404-9999	Spare Parts Manual	50.40

3 Raman Spectroscopy & Hyperspectral Imaging System

3.1 Raman Spectroscopy

3.1.1 RamEdu&RamEdu Pro Educational Multifunctional Raman Spectrometer

Revolutionize Your Spectroscopy Lab with the Educational Multifunctional Raman Spectrometer

Bridge the gap between theory and practice with the EduRaman series. Designed specifically for undergraduate and graduate teaching, our unique Open Optical-Path Design allows students to see exactly how the beam travels and interacts with components, making complex physical principles intuitive and visible.



RamEdu&RamEdu Pro

From identifying gemstones to monitoring reaction kinetics, the EduRaman and EduRaman Pro offer high-performance specifications designed in a student-friendly package. Whether you are teaching basic Raman principles, fluorescence, or quantitative analysis, this 4-in-1 platform provides the flexibility and safety needed for a modern chemistry or physics curriculum.

Features

- Open Optical-Path Design: Visualize internal beam paths and key optical components.
- Multi-Modal Capabilities: Supports bright-field imaging, Raman, absorption, fluorescence, and reflectance/transmittance.
- Safety & Stability: Separated laser excitation and detection regions; enclosed detection optics.
- Teaching-Oriented Software: Includes calibration wizards, data acquisition guides, and visual demonstrations.

Ordering Information

Part Number	Model number	Unit Price USD
433-303-1	EduRam-532A	23500.00
433-303-2	EduRam-532B	38000.00
433-303-3	EduRam-633A	30800.00
433-303-4	EduRam-633B	45000.00
433-303-5	EduRam-785A	25000.00
433-303-6	EduRam-785B	40000.00
433-304-1	EduRam Pro-532	31500.00
433-304-2	EduRam Pro-633	39000.00
433-304-3	EduRam Pro-785	34500.00

Accessories

Part Number	Description	Qty
413-311	Analysis software	1
403-334-01	Wavelength calibration standard	1
403-334-02	Deuterium lamp	1
403-334-03	silicon wafer	1
403-334-04	real diamond	1
403-334-05	fake diamond	1
403-334-06	real jadeite	1
403-334-07	fake jadeite	1
403-334-08	cuvette	1
403-334-09	empty slide	1
403-334-10	Absorb sample	1
403-334-11	Fluorescent sample	1
403-334-13	Microscope objectives 10x	POR
403-334-14	Microscope objectives 20x	POR
403-334-15	Microscope objectives 50x	POR
403-334-16	Microscope objectives 100x	POR
403-334-17	course materials	POR

3.1.2 RamF532 Field Raman Spectrometer for Gemstones & Diamonds analysis 532nm

Mobile Raman Spectrometer — Precision Gemstone & Diamond Analysis

532 nm excitation delivers high Raman efficiency, improved spatial resolution, and enhanced sensitivity for rapid gemstone identification, grading, and treatment detection. Engineered for mobile, high-performance analysis with integrated optical and software measures to manage fluorescence.

Ideal for jewelry authentication, customs inspection, law enforcement, pharmaceutical QC, food adulteration detection, herbal ingredients, and safety applications.

Features

- 532 nm stabilized laser — Semiconductor cooling, constant-current drive, 0–50 mW adjustable
- High-efficiency optics — 60–70% probe transmission, ~0.29% stray light
- Cooled CMOS detector — 2048 pixels, ~440:1 SNR, 16-bit dynamic range
- True portability — 6 kg integrated enclosure, 12V DC field power



RamF532 Field Raman Spectrometer

Application

Gemstone authentication and diamond grading

Treatment detection in jewelry and minerals

Customs inspection and law enforcement screening

Pharmaceutical quality control; Food safety and herbal verification

Ordering Information

Part Number	Model number	Unit Price USD
433-305	RamF532	17,500.00

3.1.3 RamF785 Field Raman Spectrometer for routine analysis 785nm

Mobile Raman Spectrometer — Field-Ready Chemical Identification

Compact, mobile Raman system with 785 nm excitation for on-site chemical analysis. Fiber-coupled design with integrated computer and software enables rapid material identification in security, pharmaceutical, and field inspection applications.

Weighing only 6 kg with suitcase-sized enclosure, this system delivers reliable non-contact measurements wherever analysis is needed.

Features

- True portability: 6 kg, compact 508 × 373 × 147 mm footprint
- 785 nm excitation for reduced fluorescence
- Built-in computer and software—no external PC required
- 1 m armored fiber probe for flexible sampling
- All-in-one software: laser control, detection, database, and analysis



RamF785 Field
Raman Spectrometer
Note: Images Same as F532

Applications

Security screening: drugs, hazardous materials, biochemical threats

Food and pharmaceutical: illegal additives, counterfeit detection, herbal composition

Gemstone and artifact authentication: non-destructive authenticity and age verification

Medical: DNA identification, metabolite analysis, cancer cell detection

R&D: advanced spectroscopic research and method development

Ordering Information

Part Number	Model number	Unit Price USD
433-306	RamF785	15,000.00

3.1.4 RamSitu Raman Microscope with Electrochemical In-Situ

RamSitu Series Raman Microscope

Compact integration without compromise. The RamSitu series breaks through the limitations of traditional bulky, expensive, and single-function Raman systems. With its compact all-in-one design, it fits easily into glove boxes and demanding environments while offering optional integrated electrochemical in-situ testing and intelligent particle recognition capabilities.



RamSitu Raman

Delivering exceptional performance at a reasonable price point, this system provides a new solution for cutting-edge research and efficient teaching. Whether characterizing 2D materials, monitoring battery interfaces, or analyzing single cells, the RamSitu combines research-grade capabilities with unprecedented accessibility.

Features

- Space Breakthrough: Miniaturized all-in-one design easily adapts to glove boxes and complex working conditions
- Molecular Fingerprinting: High sensitivity and spatial resolution for precise micro-area chemical identification and spectral imaging
- Technical Integration: Optional built-in electrochemical workstation for precise synchronized electrochemical-Raman detection
- Intelligent Detection: Advanced particle recognition and positioning algorithms enable high-throughput, automated intelligent particle analysis

Application

Materials Analysis: 2D materials, new energy materials, semiconductor characterization

Energy Systems Research: Battery interfaces, catalytic reactions, electrochemical processes

Life Sciences: Cell detection, microbial analysis, single-cell studies

Environmental Monitoring: Pollutant analysis, safety screening, contamination detection

Precision Identification: Gemstone identification, pharmaceutical polymorph screening

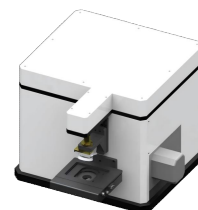
Education & Research: Teaching laboratories, frontier scientific research

Ordering Information

Part Number	Model number	Unit Price USD
433-307	RamSitu	40,000.00

3.1.5 Confocal Raman Microscope

The Ram-M330 and Ram-M350 are automated Confocal Raman Microscopes featuring a compact all-in-one design with integrated high-performance optical systems. Both models support up to three configurable excitation wavelengths (532 nm, 633 nm, 785 nm) with motorized switching, enabling simultaneous Raman and photoluminescence analysis. The system delivers high sensitivity with spectral resolution better than 1 cm^{-1} (up to 0.9 cm^{-1} for Ram-M350) and silicon third-order Raman peak SNR exceeding 30:1. Equipped with a motorized XYZ stage, research-grade upright microscope, and back-illuminated deep-cooled CCD detector (-60°C), the system offers submicron lateral resolution ($\sim 0.5\text{ }\mu\text{m}$) for micro-area Raman imaging. Advanced auto-focus image recognition and customizable automated sample handling solutions enable fully unattended operation.



Confocal Raman Microscope

Features

- **Ion Source:** Open ion source with standard dual filaments for enhanced stability and continuous operation
- **Mass Analyzer:** Hyperbolic quadrupole for precise ion separation and accurate mass detection
- **Thermal Control:** Chamber heating temperature $\leq 200^{\circ}\text{C}$ and capillary heating sleeve temperature $\leq 350^{\circ}\text{C}$ for high-temperature operation
- **Detection Performance:** Ultra-low detection limit of 1 ppm with broad dynamic range from 1 ppm to 100%
- **Method Flexibility:** Dwell time range of 1 ms \sim 16 s/amu and adjustable resolution from 0.5 \sim 2 amu for optimized analysis
- **Sample Compatibility:** Versatile sample injection pressure of 0.5 \sim 2.5 atm for diverse sample matrices
- **Data Connectivity:** Ethernet LAN port for seamless network integration and LIMS compatibility

Item	Ram-M330	Ram-M350
Focal Length	330 mm	350 mm
Spectral Resolution	$< 2\text{ cm}^{-1}$	$< 0.9\text{ cm}^{-1}$
Dimension	Compact 720 \times 553 mm benchtop	
Excitation Wavelengths	532, 633, 785 nm	
Laser Power	532 nm: 100 mW 633 nm: 35 mW 785 nm: 100 mW	
Detector Cooling	-60°C back-illuminated CCD	

Ordering Information

Part Number	Model number	Unit Price USD
423-362-1	Ram-M330-S	168,000.00
423-362-2	Ram-M330-D	193,200.00
423-362-3	Ram-M330-T	219,800.00
423-363-1	Ram-M350-S	203,000.00
423-363-2	Ram-M350-D	228,200.00
423-363-3	Ram-M350-T	254,800.00

3.2 Hyperspectral Imaging System

3.2.1 Industrial-grade Hyperspectral Camera

The Industrial-Grade Hyperspectral Camera is based on Hyperspectral Imaging Technology independently developed prism-grating dispersion spectroscopic hyperspectral imaging technology. It offers high spectral resolution, high efficiency, excellent consistency, and easy operation.

Recognizing the demanding requirements of industrial applications, the IC-10 series features high frame rates and a wide field of view to meet users' needs for higher efficiency. Its exceptional cost-performance ratio helps customers achieve greater return on investment.

The industrial hyperspectral cameras are equipped with flexible pixel binning and band selection capabilities, significantly reducing the difficulty of online data transmission and processing. This versatile instrument can be widely applied in industrial sorting, precision agriculture, food safety testing, medical pharmaceuticals, environmental monitoring, and other fields.



Industrial-grade
Hyperspectral Camera

Features

- **More Accurate Spectral Data**

Accurate, Stable, and Fast Hyperspectral Imaging for Online Industrial Applications. For real-time industrial monitoring,

- **Faster and More Flexible**

Thanks to powerful interest-area (ROI) selection capabilities, the IC-10C series hyperspectral cameras can meet diverse application needs. They support high data acquisition speeds, with full-spectrum frame rates exceeding 1,400 fps and ROI frame rates reaching up to 8,800 fps, delivering rapid data collection to enhance operational efficiency.

- **Broader Field of View**

This series employs a unique precise optical system to achieve a larger viewing angle, with a minimum focal length of just 8mm and a maximum viewing angle exceeding 75°, enabling wider scene coverage and higher detection efficiency.

- **Higher Cost-Performance Ratio**

Application

Plastic Waste Classification and Recycling

Model number	Range	Detector	Max FR	Application
IC-10C	400–780 nm	CMOS	750 fps	Color inspection, print/quality control
IC-10U	400–1000 nm	CMOS	500 fps	Extended visible, vegetation monitoring
IC-10S	380–1000 nm	CMOS	1000 fps	Low-light, high-sensitivity applications
IC-17U	900–1700 nm	InGaAs	700 fps	Entry SWIR, plastic/moisture detection

Model number	Range	Detector	Max FR	Application
IC-17S	900–1700 nm	InGaAs	1400 fps	Wide-angle SWIR sorting systems
IC-17X	900–1700 nm	InGaAs	2500 fps	Maximum speed SWIR production lines
IC-M10L	400–780 nm	CMOS	<1 min/scan	Large-area color measurement (30×20cm)
IC-1710P	350–1700 nm	CMOS+InGaAs	N/A	Wide-spectrum lab analysis

Ordering Information

Part Number	Model number	Price USD
423-336	IC-10C	25,000
423-337	IC-10U	25,000
423-338	IC-10S	25,000
423-339	IC-17U	32,000
423-340	IC-17S	32,000
423-341	IC-17X	42,000
423-342	IC-M10L	40,000
423-343	IC-1710P	15,000

3.2.2 RM-10 Series Hyperspectral Microscope

The RM Series Hyperspectral Imaging Microscope: See the Spectrum at the Microscopic Level. The RM is a fully integrated, high-precision instrument designed for advanced microscopic spectral analysis. By combining automated push-broom hyperspectral imaging with high-magnification microscopy, the system leverages the microscope's optical path to capture detailed spectral data and spatial images within the microscopic field of view without requiring sample scanning. This powerful combination provides unparalleled insight into the composition and characteristics of samples, opening new possibilities in biomedicine, materials analysis, life sciences, and forensic investigation.



RM-10 Series
Hyperspectral Microscope

Features

- The RM-10 series, equipped with lenses of different magnifications, allows for high-resolution observation and hyperspectral imaging at various zoom levels.
- Supports both reflective and transmissive illumination modes for versatile high-quality imaging.
- Equipped with a CCD camera and hyperspectral imager, enabling rapid, clear observation and measurement over large areas with precise focusing, thereby achieving synchronized collection of visible images and hyperspectral data.
- Compact design with built-in focus and zoom control, eliminating the need for manual adjustments and ensuring distortion-free imaging.
- Standard micro-interfaces and adapters compatible with various microscope brands, making integration straightforward.

- Uses a dedicated full-spectrum light source suitable for both transmission and reflection illumination, meeting the needs of professional microscopy lighting.
- Supports high spatial and spectral resolution imaging for detailed analysis.
- Compatible with other brand microscopes such as Olympus, Carl Zeiss, Nikon, and Leica for flexible, professional hyperspectral microscopy.

Application

Medical and Healthcare: Cancer tissue classification, tissue morphology inspection, drug development, and pathology research.

Biology: Bacterial and cell analysis.

Materials Science: Microstructure observation and identification.

Forensic Industry: Crime scene residue analysis and evidence examination.

Electronics Industry: Semiconductor inspection, display panel analysis, and screen testing.

Model number	Range	Detector	Max FR	Application
RM-10-U	400–1000 nm	CMOS	128 fps	Visible microscopy, pathology
RM-10-S	400–1000 nm	CMOS	68 fps	High-resolution visible microscopy
RM-30-U	900–1700 nm	InGaAs	175 fps	SWIR microscopy, semiconductors

Ordering Information

Part Number	Model	Unit Price USD
423-344	RM-10-U	40,000.00
423-345	RM-10-S	60,000.00
423-346	RM-30-U	100,000.00

3.2.3 Field Hyperspectral Imager

The RF Series Mobile Hyperspectral Imager is a hyperspectral imaging system designed for field applications. Its built-in power module eliminates the need for complex external wiring. When used together with a professional outdoor tripod, it offers the advantages of quick setup and rapid data collection.



Field Hyperspectral Imager

Features

- High-Performance Hyperspectral Camera: Supports high-cost COMS image sensors and high-performance CCD image sensors for enhanced image quality.
- Wide-Angle Quick-Change Mount: Equipped with an outdoor-specific tripod mount, enabling rapid setup and portability.
- Advanced Spectral Preprocessing Software: Compatible with Envi and other third-party software for comprehensive data analysis.
- Multiple Spectral Range Options: Covering 400–1700nm, including visible, near-infrared, and shortwave infrared regions, suitable for diverse applications.
- Precise and Automatic Scan: Models like RF-10-U, RF-30-U, and RF-30-S feature 360-degree full panoramic rotation with an integrated gimbal adjustment module for automatic speed matching and precise targeting.
- High-Accuracy Data Collection: The RF-30-S model includes a built-in scan module with automatic calibration and high-precision scanning.
- Versatile External: Support for fast aerial deployment with mobile tripod frames for field use.
- Automatic and Precise Scanning: Equipped with laser measurement modules to assist in automatic alignment and focus, ensuring reliable data collection.

Application

Agriculture and Forestry: Disease detection, early pest prevention, plant species identification, and grassland growth monitoring.

Ecological Environment: Water quality monitoring, atmospheric environment surveillance, and soil nutrient analysis.

Urban Applications: City planning, road damage inspection, environmental assessment, and scenic vegetation monitoring.

Archaeology: Site identification, material differentiation, and artifact analysis.

Geological Exploration: Prospecting, mineral detection, and geological mapping.

Military Applications: Target identification and counterfeit detection.

Model number	Range	Detector	Max FR	Application
RF-10-U	400–1000 nm	CMOS	128 fps	External sweep, 360° panoramic
RF-10-S	400–1000 nm	CMOS	128 fps	Internal push-broom, auto focus
RF-10-X	400–1000 nm	CMOS	128 fps	Integrated system, 7" touch screen
RF-30-U	900–1700 nm	InGaAs	175 fps	External sweep SWIR, 360° rotation
RF-30-S	900–1700 nm	InGaAs	175 fps	Internal push-broom SWIR, high-precision

Ordering Information

Part Number	Model number	Unit Price USD
423-347	RF-10-U	30,000.00
423-348	RF-10-S	32,000.00
423-349	RF-10-X	32,000.00
423-350	RF-30-U	45,000.00
423-351	RF-30-S	50,000.00

3.2.4 Lab Hyperspectral Imager

The Laboratory Hyperspectral Imager is a high-performance instrument specifically engineered for laboratory applications. Its core dispersive spectral module is independently developed by Hangzhou Hyperspectral and supports a wide range of optional imaging sensors. When paired with ultra-high-resolution cameras, it achieves the perfect balance of high spatial resolution and high spectral fidelity.

For enhanced precision, the system can be configured with our proprietary linear light source and specially designed darkroom enclosure, minimizing environmental interference during sample testing. Combined with our unique spatio-temporal radiometric calibration technology, the NWH8000 Series delivers stable, standardized hyperspectral data ideally suited for advanced scientific analysis.



Lab Hyperspectral Imager

Features

- High-Performance Camera System: Equipped with large-aperture, high light-gathering optics, supporting advanced CMOS sensors and optional high-end CCD sensors.
- Uniform Illumination: Wide, homogeneous line or beam light source matched to the camera field of view ensures full dataset coverage.
- Precision Calibration: Supports both spectral and spatial calibration for enhanced measurement accuracy.
- High-Resolution Hyperspectral Imaging: Captures detailed spatial images combined with rich spectral data for comprehensive multi-dimensional analysis.
- Rapid Scanning & Data Management: Enables fast acquisition of large datasets with convenient storage and processing.
- Autofocus Function: Automatically adjusts focus based on sample thickness, ensuring consistently sharp images.
- Real-Time Processing : Provides real-time collection, analysis, and storage of hyperspectral data.
- Standardized, Stable Data: Generates calibrated hyperspectral datasets optimized for precise scientific research.
- Adaptive Autofocus & Elevation Adjustment : Maintains clarity across varying sample thicknesses.
- Time-Based Spectral Optimization: Automatically suggests acquisition times based on sample reflectance, improving spectral quality.
- Software Compatibility: Fully compatible with third-party analysis software such as ENVI.

Application

Forensic Science & Document Examination: Evidence, seals, signatures, alterations, inks, printed materials, certificates, fingerprints.

Food & Agriculture: Fruits, vegetables, meat, grains, tea leaves.

Material Sorting: Tobacco, pharmaceuticals.

Authentication & Verification: Cultural relic identification, gemstone and jewelry analysis.

Hyperspectral imaging technology is non-destructive, rapid, and environmentally friendly, enabling efficient quality inspection and identification of traditional medicinal materials such as honeysuckle and mountain honeysuckle.

Model number	Range	Detector	Max FR	Application
RL-10-U	400–1000 nm	CCD	128 fps	Standard lab bench, forensic analysis
RL-10-S	400–1000 nm	CCD	80 fps	Lightproof darkroom, high-res 24MP camera
RL-30-U	900–1700 nm	InGaAs	300 fps	SWIR lab analysis, 5MP camera
RL-30-S	900–1700 nm	InGaAs	300 fps	High-res SWIR, 24MP camera, CameraLink
RL-50-U	1000–2500 nm	HgCdTe	340 fps	Extended MWIR, 40MP camera

Ordering Information

Part Number	Model number	Unit Price USD
423-352	RL-10-U	44,000.00
423-353	RL-10-S	67,000.00
423-354	RL-30-U	69,000.00
423-355	RL-30-S	74,000.00
423-356	RL-50-U	89,000.00

3.2.5 RC Series Research Hyperspectral Camera

The **RC Series** employs independently developed **prism-grating dispersion hyperspectral imaging technology** with push-broom imaging. It delivers high spectral resolution, high efficiency, excellent spectral linearity, and minimal spectral distortion in a compact, lightweight design.

The series covers **200nm to 12µm** wavelength range across UV, Visible/NIR, NIR, SWIR, and LWIR bands, serving applications in education/research, smart agriculture, ecological protection, intelligent manufacturing, and industrial inspection.

Features

- High spectral resolution with prism-grating technology
- Wide wavelength coverage from UV to LWIR
- Multiple detector options (cooled and uncooled)
- Compact and lightweight design
- Standard C-Mount lens compatibility
- Flexible integration for diverse applications
- Complete software support with SDK
- Cost-effective solution with high performance



RC Series Research Hyperspectral Camera

Model Number	Product Name	Spectral Range	Spectral Resolution	Detector	Interface
RC-30-02	UV Hyperspectral Camera	250–490 nm	<2 nm	CMOS	GigE
RC-60-01	VNIR Hyperspectral Camera	400–1000 nm	<2.3 nm	CMOS	GigE
RC-60-03	VNIR Hyperspectral Camera (Cooled)	400–1000 nm	<2.3 nm	sCMOS (TE Cooled)	USB 3.0
RC-10-05	NIR Hyperspectral Camera	900–1700 nm	<6 nm	InGaAs (TE Cooled)	GigE
RC-10-03	SWIR Hyperspectral Camera	900–2500 nm	<10 nm	HgCdTe (Stirling Cooled)	GigE
RC-10-01	LWIR Hyperspectral Camera	7.7–12.5 µm	<40 nm	Cooled IR Detector	GigE

Order information

Product Number	Model Number	Unit Prices USD
423-332	RC-30-02	47,400.00
423-330	RC-60-01	17,400.00
423-331	RC-60-03	27,800.00
423-333	RC-10-05	32,200.00
423-334	RC-10-03	213,000.00
423-335	RC-10-01	300,000.00

3.3 UAV Hyperspectral Imager

3.3.1 RU Series UAV-Mounted Hyperspectral Camera

Description

The RU Series is a purpose-built UAV-mounted hyperspectral camera line developed for direct drone integration. Engineered from the ground up for aerial platforms, these cameras deliver "spectrum plus

image" remote sensing without external gimbals or complex mounting systems. From sub-1kg VNIR units for standard commercial drones to full-spectrum 400-2500nm systems for heavy-lift UAVs, each model features native drone connectivity and streamlined power/data interfaces for plug-and-flight deployment across precision agriculture, water quality monitoring, mineral surveys, and autonomous drone-in-box operations.

RU-10-L Features (Lightweight VNIR)

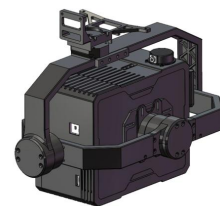
- Native UAV Mounting: Direct airframe integration, no external gimbal required
- Weight: Under 1kg for standard commercial drone compatibility
- Spectroscopic Capability: 2.8nm spectral resolution @ 650nm
- Geometric Calibration: Built-in GPS/INS position calibration
- High-Definition Imaging: RGB synchronization
- Multidimensional Data Analysis: Spectral and spatial data fusion
- Water Quality Parameters: Compatible with TN/TP/COD/NH4/Chla/CDOD/OSSI
- Internal Calibration: WDN/WDPN/RDN/RDPN indexing
- Real-Time Monitoring: Immediate data insights during flight
- Navigation: Auto detection via GPS/INS



RU-10-L
UAV Hyperspectral Imager

RU-30-L Features (SWIR Payload)

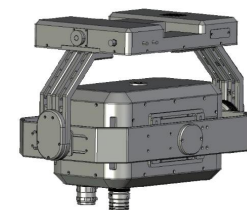
- Native UAV Mounting: Direct integration with small UAV platforms
- Platform Compatibility: Optimized for DJI M350 RTK and similar frames
- Compact SWIR Module: 900-1700nm near-infrared hyperspectral imaging
- High Spectral Resolution: Precise spectral data capture
- Fog Penetration: SWIR capability for adverse weather observation
- Camouflage Detection: Military and security applications



RU-30-L
UAV Hyperspectral Imager

RU-70-U Features (Full-Spectrum)

- Native UAV Mounting: Direct heavy-lift UAV integration
- Full-Spectrum Coverage: 400-2500nm continuous range, 460 bands
- Dual-Detector Design: CMOS + HgCdTe for complete VNIR-SWIR capture
- Extended Range Capability: Full spectral signature identification
- High Frame Rate: 128 fps for rapid area coverage
- Advanced Geological Survey: Mineral and resource exploration optimized
- Comprehensive Water Analysis: Full parameter water quality assessment
- Precision Agriculture Enhancement: Deep crop health and stress analysis



RU-70-U
UAV Hyperspectral Imager

Model	Spectral Range	Detector	Max FR	Application
RU-10-L	400–1000 nm	CMOS	120 fps	Direct UAV mount, <1kg, precision agriculture
RU-30-L	900–1700 nm	InGaAs	125 fps	Direct UAV mount, SWIR payload, fog penetration
RU-70-U	400–2500 nm	CMOS+HgCdTe	128 fps	Direct UAV mount, full-spectrum, 460 bands

Ordering Information

Part Number	Model number	Unit Price USD
423-357	RU-10-L	30,470.00
423-358	RU-30-L	67,530.00
423-359	RU-70-U	387,058.00

3.3.2 RU-10-E UAV Hyperspectral Imager with Drone

The WingNest UAV-mounted Hyperspectral Automated Monitoring System is built around proprietary hyperspectral imaging technology. It integrates industry-leading drone flight platforms and ground stations to address key challenges such as flight control, video transmission, safety monitoring, automated data processing, intelligent early warning, and remote system updates. This innovative approach significantly reduces operational complexity, enabling truly autonomous hyperspectral remote sensing missions—a first worldwide achievement. The system supports multi-dimensional data synchronization, allowing a single flight to capture hyperspectral data across 300 spectral bands along with high-definition visible-light imagery.



RU-10-E
UAV Hyperspectral Imager

Features

- Autonomous Operation
- Remote Monitoring and Management
- Built-in Intelligent Algorithms
- Real-time Inversion Capability
- Multi-Scenario Adaptability
- Third-Party Data Calibration
- Ultra-Compact Design: Total weight ≤1kg for easy UAV integration and maneuverability
- High-Capacity Storage: Built-in 1TB SSD with 16GB RAM; supports continuous operation up to 8 hours
- Seamless Data Workflow:

Model number	Detector	Max FR	Application
RU-10-E	CMOS	120 fps	Automated drone-in-box system, autonomous missions

Ordering Information

Part Number	Model number	Unit Price USD
423-360	RU-10-E	114,882.00

3.4 Hyperspectral Accessories

3.4.1 Light Source

Part Number	Model	Price USD
403-333-01	1010 Light Source	150.00
403-333-02	1020 Light Source	150.00
403-333-03	1050 Light Source	720.00
403-333-04	1130 Light Source	930.00
403-333-05	1150 Light Source	1,200.00
403-333-06	2020 Light Source	4,000.00
403-333-07	2030 Light Source	4,000.00
403-333-08	2050 Light Source	8,600.00
403-333-09	3010 Light Source	290.00
403-333-10	3020 Light Source	500.00

3.4.2 Software

Part Number	Software	Price USD
413-306	Hyperspectral Data Acquisition Software – Universal Edition (Features continuously updated)	Free
413-307	Hyperspectral Camera Secondary Development Software – Universal Edition	Free
413-308	Hyperspectral Data Processing and Analysis Software Basic Edition (Features continuously updated)	2,200.00
413-3081	Paid Feature-Water Quality Parameter Retrieval	720.00
413-3082	Paid Feature-Color and Color Difference Calculation	720.00
413-3083	Paid Feature-Deep Learning Module	720.00
413-309	Hyperspectral Data Annotation & Modeling Software – Basic Edition (additional features are under development)	720.00
413-3091	Paid Feature-Model Deployment	2,900.00
413-310	Real-Time Hyperspectral Data Classification Software – Basic Edition (additional features are under development)	1,500.00
413-3101	Paid Feature-Algorithm Module	2,900.00

4 Elemental Analysis

4.1 ICP Spectrometer

4.1.1 ICPO-30 ICP Spectrometer for direct oil analysis

High-performance inductively coupled plasma optical emission spectrometer for elemental analysis. Features configurable holographic gratings (2400/3600/4320 lines/mm) to optimize resolution versus wavelength coverage based on application needs. 1-meter Czerny-Turner optical system with argon purge enhances UV sensitivity 30-100%. Designed for petroleum, environmental, and industrial laboratories requiring ppb-level detection limits and robust sample handling.



ICPO-30
ICP Spectrometer for direct oil analysis

Features

- Grating Selection • 2400 lines/mm: 160-800nm range, detects K and Na, general purpose analysis • 3600 lines/mm: 160-530nm range, 9pm resolution, optimized for wear metals • 4320 lines/mm: 160-442.5nm range, 7pm resolution, maximum spectral separation
- UV Detection Range • Standard: Pb detection at 168nm • Extended upgrade: Cl at 134nm, Br at 154nm for halogen analysis
- Nebulizer Options • Standard concentric: Aqueous samples, stable operation, low maintenance • Oil analysis kit: Oxygen gas + cooled chamber + oil nebulizer for diesel/gasoline direct injection; wax and heavy oil require pretreatment
- Stability Guarantee • Short-term stability: $\leq 1.5\%$ RSD • Long-term stability: $\leq 2.0\%$ RSD
- Optical Purge System • UV sensitivity enhancement: +30-100% • Moisture removal and contamination prevention • Optional drying tube for enhanced purge gas purity

Application

Environmental: water/soil heavy metals

Food/Agriculture: minerals/trace elements

Petrochemical: diesel/gasoline/lubricants

Metallurgy: alloy/pure metals

Pharmaceutical: ICH Q3D impurities

Research: quantitative analysis

High-resolution: trace analysis (no K/Na)

Ordering Information

Part Number	Model number	Unit Price USD
643-603	ICPO-30	50,000.00

Accessories

Part Number	Description	Qty
643-603	ICP Host	1
603-60712	Diffraction Grating 3600	1
613-601	ICP Analysis Software	1
603-6311	Computer main unit	1
603-6312	Laser Printer	1
603-6313	Serial port cable	1
603-6314	Split-control power strip	1
603-6075	Test plate	1
603-6012	Quartz torch tube	2
603-6032	Quartz mist chamber	2
603-6022	Quartz Atomizer	2
603-6081	Axial flow fan	1
603-6082	Ventilation duct	1
603-6083	φ6 Endotracheal intubation	1
603-6084	φ6 Three-way tracheal straight insertion	1
603-6085	PU φ6 Blue trachea	1
603-6086	PU φ6 Orange trachea	1
603-6087	Capillary	1
603-6088	Waste liquid pipe	1
603-6091	Intelligent Cooling Tank	1
603-6092	Low-temperature coolant circulation pump	1
603-6093	PU φ10 Water pipe	1
603-6301	Copper strip	1
603-6302	Copper coin	1
603-60711	Diffraction Grating 2400	POR
603-60713	Diffraction Grating 4320	POR
603-6011	Quartz torch tube	POR
603-6031	Quartz mist chamber	POR
603-6021	Quartz Atomizer	POR
603-6024	High-salt nebulizer	POR
603-6023	HF-resistant nebulizer	POR
603-6013	HF-resistant quartz torch	POR
603-6033	HF-resistant spray chamber	POR

4.1.2 ICP-10 Routine ICP Spectrometer

High-performance inductively coupled plasma optical emission spectrometer for rapid multi-element analysis. Analyzes 15 elements per minute with 2-6 minute sample throughput. Features configurable holographic gratings (2400/3600/4320 lines/mm) to optimize resolution versus wavelength coverage. 1-meter Czerny-Turner optical system with argon purge and thermostated chamber ensures thermal stability and enhanced UV sensitivity.



ICP-10 Routine ICP Spectrometer

Compact integrated design with intelligent automated control reduces operator intervention and improves reproducibility. Suitable for environmental monitoring, metal smelting, mineral analysis, and food safety testing.

Features

- **Dual Analysis Modes** • 2-minute rapid screening for high-throughput labs • 6-minute comprehensive analysis for full elemental profiles • Full-spectrum direct reading captures all elements in single run
- **Configurable Holographic Gratings** • 2400 lines/mm: 160-800 nm range, 16 pm resolution — detects K, Na, full spectrum coverage • 3600 lines/mm: 160-530 nm range, 9 pm resolution — optimized for transition metals (Fe, Cu, Mn, Cr, Ni, Zn) • 4320 lines/mm: 160-442.5 nm range, 7 pm resolution — maximum separation for complex matrices
- **Environmental Protection System** • Inflation device prevents moisture damage to precision optical components • High corrosion-resistant materials ensure long-term stability • Argon-purged optical chamber enhances UV sensitivity
- **Intelligent Automated Control** • Auto-adjusts gas flows, RF power, and sample introduction parameters • Reduces operator intervention and improves reproducibility • Windows 7/10/11 compatible software with built-in element database
- **Sample Introduction Kits** • KIT-AQUEOUS: General solutions, environmental water, food digests — standard concentric nebulizer • KIT-HIGH-SOLIDS: Mineral digests, metallurgical samples with high dissolved solids • KIT-ORGANIC: Organic solvents, oil analysis — cooled spray chamber with specialized nebulizer
- **Performance & Stability** • Analysis speed: 15 elements per minute • Detection limits: ppb level (Mn ≤ 0.002 mg/L) • Short-term stability: $\leq 1.5\%$ RSD • Long-term stability: $\leq 2.0\%$ RSD • Wavelength precision: ± 0.03 nm indication, ≤ 0.003 nm reproducibility
- **Compact Design** • 1-meter Czerny-Turner optical path in integrated footprint • Dimensions: 150 × 50 × 107 cm (W×D×H), 235 kg • Smaller footprint than conventional ICP systems

Application

Environmental monitoring, Mineral analysis, Metal smelting, Food safety, Meeting the needs of all industries.

Ordering Information

Part Number	Model number	Unit Price USD
643-604	ICP-10	40,000.00

Accessories

Part Number	Description	Qty
643-603	ICP Host	1
603-60712	Diffraction Grating 3600	1
613-601	ICP Analysis Software	1
603-6311	Computer main unit	1
603-6312	Laser Printer	1
603-6313	Serial port cable	1
603-6314	Split-control power strip	1
603-6075	Test plate	1
603-6011	Quartz torch tube	2
603-6031	Quartz mist chamber	2
603-6021	Quartz Atomizer	2
603-6081	Axial flow fan	1
603-6082	Ventilation duct	1
603-6083	φ6 Endotracheal intubation	1
603-6084	φ6 Three-way tracheal straight insertion	1
603-6085	PU φ6 Blue trachea	1
603-6086	PU φ6 Orange trachea	1
603-6087	Capillary	1
603-6088	Waste liquid pipe	1
603-6091	Intelligent Cooling Tank	1
603-6093	PU φ10 Water pipe	1
603-6301	Copper strip	1
603-6302	Copper coin	1
603-60711	Diffraction Grating 2400	POR
603-60713	Diffraction Grating 4320	POR
603-6012	Quartz torch tube	POR
603-6032	Quartz mist chamber	POR
603-6022	Quartz Atomizer	POR
603-6024	High-salt nebulizer	POR
603-6023	HF-resistant nebulizer	POR
603-6013	HF-resistant quartz torch	POR
603-6033	HF-resistant spray chamber	POR

4.2 Atomic Absorption Spectrometer

4.2.1 AA-230 Flame Atomic Absorption Spectrometer

The AA-230 Atomic Absorption Spectrometer comes with three powered lamp brackets inside of the instrument and can be upgraded to include D2 background correction.

Features

- 10" Color touchscreen; 4 USB ports;
- 5 screen tabbed GUI;
- Automated wavelength setting;
- High Energy Optical Design Automated Slit selection;
- Optional D2 Background correction;
- Push button ignition;
- Robust Steel & Aluminum Build; Unparalleled Reliability;(graphic user interface);



AA-230 Flame Atomic Absorption Spectrometer

Installation and familiarization

Our technician will come and install the instrument & show you how to use the instrument controls (4 hrs).
Advanced Atomic absorption training

Our advanced training is 8 hours on site. We can teach 2-3 lab tech's the principles of AA. Teach operators how to use the instrument and develop a method for compliance.

Buck Scientific Factory Training

Each quarter Buck Scientific offers factory training for Atomic absorption, UV/Vis, & Microwave digestion. The courses are 8 hours each and cost \$695 per student. By the end of the day you will be comfortable running samples through the instruments here in our demo lab, and know how the instruments work.

Ordering Information

Part Number	Model number	Unit Price USD
626-601	AA-230	22,999.00

Accessories

Part Number	Description	Price USD
BS303-0106	Acetylene Pressure Regulator (Includes 2 brass fittings)	738.00
BS303-0263	Air Pressure Regulator	660.00
BS303-0204	Nitrous Oxide Pressure Regulator	846.00
210-0541	Nitrous Oxide Burner Head	1,512.00
BS303-0407	Hood and Vent Kit, Stainless Steel (110V)	1,950.00
BS303-0417	Hood and Vent Kit, Stainless Steel (220V)	1,950.00
BS303-0313	Oil-less Air Compressor (110V)	1,350.00
BS303-0314	Oil-less Air Compressor (220V)	1,530.00
BS303-0229	Air Filter (Includes brackets, 2 brass fittings and spare cartridge)	330.00
6103A	Flash Arrestor (Includes 2 brass fittings)	390.00
BS30042	Minor AA Spares Kit (includes nebulizer, impact bead, and other spares)	1,411.20
BS30043	Major AA Spares Kit (includes complete spray chamber, burner head, etc.)	5,928.00

4.2.2 AA-235 Flame Atomic Absorption Spectrometer with upgraded safety features

Our 235ATS gets safety upgrades from the base 230ATS. A flame sensor cuts gasses in case of flame outage. The drain sensor prevents drain bottle flashbacks from acetylene build-up. The automated gas box prevents flashback from occurring while changing oxidant from air to N₂O.



AA-235 Flame Atomic Absorption Spectrometer
Note: Images Same as AA230

Features

- High energy optical design for superior sensitivity; Automated Slit selection;
- In-line D2 Background correction; Push button ignition;
- Automated wavelength setting; 10" Color touchscreen;
- Push button oxidant change-over for N₂O ; 3 lamp turret ;
- Flame detector with automatic gas shut down; Small footprint ;
- Sample drain sensor to prevent flashbacks; Made in the USA;

Installation and familiarization: Our technician will come and install the instrument & show you how to use the instrument controls (4 hours).

Advanced Atomic absorption training: Our advanced training is 8 hours on site. We can teach 2-3 lab tech's the principles of AA. Teach operators how to use the instrument and develop a method for compliance.

Buck Scientific Factory Training: Each quarter Buck Scientific offers factory training for Atomic absorption, UV/Vis, & Microwave digestion . the courses are 8 hours each and cost \$695 per student. By the end of the day you will be comfortable running samples through the instruments here in our demo lab, and know how the instruments work.

Ordering Information

Part Number	Model number	Unit Price USD
626-602	AA-235	25,999.00

Accessories

Part Number	Description	Price USD
BS303-0106	Acetylene Pressure Regulator (Includes 2 brass fittings)	738.00
BS303-0263	Air Pressure Regulator	660.00
BS303-0204	Nitrous Oxide Pressure Regulator	846.00
210-0541	Nitrous Oxide Burner Head	1,512.00
BS303-0407	Hood and Vent Kit, Stainless Steel (110V)	1,950.00
BS303-0417	Hood and Vent Kit, Stainless Steel (220V)	1,950.00
BS303-0313	Oil-less Air Compressor (110V)	1,350.00
BS303-0314	Oil-less Air Compressor (220V)	1,530.00
BS303-0229	Air Filter (Includes brackets, 2 brass fittings and spare cartridge)	330.00
6103A	Flash Arrestor (Includes 2 brass fittings)	390.00
BS30042	Minor AA Spares Kit (includes nebulizer, impact bead, and other spares)	1,411.20
BS30043	Major AA Spares Kit (includes complete spray chamber, burner head, etc.)	5,928.00

4.3 Atomic Fluorescence Spectrometer

4.3.1 AFS- Atomic Fluorescence Spectrometer

AFS- is a classic and practical atomic fluorescence spectrometer, standard-equipped with an automatic sampler for more than 100 positions. The software dynamically displays the status of instrument online connection, preheating, pipeline flushing, etc. It features consumable life statistics and monitoring functions, facilitating understanding of the usage status of pump tubes, element lamps, and other consumables. Report formats support output in multiple formats such as WORD, EXCEL, and PDF. It supports upgrading to WIFI functionality, allowing experimental personnel to experience the joy of remote operation.



AFS-
Atomic Fluorescence Spectrometer

It is used for detecting 12 kinds of trace elements (As, Se, Hg, Sn, Te, Sb, Ge, Cd, Zn, Pb, Bi, Au) in different samples (environment, food, water supply and drainage, agricultural products, geology and metallurgy, cosmetics, traditional Chinese medicinal materials, soil and feed, blood, etc.).

Features

- Two elements simultaneously through dual channels, achieving the detection of the content of two elements with a single sample injection.
- The hollow cathode lamp adopts a new pulse modulation and constant current drive power supply method, with encoding technology. The instrument automatically identifies elements, automatically configures lamp current, and automatically monitors the service life of element lamps.
- The atomizer height does not require adjustment and can be automatically ignited.
- The sampling system includes a three-dimensional matrix fully automatic sampler for more than 120 positions, equipped with a carbon fiber sampling needle. The automatic sampler is installed above the main unit, integrated with the main unit to reduce the footprint. It has an active needle washing function to avoid cross-contamination caused by high-concentration samples.
- The hydride reactor and the first-stage gas-liquid separator are made of special materials in an integrated manner, with no connecting pipelines in between, ensuring full reaction of the sample, small dead volume, and no sample cross-contamination.
- Automatic low-pressure alarm function for argon gas and a gas circuit protection device against backfire.
- Automatic leak detection function to prevent instrument corrosion caused by leaks.
- When shutting down, the gas source is automatically cut off, and the gas circuit is automatically turned on during sample analysis, effectively saving argon consumption.
- Instrument status indicator lights use different colors to display real-time working, standby, and fault statuses.
- The spectral control software has functions for statistics and monitoring the service life of consumables such as element lamps and peristaltic pump tubes, with simple operation.

Ordering Information

Part Number	Model number	Unit Price USD
623-605	AFS-	11,500.00

Accessories

Part Number	Description	Qty	Unit Price USD
623-605	AFS host	1	-
623-608	Automatic Sampler	1	-
603-640-1	Automatic sampler test tube-50ml	7	-
603-640-2	Automatic sampler test tube-15ml	1	-
603-640-3	Gas-liquid separator connecting tube	1	-
603-640-4	Sampling pump tube	1	14.00
603-640-5	Waste discharge pump tube	1	17.00
603-640-6	Sample sampling tube	1	
603-640-7	Waste liquid tube	1	10.00
603-641	Secondary gas-liquid separator	1	125.00
603-642-1	External thread straight-through 16	1	-
603-642-2	External thread straight-through 32	1	-
603-643	External thread straight-through fitting 48	1	-
603-644	Reaction module	1	-
603-645	Sampling needle	1	66.00
603-646	Reagent bottle	1	-
603-647	Test tube rack	1	-
603-648	Pressure reducer outlet quick connector	1	-
603-649	Bracket fixing screw	1	-
603-650	Argon gas tube	1	-
603-651	Ignition Furnace Wire	1	60.00
603-652	Atomizer Furnace Core	1	280.00
603-653	Pump Clamp	1	33.00
213-102	High-performance hollow cathode lamp-Sb	1	POR
213-103	High-performance hollow cathode lamp-As	1	POR
213-106	High-performance hollow cathode lamp-Bi	1	POR
213-108	High-performance hollow cathode lamp-Cd	1	POR
213-118	High-performance hollow cathode lamp-Ge	1	POR
213-119	High-performance hollow cathode lamp-Au	1	POR
213-126	High-performance hollow cathode lamp-Pb	1	POR
213-130	High-performance lamp-Hg	1	POR
213-145	High-performance hollow cathode lamp-Se	1	POR
213-151	High-performance hollow cathode lamp-Te	1	POR
213-155	High-performance hollow cathode lamp-Sn	1	POR
213-161	High-performance hollow cathode lamp-Zn	1	POR

4.4 Flame Photometer

4.4.1 FP-8 Flame Photometer

The FP-8 Flame Photometer is a state of the art instrument designed for precise quantitative analysis of alkaline metals (K,Na) across a wide range of industries. With its robust construction, user friendly interface, and high-performance capabilities, the FP-8 ensures reliable results for your laboratory, production, or research applications.



FP-8 Flame Photometer

Features

- Dual-Element Detection – Simultaneously measure Potassium (K) and Sodium (Na) with high accuracy.
- Intuitive Touch Controls – Easy operation with pre-selected flame size and calibration functions.
- Flame Safety – Equipped with a flameout protection device for secure operation.
- Data Connectivity – RS232 interface for seamless connection to printers and PC software.
- Stable Performance – High repeatability ($\leq 3\%$) and stability for consistent results.
- Compact & Portable – Lightweight (10 kg) and space-saving design for flexible lab setups.

Application

The FP-8 is ideal for:

Cement, Glass & Ceramics – Quality control in manufacturing applications.

Agriculture – Soil and fertilizer analysis.

Pharmaceuticals & Beverages – Compliance and safety testing.

Petrochemical & Metallurgy – Elemental detection in raw materials.

Healthcare & Education – Research and clinical diagnostics.

Why Choose the FP-8?

Precision – Advanced optical and detection systems for accurate readings.

Ease of Use – Simple setup with automated ignition and intuitive controls.

Safety – Built-in flameout protection and gas leakage prevention.

Versatility – Compatible with liquefied petroleum gas (LPG) or propane.

Complete Package Includes

Main Host Unit	Chimney components	Inner hexagon spanner
Air compressor	Glass tube, Capillary, fuse	Product Qualification certificate
PU Hose (2.5m) & Silicon Tube (0.6m)	Power line, steel wire	Optional printer upon request

Ordering Information

Part Number	Model number	Unit Price USD
623-606	FP-8	-

Accessories

Part Number	Description	Qty
623-606	Main Host Unit	1
603-680	Chimney components	1
603-681	Inner hexagon spanner	1
603-682	Air compressor	1
603-683	Glass tube	1
603-684	Capillary	1
603-685	fuse	1
603-686	Power line	1
603-687	steel wire	1
603-688	PU Hose (2.5m)	1
603-689	Silicon Tube (0.6m)	1
603-690	Optional printer upon request	POR

4.5 Elemental Analysis Accessories

4.5.1 Hydride generation

A flow injection hydride generator that pairs with an Atomic Absorption Spectrophotometer. Press one button to start and the HG-6 automatically delivers your samples to the AA for fast, stable peak readings.

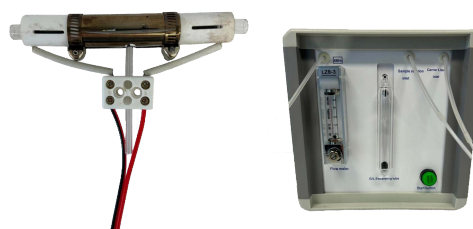
Overview

Hydride atomic absorption method for trace As, Se, Sb, Bi, Pb, Sn, Te, and Ge.

Cold vapor method for Hg.

Carrier gas pressure powered pneumatic automation replaces a peristaltic pump.

Compatible with old and new Atomic Absorption instruments.



Absorption Quartz Tube

Features

- One-Button Operation: Start runs sampling, reaction, measurement, and cleaning automatically.
- Fast Performance: 25 seconds per reading, strong sensitivity and repeatability for trace work.
- Pneumatic Automation: Carrier-gas pressure provides timed liquid injection simplifying operation.
- Efficient Design: Uses 2–2.5 ml of sample, low solution, and no acetylene consumption.
- Wide Compatibility: Works with most old and new atomic absorption instruments.
- Great Performance & Reliability: Our electro-thermal quartz tube heats rapidly, holds stable temperature, and installs easily. Service life is more than 10× longer than flame heating

Application

Environmental: water & soil screening; and more;

Semiconductor: High-purity acids & solvents

Academia & Education: teaching/research projects

Food & Agriculture: Measures trace contaminants

Mining & metallurgy: ores, leach solutions, refinery streams

Pharma & Chemical R&D: raw materials and finished goods QC

Ordering Information

Part Number	Model number	Unit Price USD
623-607	HG-6	-

Accessories

Part Number	Description	Qty
623-607	Flow injection hydride generator	1
603-691-1	electrically heated quartz absorption tube	1
603-691-2	nitrogen (or argon) gas pressure reducer	1
603-691-3	syringe	1
603-691-4	screwdriver	1
603-691-5	two-core power cord	1
603-691-6	three-core power cord	1
603-691-7	plastic gas source tube	1
603-691-8	fixed clip	1
603-691-9	magnetic tube	1
603-691-10	fixing screw	1
603-691-11	remote control automatic reading wiring	1

5 Sample Processing Instrument

5.1 Microwave Digestion System

5.1.1 MW-1600 (50 ml vessels)

Our Latest microwave digestion system (The Alchemist 1600) was designed from the ground up to offer the safest, and easiest to use microwave digestion system we have ever offered. Our finger tight vessels and wireless temperature and pressure monitoring eliminate the need for costly consumables.

System Details

Our patented finger tight vessels are designed to be the safest and easiest to use on the market. Our patented pressure relief system automatically reseals in, the event of an over-pressurization

The high-tensile steel door features double interlocks which ensures operator safety.

Audible Anomaly Detection System will notify the user with an alarm in case of vessel rupture.

The Alchemist 1600's on-board computer can store and edit up to 255 user pre-set methods for fast and easy operation. Each preset method has parameters for time, temperature, pressure, and microwave power (0-1000 watts). 10 common methods come preloaded.

The Alchemist 1600 will automatically adjust power output to ensure your samples stay within the heat and temperature parameters you set.

The wireless temperature and pressure monitoring allows our carousel to continuously rotate. This distributes heating more evenly and eliminates carousel motor wear from constant direction changes.

The 7" (17.78 cm) color touchscreen displays real-time temperature and pressure reading of each vessel, along with working time and tendency curves.

Triple coated TFM coated 316 stainless steel construction ensures years of corrosion resistance.

The Alchemist 1600 can operate with 1-16 vessels.

The system will automatically count the vessels at the beginning of each run & adjust the power accordingly.

Features

- **Simple:** Our Easy to use 7" touchscreen can store 255 user installed methods making start-up a breeze. No costly temperature probes to replace or pesky rupture disc to deal with.
- **Efficient:** Our tool-less vessels give you quicker set-up times, eliminating the frustration of searching for tools.
- **Effective:** Powerful tools allow users to set power output 0-1000 watts, time, temperature and pressure. All settings are monitored and controlled by the on-board computer.



MW-1600 (50 ml vessels)
Microwave Digestion System

Ordering Information

Part Number	Model number	Unit Price USD
526-404	MW1600	19,699.00

Accessories

Part Number	Description	Price USD
Alchemist 56	56 Position Hot Plate for sample pre-treatment and evaporation	5,000.00
Alchemist 42	42 Position Hot Plate for sample pre-treatment and evaporation	4,000.00
BMV-50	Complete Microwave Digestion Vessel (60ml)	695.00
BMV-50-IN	Inner Sample Digestion Vessel (for use with the Alchemist 42,56)	475.00

5.1.2 MW-4000 (50 ml vessels)

Overview

Our Latest microwave digestion system (The Alchemist 4000) is the culmination of over 20 years of continuous refinement.

Powerful 3000 Watt output

Advanced Safety Systems

Easy Access to Vessels

Top Load Design for Superior safety

Tool-less Finger Tight Vessel



MW-4000 (50 ml vessels)
Microwave Digestion System

Features

- The powerful Alchemist 4000 has 3000 watts of fully adjustable power output (0-3000 watts) to tackle the toughest digestions.
- Our advanced Safety features ensure the safest possible working environment for you and your samples. The Alchemist 4000 will automatically adjust power output when heat or pressure parameter limits are achieved.
- The ergonomic top-loader design makes our system easier to use, simply remove one vessel at a time without the hassle of lifting a heavy carousel.
- Our patented finger tight vessels require no tools, and eliminate contamination worries with wireless real-time temperature and pressure monitoring.

Safety Features

- Our patented finger tight vessels are designed to be the safest and easiest to use on the market.
- Each vessel is temperature and pressure are continuously monitored to keep sample temperature and pressure within the pre-set ranges input by the user.
- The high-tensile steel door features double interlocks which ensure operator safety.
- Audible Anomaly Detection System will notify the user with alarm in case of vessel rupture.

System Details

The on-board computer can store and edit up to 255 user pre-set methods for fast and easy operation.

Each preset method has parameters for time temperature, pressure and microwave power (0-3000 watts).

Our 360 degree carousel ensures even heating and also an extended motor life since there is no continuous stopping and starting.

The 7" (17.78 cm) color touchscreen displays real-time temperature and pressure reading of each vessel, along with working time and tendency curves.

TFM coated 3/16 stainless steel construction ensures years of corrosion resistance.

Ordering Information

Part Number	Model number	Unit Price USD
526-405	MW4000	38,499.00

Accessories

Part Number	Description	Price USD
Alchemist 56	56 Position Hot Plate for sample pre-treatment and evaporation	5,000.00
Alchemist 42	42 Position Hot Plate for sample pre-treatment and evaporation	4,000.00
BMV-50	Complete Microwave Digestion Vessel (60ml)	695.00
BMV-50-IN	Inner Sample Digestion Vessel (for use with the Alchemist 42,56)	475.00

5.2 Acid-rinsing Instrument

5.2.1 HB-42 (50 ml vessels)

The Alchemist Heating Block is used for the pre-heating of some organic samples and acid vaporizing after microwave digestion.

Features

- Sample batch processing quantity: 1~42 sample cups
- Sample heating holes: hole diameter 32 mm, hole depth 118mm. The diameter and the depth of the hole, can design according to the users requirements



HB-42 (50 ml vessels)
Alchemist Heating Block

Ordering Information

Part Number	Model number	Unit Price USD
526-406	HB-42	2,999.00

5.2.2 HB-56 (50 ml vessels)

The HB-56 heating block is perfect for sample pre-heating before microwave digestion, and vaporizing left over acids after microwave digestion. The entire unit is coated in PFA for the ultimate in high heat corrosion resistance. The alchemist 56 features easy to use controls and a two line LCD display for current temperature and set temperature and features an alarm if it overheats.



HB-56 (50 ml vessels)
Alchemist Heating Block

Features

- Acid Leak Proof Bottom
- Only 2 Housing Parts, keeping the electronic away from risk at top
- Uniformed Block
- Safety/ Malfunction Warning System
- Coated with PFA which is strong acid and alkali proof to extend accessory lifetime. Auto temperature control and alarm for over-temperature.

Vessel Features (Sold Separately)

- Our patented finger tight vessels are designed to be the safest and easiest to use on the market. Each vessel is continuously heated pressure monitored keeping the heat and pressure within the pre-set ranges input by the user.

Ordering Information

Part Number	Model number	Unit Price USD
526-407	HB-56	3,999.00

5.3 Analytical Balance

5.3.1 FA 220400

Overview

Pan 80 mm

stainless iron 304

Capacity 220g

Accuracy 0.1mg

Display Bigger LCD (white back-light) (L×W) 4.5"×1.6" (115×40 mm)

Interface Rs232C

Power AC/DC (Rechargeable Battery)

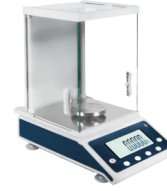
Units g, kg, oz, ct, lb, GN

More functions Counting, Percentage, Full Range Tare, Over-Load Protection, Zero Tracking, Automatic Turn-Off, Under Weighing, Low Power Indicator

Attachments english manual, adapter, under hook, rechargeable battery

Speed 2 s

Value stable time 3 s



FA 220400 Analytical Balance

Ordering Information

Part Number	Model number	Unit Price USD
526-403	FA 220400	5,000.00

6 Chromatography

6.1 Liquid Chromatograph

6.1.1 LC20

Quaternary gradient system for food safety, pharmaceutical, and environmental analysis. High-precision quaternary HPLC with 8,000 psi pressure, 162-sample capacity, $\leq 0.0005\%$ carryover. Ideal for trace-level pesticides, veterinary residues, drug impurities, and natural products.



Liquid Chromatograph
(LC20 LC40 LC60 LC80)

Feature

- **Quaternary Gradient:** Four-solvent capability for complex method development
- **High Pressure:** 8,000 psi operation for fast separations
- **Low Carryover:** $\leq 0.0005\%$ for sensitive analyses
- **Sample Capacity:** 162 vials or three 96-well plates
- **Needle-Loading:** Zero sample loss injection technology

Step 1: Pump Configuration

Standard System — 7,800 psi, 0.001–4.5 mL/min, quaternary gradient, $\leq 0.06\%$ RSD

Advanced System (Recommended) — 8,000 psi, 0.001–4.5 mL/min, quaternary + smart weighing, $\leq 0.06\%$ RSD

Step 2: Autosampler

Standard — 162 × 2 mL vials, 0.2–50 μ L injection, $\leq 0.25\%$ RSD, $\leq 0.0005\%$ carryover

Cooled (+4°C) — 162 × 2 mL vials, 0.2–50 μ L injection, 4°C or 20°C below ambient, $\leq 0.0005\%$ carryover

Step 3: Detectors

PDA (190–800 nm) — Peak purity, method development

UV/Vis (190–900 nm) — Routine quantitative analysis

Fluorescence (Ex 200–750 nm / Em 210–750 nm) — Trace-level biomarkers

RID (1.00–1.75 RI) — Sugars, polymers

ELSD (light scattering) — Lipids, steroids, surfactants

Step 4: Options & Accessories

Column Oven — +4°C to 90°C, 3×300mm columns, 2 switching valves

External Degasser — 4-channel vacuum

Seal Wash Kit — For high-salt mobile phases

Advanced Software — 3D spectral mapping, automated method development

Ordering Information

Part Number	Model number	Unit Price USD
846-804	LC20	POR

Accessories

Part Number	Description	Price USD
823-803-7	Binary High Pressure Gradient Pump	10,290.00
823-803-1	Quaternary Gradient Pump	9,362.00
823-804-1	High Performance Autosampler	7,928.00
803-804	Autosampler Cooling Module	1,290.00
806-801	Manual Injector index 7725i	1,464.00
803-805-1	Column Oven (Vertical)	1,464.00
803-805-7	Column Oven (Horizontal)	884.00
823-802-U1	UV Detector	3,826.00
823-802-U3	High Performance UV Detector	4,203.00
823-802-P1	Diode Array Detector	13,391.00
823-802-F1	Fluorescence Detector	12,522.00
823-802-R1	Refractive Index Detector	11,594.00
823-802-E1	Evaporative Light Scattering Detector	15,667.00
813-801	Clarity Workstation	4,758.00
813-802	Clarity Diode Array Detector spectrum acquisition software	1,242.00
806-802-03	C18 Column	413.00
803-806-1	Reservoir Tray	319.00
803-814	Setup Toolkit	94.00

6.1.2 LC40

Advanced quaternary gradient system with patented technologies for superior analytical performance. 10,000 psi pressure, patented mixing technology, advanced pressure sensing, mechanical zero-reset technology, $\leq 0.0005\%$ carryover. For trace-level detection in food safety, pharmaceuticals, and environmental analysis.

Features

- **Patented Innovation:** 4 proprietary technologies for superior performance and durability
- **High Pressure:** 10,000 psi capability for demanding UHPLC separations
- **Low Delay Volume:** ≤ 400 μL with patented mixer for optimal gradients
- **Zero Carryover:** $\leq 0.0005\%$ for sensitive trace analysis
- **Smart Operation:** Fully automatic priming and mobile phase weighing
- **Mechanical Protection:** Zero-reset technology extends service life

Step 1: Pump Configuration

Standard — 10,000 psi, 0.001–4.5 mL/min, quaternary gradient, ≤ 400 μL delay volume, $\leq 0.06\%$ RSD
 Advanced (Recommended) — 10,000 psi, quaternary + smart weighing, ≤ 400 μL delay volume, fully automatic priming

Step 2: Autosampler

Standard — 162 \times 2 mL vials, 0.2–50 μL , 10,000 psi, $\leq 0.0005\%$ carryover
 Cooled (+4°C) — Same specs, 4°C or 20°C below ambient cooling

Step 3: Detectors

PDA — 190–800 nm, patented optical design, 60 Hz sampling, peak purity, spectral ID
 UV/Vis — 190–900 nm, dual lamp, 120 Hz sampling, 2 channels, routine quantitative analysis
 Fluorescence — Ex 200–750 nm / Em 210–750 nm, S/N ≥ 1300 , 4 channels, 3D scanning option, trace-level detection

RID — 1.00–1.75 RI, 3-zone temp control, 10 mL/min max flow, universal detection

ELSD — Light scattering, 150°C max temp, PMT detector, 10⁴ dynamic range, non-volatile compounds

Step 4: Options & Accessories

Column Oven — Ambient +4°C to 90°C (upgradable to 120°C), 3×300mm columns, 2 switching valves

Cooling Module — 5°C or 15°C below ambient operation

Seal Wash Kit — Extended pump life with high-salt mobile phases (included in Advanced)

3D Spectral Software — Excitation-emission mapping for method development (Fluorescence option)

Ordering Information

Part Number	Model number	Unit Price USD
846-805	LC40	POR

Accessories

Part Number	Description	Price USD
823-803-9	Binary Gradient Pump	14,246.00
823-803-2	Quaternary Gradient Pump	12,333.00
823-804-2	High Performance Autosampler	9,986.00
803-804	Autosampler Cooling Module	1,290.00
806-801	Manual Injector index 7725i	1,464.00
803-805-1	Column Oven (Vertical)	1,464.00
803-805-7	Column Oven (Horizontal)	884.00
823-802-U1	UV Detector	3,826.00
823-802-U3	High Performance UV Detector	4,203.00
823-802-P1	Diode Array Detector	13,391.00
823-802-F1	Fluorescence Detector	12,522.00
823-802-R1	Refractive Index Detector	11,594.00
823-802-E1	Evaporative Light Scattering Detector	15,667.00
813-801	Clarity Workstation	4,758.00
813-802	Clarity Diode Array Detector spectrum acquisition software	1,242.00
806-802-03	C18 Column	413.00
803-806-1	Reservoir Tray	319.00
803-814	Setup Toolkit	94.00

6.1.3 LC60

Ultra-high performance separation for demanding analytical workflows. 12,000 psi capability, ≤150 µL delay volume, ≤0.0005% carryover. For high-resolution separations in food safety, pharmaceutical QC, and life science research.

Feature

- Ultra-High Pressure — 12,000 psi for sub-2µm particle separations
- Minimal Delay — ≤150 µL system volume for rapid gradients
- Zero Carryover — ≤0.0005% for sensitive trace analysis
- High Throughput — 162 samples or three 96-well microplates
- Fast Detection — Up to 250 Hz sampling rate (UV/Vis)
- Smart Automation — Fully automatic priming and weighing

Step 1: Pump Configuration

Standard UPLC — 12,000 psi, 0.001–5.0 mL/min, binary gradient (A1/A2, B1/B2), ≤150 µL delay volume, ≤0.06% RSD

Advanced UPLC (Recommended) — 12,000 psi, binary + smart weighing, ≤150 µL delay volume, fully automatic priming

Step 2: Autosampler

Standard — 162 × 2 mL vials, 0.1–50 µL, 11,500 psi, ≤0.0005% carryover

Cooled (+4°C) — Same specs, 4°C or 20°C below ambient cooling

Step 3: Detectors

PDA — 190–800 nm, 80 Hz sampling, high-reflectivity optics, peak purity, spectral ID

UV/Vis — 190–900 nm, 250 Hz sampling, dual lamp, 2 channels, routine quantitative analysis

Fluorescence — Ex 200–750 nm / Em 210–750 nm, S/N ≥1500, 4 channels, 3D scanning, trace-level detection

RID — 1.00–1.75 RI, 3-zone temp control, >85 Hz sampling, universal detection

ELSD — Light scattering, 150°C max, 10⁴ dynamic range, ≤0.5 ng LOD, non-volatile compounds

Step 4: Column Oven

Standard Oven (Recommended) — 5°C to 120°C, 3 × 300 mm columns, 2 switching valves, 15°C below ambient cooling

Compact Oven — Ambient +4°C to 120°C, 2 × 150 mm columns, 1 switching valve, reduced footprint

Step 5: Options & Accessories

Seal Wash Kit — Extended pump life with high-salt mobile phases (included in Advanced)

Enhanced Cooling Module — 5°C below ambient operation

Microplate Adapter — Three 96-well microplate capacity for high-throughput screening

3D Spectral Software — Excitation-emission mapping for advanced method development

Ordering Information

Part Number	Model number	Unit Price USD
846-806	LC60	POR

Accessories

Part Number	Description	Price USD
823-803-3	Ultra-high Pressure Binary Gradient Pump	19,391.00
823-803-10	Ultra-high Pressure Quaternary Gradient Pump	17,913.00
823-804-3	High Performance Autosampler	13,507.00
803-804	Autosampler Cooling Module	1,290.00
806-801	Manual Injector index 7725i	1,464.00
803-805-2	High Performance Column Oven (Vertical)	1,797.00
803-805-3	High Performance Column Oven (Horizontal)	971.00
823-802-U2	UV Detector	3,971.00
823-802-U4	High Performance UV Detector	4,696.00
823-802-P2	Diode Array Detector	14,101.00
823-802-F2	Fluorescence Detector	13,014.00
823-802-R2	Refractive Index Detector	11,942.00
823-802-E2	Evaporative Light Scattering Detector	16,246.00
813-801	Clarity Workstation	4,758.00
813-802	Clarity Diode Array Detector spectrum acquisition software	1,242.00
806-802-03	C18 Column	413.00
803-806-1	Reservoir Tray	319.00
803-814	Setup Toolkit	94.00

6.1.4 LC80

UHPLC System Order Guide

Ultra-High Performance Liquid Chromatography for Global Laboratories. 16,000 psi (105 MPa / 1,050 bar) unified pressure, ≤ 150 μL delay volume, $\leq 0.0005\%$ carryover, 0.039% RSD retention time reproducibility. For trace-level pesticides, veterinary residues, pharmaceutical impurities, antibiotics, and proteins in complex matrices.

Key Specifications Pump 16,000 psi | Autosampler 16,000 psi | Delay Volume ≤ 150 μL | Flow Precision $\leq 0.06\%$ RSD | Carryover $\leq 0.0005\%$

Feature

- Unified 16,000 psi pressure architecture — Pump and autosampler both rated to 16,000 psi for seamless sub- $2\mu\text{m}$ separations
- Minimal delay volume — ≤ 150 μL for rapid gradient response
- Non-destructive injection — Needle-loading technology with zero sample loss
- Superior precision — $\leq 0.06\%$ RSD flow, $\leq 0.25\%$ RSD injection, 0.039% RSD retention time
- Zero carryover — $\leq 0.0005\%$ (caffeine, UV detection)
- Intelligent control — Auto-priming, real-time compressibility compensation, delay volume auto-compensation
- Global compliance — 21 CFR Part 11, GMP/GLP ready, multi-language software
- Biological sample protection — Cooled autosampler maintains sample integrity

Step 1: Pump Configuration

Standard UHPLC — 16,000 psi, 0.001–5.00 mL/min, ≤ 150 μL delay volume, binary high-pressure mixing, $\leq 0.06\%$ RSD, 2-channel integrated vacuum degasser. 4-channel pressure feedback, auto-priming, compressibility compensation.

Advanced UHPLC (Recommended) — Same specs plus intelligent weighing tray, mobile phase monitoring, seal wash included, automatic continuous real-time compressibility compensation.

Step 2: Autosampler

Standard — $\geq 162 \times 2$ mL vials or 3×96 -well microplates, needle-loading zero sample loss, 0.1–30 μL , $\leq 0.25\%$ RSD, 16,000 psi, $\leq 0.0005\%$ carryover, touch-button auto door, auto-eject tray.

Cooled (Bio) — Same specs plus 4°C or 20°C below ambient cooling, for temperature-sensitive biologicals, proteins, antibiotics.

Step 3: Column Oven

Standard (Recommended) — 5°C (or 15°C below ambient) to 120°C, 3×300 mm or 6×100 mm columns, $\pm 0.5^\circ\text{C}$ accuracy, $\leq \pm 0.3^\circ\text{C}$ stability, 2 column switching valves, 0.1°C increment.

Step 4: Detectors

PDA — 190–800 nm, single deuterium lamp, ≥ 80 Hz sampling, $\leq 2 \times 10^{-5}$ AU noise, single-lamp full coverage, 10-step digital resolution.

RID — 1.00-1.75 RI, 600 μ RIU linearity, >85 Hz sampling, \leq 2.5 nRIU noise, 3-zone independent control, low power mode, overtemp + leak protection.

FLD — Ex 200-750 nm / Em 210-750 nm, \geq 115 Hz sampling, S/N \geq 1500 (water Raman), 4-channel simultaneous, 3D fluorescence scanning, filter auto-calibration, PMT normalization.

ELSD — RT-150°C evaporation, 35-60°C nebulization, \geq 95 Hz sampling, \leq 0.5 ng LOD (cholesterol), 650nm laser optional, high-sensitivity PMT, 1-6 sensitivity levels, low power protection.

Step 5: Software & Compliance Options

Chromatography Software Suite (21 CFR Part 11) — Database management, multi-language (EN/DE/FR/ES/RU), audit trail, real-time monitoring, automatic delay volume compensation, consumables lifetime management.

Seal Wash Kit — Extends plunger rod lifetime with high-salt mobile phases (included with Advanced pump).

Intelligent Weighing Tray — Mobile phase consumption monitoring with precision alerts (included with Advanced pump).

Column Switching Valve Kit — 2-position valves for multi-dimensional LC and method development screening.

IQ/OQ/PQ Validation Documentation (GMP/GLP) — Installation, operational, and performance qualification protocols.

Ordering Information

Part Number	Model number	Unit Price USD
846-807	LC80	POR

Accessories

Part Number	Description	Price USD
823-803-4	Ultra-high Pressure Binary Gradient Pump	20,565.00
823-803-11	Ultra-high Pressure Quaternary Gradient Pump	19,101.00
823-803-4	High Performance Ultra-high Pressure Autosampler	16,159.00
806-801	Manual Injector index 7725i	1,464.00
803-805-2	High Performance Column Oven (Vertica)	1,797.00
803-805-3	High Performance Column Oven (Horizontal)	971.00
823-802-U2	UV Detector	3,971.00
823-802-U4	High Performance UV Detector	4,696.00
823-802-P2	Diode Array Detector	14,101.00
823-802-F2	Fluorescence Detector	13,014.00
823-802-R2	Refractive Index Detector	11,942.00
823-802-E2	Evaporative Light Scattering Detector	16,246.00
813-801	Clarity Workstation	4,758.00
813-802	Clarity Diode Array Detector spectrum acquisition software	1,242.00
806-802-03	C18 Column	413.00
803-806-1	Reservoir Tray	319.00
803-814	Setup Toolkit	94.00

6.2 Gas Chromatograph

6.2.1 GC20

Dual-channel gas chromatograph with electronic flow control and multi-platform connectivity. Supports two inlets, two detectors, and flexible autosampler configurations for routine quality control and research applications.

Features local color touchscreen control with simultaneous access from mobile devices and PC workstations for versatile operation in laboratory environments.



GC20 Gas Chromatograph

Features

- Support for simultaneous installation of two injection ports and two detectors.
- All injection port detectors adopt electronic flow control, with pressure control accuracy of 0.01 psi. Up to 4 electronic flow control modules can be installed, providing up to 8 gas path channels.
- The output signals are locally digitized for minimizing external interference, improving signal transmission stability, effectively avoiding potential quality issues, and ensuring greater accuracy and reliability.
- Up to 2 gas valves can be installed.
- 5 independent heating zones (excluding the column oven) are available.
- The automatic liquid injector is fully integrated into the control of the main unit and workstation, offering various configurations such as 19-bit, 22-bit, 24-bit, 100-bit, and 150-bit.
- Compatible with various domestic and foreign brands of headspace, desorption, and purge-and-capture peripheral devices.
- Can be connected simultaneously via local color screen, mobile phone, tablet, or computer workstation, with control based on priority.

Ordering Information

Part Number	Model number	Unit Price USD
843-808	GC20	11,000.00

Accessories

Part Number	Description	QTY
843-808	Main unit (without computer and software)	1
803-852-1	Basic installation accessory kit for main unit	1
813-803	Networked workstation (UniMeta)	1
803-850-S1	Injection port-S/SL, Capillary Split/Splitless Inlet, with EPC	1
803-852-2	S/SL Basic Installation Tool Kit	1
803-851-F1	FID Hydrogen Flame Detector, with EPC, for packed and capillary columns	1
803-852-4	FID Basic Installation Tool Kit	1

6.2.2 GC30

IoT-enabled gas chromatograph with unlimited detector flexibility and multi-point control. Supports three inlets, four detectors, and 10 electronic flow control modules with 24 gas channels for complex analytical workflows.

Features 4.3-inch touchscreen, remote monitoring via VPN, and seamless integration with 19-161 position autosamplers for automated high-throughput analysis.



GC30 Gas Chromatograph

Features

- Support for simultaneous installation of three injection ports and four detectors (with no limit on detector types)
- Qualitative repeatability: <0.006% or <0.0008 min
- Quantitative repeatability: <0.5%
- All injection port detectors adopt electronic flow control, with pressure control accuracy of 0.001 psi. Up to 10 electronic flow control modules can be installed, providing up to 24 gas path channels.
- All electronic flow control modules offer pressure and temperature compensation, ensuring that flow and pressure do not be affected even when the laboratory environment changes.
- Output signals are locally digitized for minimal external interference, improving signal transmission stability and effectively avoiding potential quality issues, making it more precise and reliable.
- Up to 8 gas valves or high-pressure liquid valves can be installed
- 11 independent heating zones (excluding the column oven) can be provided, and multiple independent heating small column ovens can be configured
- Expansion boxes can integrate additional injection ports, detectors, small column ovens, valve systems, dilution devices, thermal desorption, etc. according to requirements
- The automatic liquid injector is fully integrated into the control of the main unit and workstation, providing various configurations such as 19-bit, 22-bit, 24-bit, 100-bit, and 150-bit.
- Compatible with peripheral devices of various domestic and foreign brands such as headspace, thermal desorption, and purge-and-trap
- High-resolution 4.3-inch color screen touch control
- Can be connected simultaneously through local color screen, mobile phone, tablet, and computer workstation, controlled according to priority.

Ordering Information

Part Number	Model number	Unit Price USD
843-809	GC30	16,600.00

Accessories

Part Number	Description	QTY
843-809	Main unit (without computer and software)	1
803-852-1	Basic installation accessory kit for main unit	1
813-803	Networked workstation (UniMeta)	1
803-850-S1	Injection port-S/SL, Capillary Split/Splitless Inlet, with EPC	1
803-852-2	S/SL Basic Installation Tool Kit	1
803-851-F1	FID Hydrogen Flame Detector, with EPC, for packed and capillary columns	1
803-852-4	FID Basic Installation Tool Kit	1
803-853-2	Hydrocarbon Removal Filter 200cc (Black)	1
803-853-3	Oxygen Removal Filter 200cc (Blue)	1
803-853-4	Water Removal Filter 200cc (Red)	1
803-850-P1	Injection port-PPIP	POR
803-851-T1	TCD	POR
823-805-3	Autosampler - 24bit, Includes chromatography installation fixed rods, allowing simultaneous sampling of dual columns	POR
803-852-3	Autosampler Toolkit (Standard Edition)	POR
803-853-1	General-purpose nitrogen N2 purifier, 1/8 in, 300 psig, 750cc	POR
803-810	Commercial desktop computer (with keyboard and mouse)	POR
803-872-22	ASC-5 30*0.32*0.5	POR
803-872-23	ASC-1701 30*0.32*0.5	POR

6.2.3 GC60

Smart, connected, and effortlessly modular. The GC60 Series transforms gas chromatography with IoT-enabled control, one-minute detector swaps, and standalone operation—delivering unprecedented flexibility for complex analytical challenges.

Engineered for multi-dimensional separations, high-pressure liquid injection, and continuous process monitoring, this platform consolidates workflows previously requiring multiple instruments. With support for up to 8 injection valves and 5 detectors in a single system, plus advanced GC×GC capability via Deans switch technology, the GC60 Series eliminates downtime while maximizing analytical power.



GC60 Gas Chromatograph

Features

- Support for simultaneous installation of four injection ports and five detectors (without any restrictions on detector types)
- Qualitative repeatability: <0.006% or <0.0008 min
- Quantitative repeatability: <0.5%
- All injection port detectors adopt electronic flow control, with pressure control accuracy of 0.001 psi. Up to 10 electronic flow control modules can be installed, providing up to 24 gas path channels.
- All electronic flow control modules offer pressure and temperature compensation, ensuring that flow and pressure do not be affected even when the laboratory environment changes.

- Output signals are locally digitized for minimal external interference, improving signal transmission stability and effectively avoiding potential quality issues, making it more accurate and reliable.
- Up to 8 gas valves or high-pressure liquid valves can be installed
- 11 independent heating zones (excluding the column oven) can be provided, and multiple independent heating small column boxes can be configured
- The expansion box can integrate injection ports, detectors, small column boxes, valve systems, diluters, thermal desorption, etc. according to requirements
- The automatic liquid injector is fully integrated into the control of the main unit and workstation, providing various configurations such as 19-bit, 22-bit, 24-bit, 100-bit and 150-bit.
- It is compatible with peripheral devices of various domestic and foreign brands such as headspace, thermal desorption, and purge and trap
- High-resolution 7-inch color screen touch control
- Can be connected simultaneously through local color screen, mobile phone, tablet computer, and computer workstation, controlled according to priority
- The instrument has 10 intelligent key interfaces, facilitating the input of chromatographic column information

Ordering Information

Part Number	Model number	Unit Price USD
843-810	GC60	20,500.00

Accessories

Part Number	Description	QTY
843-810	Main unit (without computer and software)	1
803-852-1	Basic installation accessory kit for main unit	1
813-803	Networked workstation (UniMeta)	1
803-850-S1	Injection port-S/SL, Capillary Split/Splitless Inlet, with EPC	1
803-852-2	S/SL Basic Installation Tool Kit	1
803-851-F1	FID Hydrogen Flame Detector, with EPC, for packed and capillary columns	1
803-852-4	FID Basic Installation Tool Kit	1
803-853-2	Hydrocarbon Removal Filter 200cc (Black)	1
803-853-3	Oxygen Removal Filter 200cc (Blue)	1
803-853-4	Water Removal Filter 200cc (Red)	1
803-850-P1	Injection port-PPIP	POR
803-850-V1	Injection port-VI	POR
803-850-C1	Injection port-PCOC	POR
803-851-T1	TCD	POR
803-851-E1	μECD	POR
803-852-5	ECD Basic Installation Tool Kit	POR
803-851-P1	FPD	POR
803-852-6	FPD Basic Installation Tool Kit	POR
803-851-N1	NPD	POR
823-805-3	Autosampler - 24bit, Includes chromatography installation fixed rods, allowing simultaneous sampling of dual columns	POR
803-852-3	Autosampler Toolkit (Standard Edition)	POR
803-853-1	General-purpose nitrogen N2 purifier, 1/8 in, 300 psig, 750cc	POR
803-810	Commercial desktop computer (with keyboard and mouse)	POR
803-872-22	ASC-5 30*0.32*0.5	POR
803-872-23	ASC-1701 30*0.32*0.5	POR

7 Mass Spectrometer

7.1 Mass Spectrometer TOF-MS

7.1.1 PRISM-PTR-6K

PRISM-PTR is a soft ionization mass spectrometry technique based on proton transfer reaction, which is a direct-reading analytical method that uses gaseous hydronium ions as reagent ions for ionization. Due to its advantages such as fast response speed, no need for pre-treatment, high sensitivity, and low detection limit, it can qualitatively and quantitatively analyze VOCs/SVOCs at the ppt level within seconds. It is widely applied in fields such as environmental monitoring, food and flavor science, biological research, and medical research.



PRISM-PTR-6K
Mass Spectrometer

Features

- Novel Full-Spectrum VOCs Real-Time Monitoring Technology: PRISM-PTR MS performs dynamic data acquisition, enabling real-time calculation of concentration results for all components and achieving high-resolution measurements across multiple dimensions of time and space.
- Rapid VOCs Detection Technology: Utilizing multi-stage vacuum and efficient ion transmission design, it completes ionization and detection of all VOCs components without requiring sample pre-separation, significantly shortening analysis time and improving efficiency.
- Multi-Reagent Ion Source : A newly designed ion source capable of using multiple reagents for ionization, with the reaction chamber enabling near-instantaneous switching of reagent ions.
- Enhanced Adaptability : VOCs are introduced into the instrument via inert stainless steel/PEEK tubes; a temperature-controlled sampling tube effectively prevents sample residue and accelerates the instrument's response process. Constant pressure sampling ensures measurement accuracy under any weather conditions.
- More Accurate Measurement : Thanks to proton transfer reaction chemical soft ionization technology, the ionization process produces almost no fragment ions, allowing direct qualitative and quantitative detection.

Ordering Information

Part Number	Model number	Unit Price USD
923-713	PRISM-PTR-6K	275,000.00

Accessories

Part Number	Description	Qty
923-701-9	Proton Transfer Reaction Ion Source	1
923-702-4	Time-of-Flight Mass Analyzer	1
903-769-1	Mechanical Pump	1
903-769-2	Turbomolecular Pump	1
903-769-3	Mass Flow Controller	1
903-769-4	Ion Guide Transmission Module	1
903-769-5	Pressure Controller	1
903-769-6	Raft Vibration Isolation Platform	1
913-709	Mass Spectrometry Control Software	1

Part Number	Description	Qty
913-710	Mobile Data Platform	1
903-769-7	Sampling Head	1
903-769-8	Sampling Manifold	1
903-769-9	Vehicle-Mounted Five-Parameter Weather Station	1
903-769-10	VOCs Fully Inert Precision Dynamic Calibrator	1

7.1.2 RT-TOF Series

The Mobile Time-of-Flight Mass Spectrometer is a portable analytical instrument designed for real-time online monitoring of pollutants in ambient air, hazardous chemicals at public security scenes, and toxic substances in water bodies. It serves as a convenient analysis tool with excellent sensitivity and measurement precision, configurable with different sampling devices to meet various routine testing requirements. The instrument is equipped with analysis software for rapid data acquisition and processing.



RT-TOF Series
Mass Spectrometer

Features

- Dimensions: 515 x 539 x 835 mm (W x D x H) Weight: 85 kg Power Supply: 220V AC, 50Hz, 500W
- Vehicle-Mountable Design. Engineered for mobile deployment with anti-vibration capabilities for field operation.
- Ultra-Fast Analysis. Analysis speed of less than 400 microseconds per compound.
- Multi-Component Capability. Simultaneous measurement of hundreds of compounds with a single instrument.
- Rugged Construction. Compact, robust structure with shock-resistant design suitable for various field conditions.
- Broad Dynamic Range. Full concentration measurement range from ppb to percentage levels.
- Flexible Sampling Options. Multiple inlet configurations available: membrane gas and liquid injection, capillary direct injection, additional customizable sampling interfaces.
- Universal Detection. Compatible with both organic and inorganic gas measurements. Composite ionization source enables simultaneous ionization. Detects organic VOCs alongside inorganic gases such as SO_x and NO_x. Provides integrated detection pathway for mixed gas analysis.

Applications

Environmental air quality monitoring
Public security and emergency response for hazardous chemical incidents
Water quality assessment for toxic substance detection
Industrial emissions monitoring
Research and field analytical studies

Ordering Information

Part Number	Model number	Unit Price USD
923-714	RT-TOF Series	128,500.00

Accessories

Part Number	Description	Qty
903-769-11	Sample Injection Tube Heater	1
903-769-12	WIFI Glue Stick Antenna	1
903-769-13	GPS Antenna	1
903-769-14	Hexagonal Socket Wrench M2.5	1
903-769-15	Hexagonal Socket Wrench M3	1
903-769-16	Tweezers	1

Part Number	Description	Qty
903-769-17	Imperial Wrench	1
903-769-18	Slotted Screwdriver	1
903-769-19	Vehicle Mounting Foot	4
903-769-20	Filter	1
903-769-21	Grinding Powder	1
903-769-22	AC Power Input Cable	1
903-769-23	Software Data USB Drive	1

7.1.3 QGA-MS

The QGA-MS is a compact, bench-top gas analysis mass spectrometer designed for real-time, multi-species gas analysis. Featuring a modular design that enhances application flexibility and sample integrity, the system separates charged ions based on their mass-to-charge ratios, recording mass numbers and abundance of various ions for precise quantitative analysis.



QGA-MS
Mass Spectrometer

Features

- Modular Design: Enhances application flexibility and automated operation
- High Sensitivity: Cross beam ion source with dual tungsten filaments
- Multiple Detectors: Electron multiplier or Faraday cup options
- Flexible Mass Range: Available in 1-100u, 1-200u, or 1-300u
- Fast Measurement: 1 ms/u to 16 s/u speed range
- Wide Temperature Range: Sample line up to 300°C
- Touchscreen Control: Integrated design for ease of use
- Vacuum Protection: Auto-shutdown when vacuum requirements not met
- Dimensions: 675mm×340mm×305mm mm (W x D x H) Weight: 35~45 kg

Applications

Environmental gas composition analysis and more

High-Sensitivity Real-Time Measurement H₂, N₂, O₂, CO₂, CO, Ar, alkanes, and other gases

Ordering Information

Part Number	Model number	Unit Price USD
923-715	QGA-MS	97,825.00

Accessories

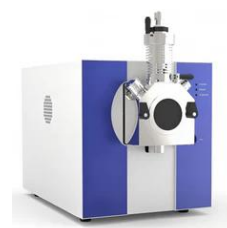
Part Number	Description	Qty
903-769-24	AC Power Input Cable	1
903-769-25	Ethernet cable	1
903-769-26	Hexagonal Socket Wrench M2	1
903-769-27	Software Data USB Drive	1

7.2 LC-MS System

7.2.1 AQUA-MS-SQ

A robust, reliable, and durable analytical platform delivering rapid and accurate qualitative and quantitative analysis for both known and unknown compounds. Engineered for demanding applications across food safety, pharmaceutical, environmental, forensic, and research laboratories.

The system combines advanced mass spectrometry technology with high-performance liquid chromatography to provide exceptional sensitivity, selectivity, and stability for complex sample matrices.



AQUA-MS-SQ
LC-MS System

Features

- Dual Ion Source: Plug-and-play ESI/APCI with 30-second automatic recognition and switching
- Superior Sensitivity: >400:1 S/N for 10pg reserpine (ESI+)
- Wide Mass Range: 5-2000 amu with $\geq 10,000$ amu/sec scan speed
- Robust Vacuum System: High-quiet mechanical pump + 30/60 L/S turbo pump
- Advanced Ion Optics: Dual-cone interface with heated curtain gas for maximum sensitivity and contamination resistance

Ordering Information

Part Number	Model number	Unit Price USD
943-701	AQUA-MS-SQ	150,000.00

Accessories

Part Number	Description	Qty
943-701	Instrument main unit	1
923-701-1	Ion Source-ESI	1
923-701-2	Ion Source-APCI	1
923-702-1	Mass Analyzer-Mass Range:5-2000 amu	1
823-803-5	Binary Gradient Pump	1
803-805-4	Column Oven	1
823-804-6	Autosampler	1
913-701	Instrument Control Software	1
913-702	Data processing software	1
903-701	ESI Tuning liquid	1
903-702	Accessories	1
903-703	Toolkit	1
806-802-03	C18 Column	1
903-704	Nitrogen generator	POR
903-705	SANTAK UPS C10KS	POR

7.2.2 TQ Series

A high-performance triple quadrupole mass spectrometry platform combining ultra-high pressure liquid chromatography with advanced tandem MS/MS technology. Designed for demanding quantitative analysis in food safety, pharmaceutical, environmental, clinical, and research applications requiring exceptional sensitivity and selectivity. The system delivers femtogram-level detection limits with fast polarity switching and robust ion optics for complex matrix analysis.



TQ Series LC-MS System

TQ55 | Best Seller

Maximum sensitivity for small molecule quantification. The standard for routine high-throughput analysis across food safety, environmental, clinical, and pharmaceutical applications.

- a. Mass Range: 5–1,250 m/z
- b. IDL: ≤ 2 fg (reserpine, 99% confidence)
- c. S/N: $\geq 800,000:1$ for 1 pg reserpine
- d. Polarity Switch: ≤ 25 ms
- e. MRM Speed: > 500 channels/s

TQ55X | Extended Range

60% wider mass coverage for large molecules. Intact protein and peptide characterization without sensitivity compromise. Future-proof for emerging workflows.

- a. Mass Range: 5–2,000 m/z
- b. IDL: ≤ 4 fg (reserpine, 99% confidence)
- c. S/N: $\geq 400,000:1$ for 1 pg reserpine
- d. Polarity Switch: ≤ 25 ms
- e. MRM Speed: > 500 channels/s

Features

- Dual Ion Sources
- Plug-and-play ESI/APCI with 30-second automatic recognition. No vacuum venting required for switching.
- Exceptional Sensitivity
- IDL $\leq 2-4$ fg (reserpine, 99% confidence); S/N $\geq 800,000:1$ for 1 pg reserpine.
- Fast Switching
- Positive/negative polarity switch ≤ 25 ms; MRM dwell time ≤ 1 ms.
- High-Speed Acquisition
- 500 MRM/s channel speed; $> 30,000$ amu/sec scan speed.
- Robust Vacuum System
- 400+300 L/S turbo pump; 40 m³/h mechanical pump with auto power-off protection.
- UHPLC Performance

- 1300 bar pressure capability; 50 μ L system delay volume.

Ordering Information

Part Number	Model number	Unit Price USD
943-702	TQ55	209,850.00
943-703	TQ55X	209,850.00

Accessories

Part Number	Description	Qty
943-702	Instrument main unit	1
923-701-3	Ion Source-ESI	1
923-701-4	Ion Source-APCI	1
923-702-2	Mass Analyzer-Mass Range:5-2000 amu(for TQ55X)	1
923-702-3	Mass Analyzer-Mass Range:5-1250 amu(for TQ55)	1
823-803-6	Binary Gradient Pump	1
803-805-5	Column Oven	1
823-804-7	Autosampler	1
913-701	Instrument Control Software	1
913-702	Data processing software	1
903-701	ESI Tuning liquid	1
903-702	Accessories	1
903-703	Toolkit	1
806-802-03	C18 Column	1
903-704	Nitrogen generator	POR
903-705	SANTAK UPS C10KS	POR

7.2.3 TQ50

This product offers excellent sensitivity and outstanding stability while maintaining superior durability. Even under complex sample conditions, it continues to deliver excellent analytical performance. It is widely applied in fields such as food safety, environmental monitoring, clinical diagnosis, public safety, biopharmaceuticals, and scientific research.



TQ50 LC-MS System

Features

- High-Performance UHPLC System: Features independent, electronically controlled dual piston linear drive pumps with dual pressure sensor feedback loops for more precise flow control. No mixer or damper is required, resulting in an ultra-low system volume. Integrated vacuum degassing ensures more accurate sample injection. The standard Seal Wash seal cleaning kit is included to extend the piston rod life when using high-salt mobile phases. Automatic continuous real-time compression factor compensation is performed to ensure that flow rate deviations caused by different solvent compression factors are avoided after solvent mixing under high pressure.
- Superior MS/MS Performance: Pre-rod design for Q1 and Q3 significantly reduces the risk of sample contamination of the analytical quadrupole. Optimized rod diameter, rod length, and field radius, along with a self-designed high-stability quadrupole power supply system, provide excellent resolution performance. Segmented quadrupole collision cell technology enables rapid ion inlet and outlet, offering shorter channel interval times, lower cross-talk,

and stronger MS/MS analysis capabilities.

- Superior Sensitivity: A uniquely designed segmented ion transmission system minimizes transmission loss and enhances ion beam focusing. Compared to traditional multi-rod transmission systems, the V-Tunnel structure greatly reduces interference from neutral ions. Combined with high-performance HED and ion counter, this results in a wider linear range, lower noise, higher ion detection signals, and superior instrument sensitivity.
- Excellent Reproducibility: For 200 injections of verapamil on-column, the relative standard deviation (RSD) of retention time was 0.86% and the RSD of peak area was 1.89%.

Ordering Information

Part Number	Model number	Unit Price USD
943-712	TQ50	185,500.00

Accessories

Part Number	Description	Qty
923-712	Triple Quadrupole Mass Spectrometer	1
923-701-8	ESI ion source compatible with APCI mode	1
903-756	ESI probe	1
903-757	APCI Probe	1
903-758	Pre-Pump	1
823-803-8	Binary Pump Unit (With Degassing Unit)	1
823-804-10	Autosampler	1
803-805-6	Column Oven	1
803-806-3	Solvent Tray	1
913-707	Operation and Data Processing Integrated Software	1
903-758	Toolkit	1
903-759	Micro-injector	1
903-760	Tuning standards	1
903-761	oil for roughing pump 1L	1
903-762	Solvent bottles with solid caps	1
903-763	Vials, 100/pack	1
903-764	Onsite Training	1
903-765	Power Cord	1
903-766	Workstation: Computer,Monitor	1
903-767	Nitrogen Generation System (Optional)	POR
903-768	UPS (Optional) 10 kVA	POR

7.3 GC-MS System

7.3.1 PRIME-GC-TQ

Ultra-trace sensitivity meets intelligent remote operation. The PRIME-GC-TQ delivers national metrology-certified performance with 4fg instrument detection limits and seamless 4G connectivity for true human-machine separation.



PRIME-GC-TQ
GC-MS System

Engineered for quantitative analysis in environmental monitoring, food safety, pharmaceutical quality control, and forensic toxicology. The system combines inert ceramic ion source technology with gold-plated hyperbolic quadrupoles to eliminate cross-talk and maximize ion transmission efficiency.

Features

- Detection Limit: <4fg OFN (99% confidence level, national metrology certified)
- Sensitivity: 100fg OFN S/N \geq 15000:1 (EI MRM mode)
- Connectivity: Built-in 4G module for remote operation via PC, mobile, or tablet
- Productivity: 150-position autosampler with dual-tower injection capability
- Vacuum System: Dual independent chambers with twin 250L/s turbomolecular pumps

Ordering Information

Part Number	Model number	Unit Price USD
943-705	PRIME-GC-TQ	160,000.00

Accessories

Part Number	Description	Qty
923-705	Triple quadrupole MS	1
823-811	GC	1
903-714	Molecular Turbine Pump	1
903-715	Primary vacuum pump	1
923-701-5	Lazy EI Ion Source	1
903-717	GC-MS Transmission Line	1
913-703	GC-MS qualitative and quantitative analysis software	1
903-718	Helium gas trap	1
903-719	NIST spectral library	1
903-720	GC-MS test standard samples	1
903-721	Mass spectrometry maintenance toolkit	1
903-722	Mechanical pump oil	1
903-723	Repeller ceramic pad	1
903-724	Ion source polishing powder	1
903-725	MS interface column nut, internal thread	1
903-726	Gloves	1
903-727	Dust-free cloth	1
903-728	Cotton swab	1
803-872-21	DB-5MS capillary column	1
823-804-8	Autosampler-24	1
803-807	Gas chromatography startup toolkit	1

7.3.2 PRIME-GC-SQ

The PRIME-GC-SQ delivers exceptional sensitivity and stability through advanced ceramic ion source technology and intelligent IoT connectivity. Engineered for laboratories requiring reliable compound identification and quantification, this system combines sub-femtogram detection limits with robust industrial design.



PRIME-GC-SQ GC-MS System

Note: Images Same as PRIME-GC-TQ

Ideal for environmental monitoring, food safety screening, pharmaceutical quality control, forensic toxicology, and petrochemical analysis. The integrated 7-inch touchscreen with 4G remote access enables true walk-away operation, while the inert ceramic ion source ensures maximum ionization efficiency for active compounds.

Features

- 1 pg OFN S/N \geq 2500:1 with third-party verification
- IDL < 10 fg octafluoronaphthalene detection capability
- Inert ceramic ion source with dual filament design
- Independent pre-quadrupole with segmented metal quadrupole
- Mass range 1.5–1250 amu, scan speed 20,000 amu/s
- 7-inch touchscreen with 4G remote operation
- 32-step oven programming with 120°C/min heating rate

Ordering Information

Part Number	Model number	Unit Price USD
943-706	PRIME-GC-SQ	125,000.00

Accessories

Part Number	Description	Qty
923-706	Single quadrupole MS	1
823-812	GC	1
903-714	Molecular Turbine Pump	1
903-715	Primary vacuum pump	1
923-701-6	Lazy EI Ion Source	1
903-717	GC-MS Transmission Line	1
913-703	GC-MS qualitative and quantitative analysis software	1
903-718	Helium gas trap	1
903-719	NIST spectral library	1
903-720	GC-MS test standard samples	1
903-721	Mass spectrometry maintenance toolkit	1
903-722	Mechanical pump oil	1
903-723	Repeller ceramic pad	1
903-724	Ion source polishing powder	1
903-725	MS interface column nut, internal thread	1
903-726	Gloves	1
903-727	Dust-free cloth	1
903-728	Cotton swab	1
803-872-21	DB-5MS capillary column	1
823-804-8	Autosampler-24	1
803-807	Gas chromatography startup toolkit	1

7.3.3 GC-MS-HR10

HR-Accurate Mass GC-MS: Dual-Mode Precision for Definitive Identification

One injection. Two analyzers. Unlimited certainty.

The HR-Accurate Mass GC-MS revolutionizes compound identification by seamlessly integrating quadrupole speed with Fourier transform electrostatic trap resolution. This hybrid architecture delivers the best of both worlds: rapid screening capabilities alongside sub-ppm mass accuracy for molecular formula confirmation. When your analysis demands both quantitative precision and qualitative certainty, HR-Accurate Mass eliminates the need for multiple instruments or sequential analyses.



GC-MS-HR10
GC-MS System

Unlike conventional high-resolution MS systems that force compromises between speed and resolution, our patented MIX mode alternates between quadrupole and FT analyzers in a single run—capturing quantitative data from the quadrupole while simultaneously acquiring high-resolution spectra from the electrostatic trap. The result? Complete characterization in half the time, with confidence levels that routine quadrupole systems cannot match.

Features

- Dual-Mode Architecture: Quadrupole for speed and quantitation (12500 u/s); FT trap for >120,000 resolution and <2 ppm mass accuracy.
- MIX Mode Technology: Simultaneous acquisition of both quadrupole and high-resolution data in a single injection.
- Sub-ppm Precision: FT mode delivers <2 ppm mass accuracy with internal calibration for unambiguous molecular formula determination.
- Cold Quadrupole Design: Non-temperature-controlled hyperbolic quadrupole maintains mass stability without thermal drift.
- Zero-Dead-Time Switching: Positive/negative ion mode switch in <700 ms; FT/QSIM alternating scan for comprehensive coverage.
- Intelligent Protection: Real-time vacuum monitoring, automatic source cooling, and filament shutdown protect your investment.

Ordering Information

Part Number	Model number	Unit Price USD
943-707	GC-MS-HR10	565,215.00

Accessories

Part Number	Description	Qty
923-707	Quadrupole-Fourier Transform Electrostatic Trap Mass	1
823-813	GC	1
923-710	Hyperbolic Quadrupole with Dual Pre-Quadrupoles	1
923-711	Fourier Transform Electrostatic Ion Trap	1
903-714	Molecular Turbine Pump	1
903-715	Primary vacuum pump	1
923-701-7	Lazy EI Ion Source	1
903-717	GC-MS Transmission Line	1

Part Number	Description	Qty
913-703	GC-MS qualitative and quantitative analysis software	1
903-718	Helium gas trap	1
903-719	NIST spectral library	1
903-720	GC-MS test standard samples	1
903-721	MS maintenance toolkit	1
903-722	Mechanical pump oil	1
903-723	Repeller ceramic pad	1
903-724	Ion source polishing powder	1
903-725	MS interface column nut, internal thread	1
903-729	Chromatography Drawer Base	1
903-730	Split/Splitless Injector with EPC	1
903-731	Low-Loss Sampling Septum	1
903-732	Universal Column Nut	1
903-733	Copper Tubing	1
903-734	Ceramic Cutter	1
903-735	Tee Fitting	1
903-736	Pressure Reducing Valve Adapter	1
903-737	Column Holder	1
903-738	Injector Wrench	1
903-739	Graphite Sealing Gasket	1
903-740	Leak Detection Liquid	1
903-741	Single Fine-Bore Cone, Split Liner with Glass Wool	1
903-742	Non-Stick O-Ring for Injector Liner	1
903-743	10uL Manual Syringe	1
903-744	Threaded Sample Vial	1
903-745	Threaded Sample Vial Cap and Seal	1
903-726	Gloves	1
903-727	Dust-free cloth	1
903-728	Cotton swab	1
803-872-21	DB-5MS capillary column	1
823-804-8	Autosampler-24	1
803-807	Gas chromatography startup toolkit	1

7.3.4 GC-MS10 (portable)

Mobile GC-MS Laboratory-Grade Analysis in the Field

Bring the lab to the sample. This compact Gas Chromatography-Mass Spectrometry system delivers precise chemical identification and quantification anywhere—combining exceptional mobility with uncompromised analytical performance for emergency response, environmental monitoring, and forensic investigations.



GC-MS10
GC-MS System

Weighing under 20 kg with battery and carrier gas included, the Mobile GC-MS operates seamlessly across vehicular, handheld, or shoulder-carry configurations. Engineered for demanding field conditions with IP43 protection and 0-45°C operating range, it ensures reliable results when time and location are critical.

Features

- Ultra-portable: Complete system under 20 kg with multiple transport options
- Rapid deployment: Modular quick-release design for instant configuration changes
- High-performance vacuum: Oil-free turbomolecular pump (≥ 60 L/s) for continuous operation

- Versatile sampling: Supports syringe, SPME, headspace, and thermal desorption methods
- Field-proven: IP43 rated, operates 0-45°C, compliant with emergency response standards
- Low thermal mass column: 30m capillary design replaces conventional ovens for reduced volume and improved efficiency
- Automated valve control: Software-controlled switching between enrichment and loop systems without manual intervention
- Expanded capabilities: Full compatibility with mobile headspace and thermal desorption accessories

Ordering Information

Part Number	Model number	Unit Price USD
943-708	GC-MS10	200,000.00

Accessories

Part Number	Description	Qty
943-708	Quadrupole-Fourier Transform Electrostatic Trap Mass	1
903-746	Handheld sampling probe	1
903-747	Attachment box	1
903-748	Bottle-loaded gas	1
903-749	Charger	1
903-750	Rechargeable battery	1
903-751	Accessories pack	1
903-752	Toolkit	1
903-753	Pulling a trolley bag	1
903-754	Built-in workstation	1
913-704	Newly Installed Latest Version NIST Spectral Library	1
913-705	NIOSH Database	1
913-706	Database of inherently toxic industrial chemicals (TICs) and chemical weapon agents (CWAs)	1
823-804-9	Portable Headspace Sampler	1
923-708	Portable Thermal Desorber	1
923-709	Portable Solid-Phase Microextraction Device	1
903-755	Solid-phase microextraction needle	1

7.3.5 GC-MS65 (portable)

GC-MS65 Precision Gas Monitor for Small-Molecule Hyperboloid Mass Spectrometry

Unmatched performance for critical gas analysis. Engineered for superior accuracy and reliability, this robust gas monitor delivers real-time insights for cutting-edge research in demanding analytical environments.



GC-MS65
GC-MS System

The all-metal design and advanced mass spectrometry capabilities provide scientists with detailed molecular insights for semiconductor manufacturing, battery research, catalysis studies, and process monitoring where precision is paramount.

Features

- All-metal chamber: Stainless steel construction stable to 200°C
- Ultra-high vacuum: Diaphragm + turbomolecular pump system
- Versatile inlet: External heated capillary up to 350°C
- Precise ionization: Open EI source with dual filaments
- Superior resolution: Hyperbolic quadrupole mass filter
- Trace detection: Electron multiplier for high sensitivity
- Detect limit 1ppm

Ordering Information

Part Number	Model number	Unit Price USD
943-709	GC-MS65	60,000.00

7.4 ICP-MS System

7.4.1 ICP-MS-7K

High-performance routine analysis for environmental, pharmaceutical, and food testing laboratories.

Features

- Self-Excited RF Generator, All-solid-state design with frequency-matching tuning. No moving parts, minimal maintenance.
- Dual-Cone Ion Interface, Optimized aerodynamics reduce salt deposition and extend cone lifetime.
- Four Interference Modes, Standard, Collision, KED, and Reaction modes handle any spectral interference.
- Intelligent Software, 21 CFR Part 11 compliant with automated tuning, QC checks, and custom reporting.
- Collision Cell, Hexapole with 4 operation modes
- Matrix Tolerance, Up to 5% dissolved solids
- Detection, ppt-level for most elements



ICP-MS-7K
ICP-MS System

Application

Environmental monitoring (water, soil, air); Pharmaceutical QC & ICH Q3D compliance;

Food safety screening; Industrial materials analysis; High-throughput routine laboratories;

Ordering Information

Part Number	Model number	Unit Price USD
943-710	ICP-MS-7K	120,000.00

Accessories

Part Number	Description	Qty
913-708	ICP-MS Workstation with Online Help System	1
903-756	Collision Reaction Cell	1
903-757	4 Channels Peristaltic Pump	1
903-758	Analytical Methods Database	1
903-759	Cyclonic Spray Chamber Kit with Cooling	1
903-760	Glass concentric nebulizer kit	1
903-761	Semi Demountable Torch kit	1
903-762	Peristaltic Pump Tubing Kit	1
903-763	Ni Sampling Cone and Skimmer Cone	1
903-764	Tool for Dismount Cone	1
903-765	Manual	1
903-766	Water Chiller	1
903-767	Fore Pump	1
903-768	Computer	1

7.4.2 ICP-MS-9K

Ultimate sensitivity for semiconductor, speciation, geological, and clinical research applications.

Features

- Self-Excited RF Generator, All-solid-state design with frequency-matching tuning. No moving parts, minimal maintenance.
- Dual-Cone Ion Interface, Optimized aerodynamics reduce salt deposition and extend cone lifetime.
- Four Interference Modes, Standard, Collision, KED, and Reaction modes handle any spectral interference.
- Intelligent Software, 21 CFR Part 11 compliant with automated tuning, QC checks, and custom reporting.
- Collision Cell, Quadrupole with mass filtering
- Dynamic Range, 9–10 orders of magnitude
- Matrix Tolerance, Up to 10% dissolved solids



ICP-MS-9K ICP-MS System

Note: Photo same as ICP-MS-7K

Application

Semiconductor ultra-trace analysis

Elemental speciation (LC-ICP-MS)

Geological & rare earth elements

Clinical & biomonitoring research

Complex high-salt matrices (>5% TDS)

Ordering Information

Part Number	Model number	Unit Price USD
943-711	ICP-MS-9K	150,000.00

Accessories

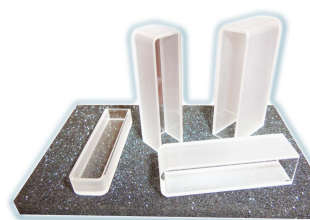
Part Number	Description	Qty
913-708	ICP-MS Workstation with Online Help System	1
903-756	Collision Reaction Cell	1
903-757	4 Channels Peristaltic Pump	1
903-758	Analytical Methods Database	1
903-759	Cyclonic Spray Chamber Kit with Cooling	1
903-760	Glass concentric nebulizer kit	1
903-761	Semi Demountable Torch kit	1
903-762	Peristaltic Pump Tubing Kit	1
903-763	Ni Sampling Cone and Skimmer Cone	1
903-764	Tool for Dismount Cone	1
903-765	Manual	1
903-766	Water Chiller	1
903-767	Fore Pump	1
903-768	Computer	1

8 Consumables

8.1 Spectrophotometer Cells

8.1.1 Model number

Nwspec manufactures many popular types of UV-VIS-NIR spectrophotometer cuvettes including micro-cells. Samples to be measured for absorbance or transmission are held in cells for all common spectrophotometers. Nwspec's cells comply with international standards and are compatible with many brands of spectrophotometers.




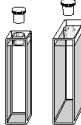
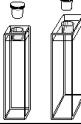
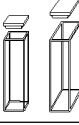
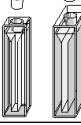
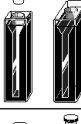
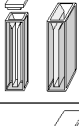
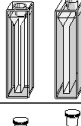


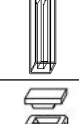
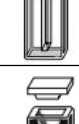



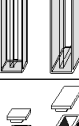
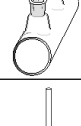
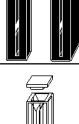

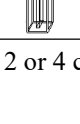
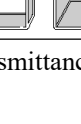
Spectrophotometer Cells

Features

- Nwspec cuvettes are 100% handcrafted and 100% individually inspected.
- All quartz cells are fused and ready for ultrasonic cleaning plus heavy solvent use.
- Nwspec offers sets of up to 4 cells matched for transmittance < 3% (Type 1 cells with a 10mm path length) at no extra charge. This offer includes all glass types G, Q and I.
- Spectrophotometer Cell Materials – all path length tolerances are $\pm 0.05\text{nm}$

Material	Code	Application	% Transmission	Matching Tolerance	Range
Optical Glass	G	VIS	> 80% @ 360nm	0.3% @ 360 nm	360 to 2500nm
Quartz	Q	UV-VIS	> 80% @ 240nm	0.3% @ 240nm	180 to 2500nm
IR Quartz	I	UV-VIS-NIR	> 80% @ 2730nm	0.3% @ 2730nm	180 to 4000nm

8.1.2 Types of Cells

Type	Model number	Drawing	Type	Model number	Drawing
1	Standard Rectangular		21	Standard Rectangular with Stopper	
1GS	GS Rectangular with Graded Seal	“as above”	23	Fluorometer Rectangular with Stopper	
3	Fluorometer Rectangular		29	Semi Micro with Stopper	
3GS	GS Fluorometer Rectangular w/Graded Seal	“as above”	29B	Semi Micro w/Stopper Self Masking	
9	Semi-Micro Rectangular		30	Micro with Stopper	
9B	Semi-Micro Self Masking		30B	Micro w/Stopper Self Masking	
9F	Semi-Micro Fluorometer		30F	Micro Fluorometer with Stopper	“as above”
17	Micro Short Rectangular		32	Cylindrical Cell One Stopper	
17B	Micro Short Self Masking		34	Cylindrical Cell Two Stoppers	
18	Micro with Lid		34S	Cylindrical Cell with Screw Cap	
18B	Self Masking Micro		37	Long Outlet Cylindrical	
18F	Micro Fluorometer		96	Absorption Meter Rectangular	

Note: It is always best to purchase either 2 or 4 cells at one time so they are matched for transmittance.

8.1.3 List of Popular Cells

Part Number	Ref. P/N	Application	Model number	Glass Type	Path Length	Capacity	Price USD
406-31-G10	1-G-10	VIS	Type 1 w/lid	Optical Glass	10mm	3.5ml	21.30
406-31-G50	1-G-50	VIS	Type 1 w/lid	Optical Glass	50mm	17.5ml	40.50
406-31-Q10	1-Q-10	UV-VIS	Type 1 w/lid	Quartz	10mm	3.5ml	62.00
406-31-I5	1-I-5	UV-VIS-NIR	Type 1 w/lid	Quartz	5mm	1.7ml	62.00
406-31-I10	1-I-10	UV-VIS-NIR	Type 1 w/lid	Quartz	10mm	3.5ml	62.00
406-33-G5	3-G-5	VIS	Type 3 w/lid	Optical Glass	5mm	1.7ml	40.63
406-33-G10	3-G-10	VIS	Type 3 w/lid	Optical Glass	10mm	3.5ml	40.63
406-321-I10	21-I-10	UV-VIS-NIR	Type 21 w/stopper	Quartz	10mm	3.5ml	85.75
406-334-I50	34-I-50	UV-VIS-NIR	Type 34 w/stoppers	Quartz	50mm	14.1ml	150.00
406-334-G100	34-G-100	VIS	Type 34 w/stoppers	Optical Glass	100mm	28.2ml	90.00

Note: The Part Number in this chapter (8 Consumables) uses the encoding of varsal.

8.1.4 Complete List of Cells

Part Number	Ref. P/N	Application	Model number	Glass Type	Path Length	Capacity	Price USD
406-31-G1	1-G-1	VIS	Type 1 w/Lid	Optical Glass	1mm	0.4ml	27.00
406-31-Q1	1-Q-1	UV-VIS	Type 1 w/Lid	Quartz	1mm	0.4ml	72.00
406-31-I1	1-I-1	UV-VIS-NIR	Type 1 w/Lid	Quartz	1mm	0.4ml	72.00
406-31-G2	1-G-2	VIS	Type 1 w/Lid	Optical Glass	2mm	0.7ml	27.00
406-31-Q2	1-Q-2	UV-VIS	Type 1 w/Lid	Quartz	2mm	0.7ml	72.00
406-31-I2	1-I-2	UV-VIS-NIR	Type 1 w/Lid	Quartz	2mm	0.7ml	72.00
406-31-G5	1-G-5	VIS	Type 1 w/Lid	Optical Glass	5mm	1.7ml	21.30
406-31-Q5	1-Q-5	UV-VIS	Type 1 w/Lid	Quartz	5mm	1.7ml	62.00
406-31-I5	1-I-5	UV-VIS-NIR	Type 1 w/Lid	Quartz	5mm	1.7ml	62.00
406-31-G10	1-G-10	VIS	Type 1 w/Lid	Optical Glass	10mm	3.5ml	21.30
406-31-Q10	1-Q-10	UV-VIS	Type 1 w/Lid	Quartz	10mm	3.5ml	62.00
406-31-I10	1-I-10	UV-VIS-NIR	Type 1 w/Lid	Quartz	10mm	3.5ml	62.00
406-31-G20	1-G-20	VIS	Type 1 w/Lid	Optical Glass	20mm	7.0ml	25.80

Part Number	Ref. P/N	Application	Model number	Glass Type	Path Length	Capacity	Price USD
406-31-Q20	1-Q-20	UV-VIS	Type 1 w/Lid	Quartz	20mm	7.0ml	84.00
406-31-I20	1-I-20	UV-VIS-NIR	Type 1 w/Lid	Quartz	20mm	7.0ml	84.00
406-31-G30	1-G-30	VIS	Type 1 w/Lid	Optical Glass	30mm	10.5ml	29.20
406-31-Q30	1-Q-30	UV-VIS	Type 1 w/Lid	Quartz	30mm	10.5ml	97.00
406-31-I30	1-I-30	UV-VIS-NIR	Type 1 w/Lid	Quartz	30mm	10.5ml	97.00
406-31-G40	1-G-40	VIS	Type 1 w/Lid	Optical Glass	40mm	14.0ml	30.40
406-31-Q40	1-Q-40	UV-VIS	Type 1 w/Lid	Quartz	40mm	14.0ml	108.00
406-31-I40	1-I-40	UV-VIS-NIR	Type 1 w/lid	Quartz	40mm	14.0ml	108.00
406-31-G50	1-G-50	VIS	Type 1 w/lid	Optical Glass	50mm	17.5ml	40.50
406-31-Q50	1-Q-50	UV-VIS	Type 1 w/lid	Quartz	50mm	17.5ml	116.00
406-31-I50	1-I-50	UV-VIS-NIR	Type 1 w/lid	Quartz	50mm	17.5ml	116.00
406-31GS-Q10	1GS-Q-10	UV-VIS	Type 1GS w/ Graded Seal	Quartz	10mm	3.5ml	144.00
406-31GS-I10	1GS-I-10	UV-VIS-NIR	Type 1GS w/ Graded Seal	Quartz	10mm	3.5ml	144.00
406-33-G5	3-G-5	VIS	Type 3 w/lid	Optical Glass	5mm	1.7ml	40.63
406-33-Q5	3-Q-5	UV-VIS	Type 3 w/lid	Quartz	5mm	1.7ml	123.50
406-33-I5	3-I-5	UV-VIS-NIR	Type 3 w/lid	Quartz	5mm	1.7ml	123.50
406-33-G10	3-G-10	VIS	Type 3 w/lid	Optical Glass	10mm	3.5ml	40.63
406-33-Q10	3-Q-10	UV-VIS	Type 3 w/lid	Quartz	10mm	3.5ml	123.50
406-33-I5	3-I-10	UV-VIS-NIR	Type 3 w/lid	Quartz	10mm	3.5ml	123.50
406-33-G20	3-G-20	VIS	Type 3 w/Lid	Optical Glass	20mm	7.0ml	59.00
406-33-Q20	3-Q-20	UV-VIS	Type 3 w/Lid	Quartz	20mm	7.0ml	148.00
406-33-I20	3-I-20	UV-VIS-NIR	Type 3 w/Lid	Quartz	20mm	7.0ml	148.00
406-33-G40	3-G-40	VIS	Type 3 w/Lid	Optical Glass	40mm	10.5ml	67.50
406-33-Q40	3-Q-40	UV-VIS	Type 3 w/Lid	Quartz	40mm	10.5ml	172.00
406-33-I40	3-I-40	UV-VIS-NIR	Type 3 w/Lid	Quartz	40mm	10.5ml	172.00
406-33-G50	3-G-50	VIS	Type 3 w/Lid	Optical Glass	50mm	14.0ml	92.00
406-33-Q50	3-Q-50	UV-VIS	Type 3 w/Lid	Quartz	50mm	14.0ml	176.38

Part Number	Ref. P/N	Application	Model number	Glass Type	Path Length	Capacity	Price USD
406-33-I50	3-I-50	UV-VIS-NIR	Type 3 w/Lid	Quartz	50mm	14.0ml	176.38
406-33GS-Q10	3GS-Q10	UV-VIS	Type 3GS w/ Graded Seal	Quartz	10mm	3.5ml	200.00
406-33GS-I10	3GS-I10	UV-VIS-NIR	Type 3GS w/ Graded Seal	Quartz	10mm	3.5ml	200.00
406-39-G5	9-G-5	VIS	Type 9 w/lid	Optical Glass	5mm	0.7ml	34.50
406-39-Q5	9-Q-5	UV-VIS	Type 9 w/lid	Quartz	5mm	0.7ml	99.50
406-39-I5	9-I-5	UV-VIS-NIR	Type 9 w/lid	Quartz	5mm	0.7ml	99.50
406-39-G10	9-G-10	VIS	Type 9 w/lid	Optical Glass	10mm	1.4ml	34.50
406-39-Q10	9-Q-10	UV-VIS	Type 9 w/lid	Quartz	10mm	1.4ml	99.50
406-39-I10	9-I-10	UV-VIS-NIR	Type 9 w/lid	Quartz	10mm	1.4ml	99.50
406-39-G20	9-G-20	VIS	Type 9 w/lid	Optical Glass	20mm	2.8ml	47.50
406-39-Q20	9-Q-20	UV-VIS	Type 9 w/lid	Quartz	20mm	2.8ml	123.00
406-39-I20	9-I-20	UV-VIS-NIR	Type 9 w/lid	Quartz	20mm	2.8ml	123.00
406-39-G30	9-G-30	VIS	Type 9 w/lid	Optical Glass	30mm	4.2ml	60.00
406-39-Q30	9-Q-30	UV-VIS	Type 9 w/lid	Quartz	30mm	4.2ml	137.00
406-39-I30	9-I-30	UV-VIS-NIR	Type 9 w/lid	Quartz	30mm	4.2ml	137.00
406-39-G40	9-G-40	VIS	Type 9 w/lid	Optical Glass	40mm	5.6ml	70.00
406-39-Q40	9-Q-40	UV-VIS	Type 9 w/lid	Quartz	40mm	5.6ml	154.50
406-39-I40	9-I-40	UV-VIS-NIR	Type 9 w/lid	Quartz	40mm	5.6ml	154.50
406-39-G50	9-G-50	VIS	Type 9 w/lid	Optical Glass	50mm	7.0ml	80.00
406-39-Q50	9-Q-50	UV-VIS	Type 9 w/lid	Quartz	50mm	7.0ml	160.00
406-39-I50	9-I-50	UV-VIS-NIR	Type 9 w/lid	Quartz	50mm	7.0ml	160.00
406-39B-G5	9B-G-5	VIS	Type 9B w/lid	Optical Glass	5mm	0.7ml	80.00
406-39B-Q5	9B-Q-5	UV-VIS	Type 9B w/lid	Quartz	5mm	0.7ml	170.00
406-39B-I5	9B-I-5	UV-VIS-NIR	Type 9B w/lid	Quartz	5mm	0.7ml	170.00
406-39B-G10	9B-G-10	VIS	Type 9B w/lid	Optical Glass	10mm	1.4ml	80.00
406-39B-Q10	9B-Q-10	UV-VIS	Type 9B w/lid	Quartz	10mm	1.4ml	170.00
406-39B-I10	9B-I-10	UV-VIS-NIR	Type 9B w/lid	Quartz	10mm	1.4ml	170.00

Part Number	Ref. P/N	Application	Model number	Glass Type	Path Length	Capacity	Price USD
406-39B-G20	9B-G-20	VIS	Type 9B w/lid	Optical Glass	20mm	2.8ml	93.00
406-39B-Q20	9B-Q-20	UV-VIS	Type 9B w/lid	Quartz	20mm	2.8ml	180.00
406-39B-I20	9B-I-20	UV-VIS-NIR	Type 9B w/lid	Quartz	20mm	2.8ml	180.50
406-39B-G40	9B-G-40	VIS	Type 9B w/lid	Optical Glass	40mm	4.2ml	102.50
406-39B-Q40	9B-Q-40	UV-VIS	Type 9B w/lid	Quartz	40mm	4.2ml	190.00
406-39B-I40	9B-I-40	UV-VIS-NIR	Type 9B w/lid	Quartz	40mm	4.2ml	190.00
406-39F-G10	9F-G-10	VIS	Type 9F w/lid	Optical Glass	10mm	1.4ml	57.00
406-39F-Q10	9F-Q-10	UV-VIS	Type 9F w/lid	Quartz	10mm	1.4ml	176.00
406-39F-I10	9F-I-10	UV-VIS-NIR	Type 9F w/lid	Quartz	10mm	1.4ml	176.00
406-317-G5	17-G-5	VIS	Type 17 w/lid	Optical Glass	5mm	0.2ml	24.00
406-317-Q5	17-Q-5	UV-VIS	Type 17 w/lid	Quartz	5mm	0.2ml	71.00
406-317-I5	17-I-5	UV-VIS-NIR	Type 17 w/lid	Quartz	5mm	0.2ml	71.00
406-317-G10	17-G-10	VIS	Type 17 w/lid	Optical Glass	10mm	0.4ml	24.00
406-317-Q10	17-Q-10	UV-VIS	Type 17 w/lid	Quartz	10mm	0.4ml	71.00
406-317-I10	17-I-10	UV-VIS-NIR	Type 17 w/lid	Quartz	10mm	0.4ml	71.00
406-317-G20	17-G-20	VIS	Type 17 w/lid	Optical Glass	20mm	0.6ml	30.00
406-317-Q20	17-Q-20	UV-VIS	Type 17 w/lid	Quartz	20mm	0.6ml	86.00
406-317-I20	17-I-20	UV-VIS-NIR	Type 17 w/lid	Quartz	20mm	0.6ml	86.00
406-317-G30	17-G-30	VIS	Type 17 w/lid	Optical Glass	30mm	0.8ml	34.00
406-317-Q30	17-Q-30	UV-VIS	Type 17 w/lid	Quartz	30mm	0.8ml	99.50
406-317-I30	17-I-30	UV-VIS-NIR	Type 17 w/lid	Quartz	30mm	0.8ml	99.50
406-317-G40	17-G-40	VIS	Type 17 w/lid	Optical Glass	40mm	1.0ml	42.00
406-317-Q40	17-Q-40	UV-VIS	Type 17 w/lid	Quartz	40mm	1.0ml	110.50
406-317-I40	17-I-40	UV-VIS-NIR	Type 17 w/lid	Quartz	40mm	1.0ml	110.50
406-317-G50	17-G-50	VIS	Type 17 w/lid	Optical Glass	50mm	1.2ml	52.00
406-317-Q50	17-Q-50	UV-VIS	Type 17 w/lid	Quartz	50mm	1.2ml	121.50
406-317-I50	17-I-50	UV-VIS-NIR	Type 17 w/lid	Quartz	50mm	1.2ml	121.50
406-317B-G5	17B-G-5	VIS	Type 17B w/lid	Optical Glass	5mm	0.2ml	50.00

Part Number	Ref. P/N	Application	Model number	Glass Type	Path Length	Capacity	Price USD
406-317B-Q5	17B-Q-5	UV-VIS	Type 17B w/lid	Quartz	5mm	0.2ml	118.50
406-317B-I5	17B-I-5	UV-VIS-NIR	Type 17B w/lid	Quartz	5mm	0.2ml	118.50
406-317B-G10	17B-G-10	VIS	Type 17B w/lid	Optical Glass	10mm	0.4ml	50.00
406-317B-Q10	17B-Q-10	UV-VIS	Type 17B w/lid	Quartz	10mm	0.4ml	118.50
406-317B-I10	17B-I-10	UV-VIS-NIR	Type 17B w/lid	Quartz	10mm	0.4ml	118.50
406-317B-G20	17B-G-20	VIS	Type 17B w/lid	Optical Glass	20mm	0.6ml	56.00
406-317B-Q20	17B-Q-20	UV-VIS	Type 17B w/lid	Quartz	20mm	0.6ml	133.50
406-317B-I20	17B-I-20	UV-VIS-NIR	Type 17B w/lid	Quartz	20mm	0.6ml	133.50
406-317B-G30	17B-G-30	VIS	Type 17B w/lid	Optical Glass	30mm	0.8ml	60.00
406-317B-Q30	17B-Q-30	UV-VIS	Type 17B w/lid	Quartz	30mm	0.8ml	148.50
406-317B-I30	17B-I-30	UV-VIS-NIR	Type 17B w/lid	Quartz	30mm	0.8ml	148.50
406-317B-G40	17B-G-40	VIS	Type 17B w/lid	Optical Glass	40mm	1.0ml	65.00
406-317B-Q40	17B-Q-40	UV-VIS	Type 17B w/lid	Quartz	40mm	1.0ml	163.50
406-317B-I40	17B-I-40	UV-VIS-NIR	Type 17B w/lid	Quartz	40mm	1.0ml	163.50
406-317B-G50	17B-G-50	VIS	Type 17B w/lid	Optical Glass	50mm	1.2ml	70.00
406-317B-Q50	17B-Q-50	UV-VIS	Type 17B w/lid	Quartz	50mm	1.2ml	178.50
406-317B-I50	17B-I-50	UV-VIS-NIR	Type 17B w/lid	Quartz	50mm	1.2ml	178.50
406-318-G5	18-G-5	VIS	Type 18 w/lid	Optical Glass	5mm	0.35ml	40.00
406-318-Q5	18-Q-5	UV-VIS	Type 18 w/lid	Quartz	5mm	0.35ml	104.00
406-318-I5	18-I-5	UV-VIS-NIR	Type 18 w/lid	Quartz	5mm	0.35ml	104.00
406-318-G10	18-G-10	VIS	Type 18 w/lid	Optical Glass	10mm	0.7ml	40.00
406-318-Q10	18-Q-10	UV-VIS	Type 18 w/lid	Quartz	10mm	0.7ml	104.00
406-318-I10	18-I-10	UV-VIS-NIR	Type 18 w/lid	Quartz	10mm	0.7ml	104.00
406-318-G20	18-G-20	VIS	Type 18 w/lid	Optical Glass	20mm	1.4ml	54.00
406-318-Q20	18-Q-20	UV-VIS	Type 18 w/lid	Quartz	20mm	1.4ml	128.00
406-318-I20	18-I-20	UV-VIS-NIR	Type 18 w/lid	Quartz	20mm	1.4ml	128.00
406-318-G30	18-G-30	VIS	Type 18 w/lid	Optical Glass	30mm	2.1ml	60.00
406-318-Q30	18-Q-30	UV-VIS	Type 18 w/lid	Quartz	30mm	2.1ml	144.00

Part Number	Ref. P/N	Application	Model number	Glass Type	Path Length	Capacity	Price USD
406-318-I30	18-I-30	UV-VIS-NIR	Type 18 w/lid	Quartz	30mm	2.1ml	144.00
406-318-G40	18-G-40	VIS	Type 18 w/lid	Optical Glass	40mm	2.8ml	70.00
406-318-Q40	18-Q-40	UV-VIS	Type 18 w/lid	Quartz	40mm	2.8ml	167.00
406-318-I40	18-I-40	UV-VIS-NIR	Type 18 w/lid	Quartz	40mm	2.8ml	167.00
406-318-G50	18-G-50	VIS	Type 18 w/lid	Optical Glass	50mm	3.5ml	80.00
406-318-Q50	18-Q-50	UV-VIS	Type 18 w/lid	Quartz	50mm	3.5ml	176.50
406-318-I50	18-I-50	UV-VIS-NIR	Type 18 w/lid	Quartz	50mm	3.5ml	176.50
406-318F-G10	18F-G-10	VIS	Type 18F w/lid	Optical Glass	10mm	0.7ml	80.00
406-318F-Q10	18F-Q-10	UV-VIS	Type 18F w/lid	Quartz	10mm	0.7ml	199.00
406-318F-I10	18F-I-10	UV-VIS-NIR	Type 18F w/lid	Quartz	10mm	0.7ml	199.00
406-318B-G5	18B-G-5	VIS	Type 18B w/lid	Optical Glass	5mm	0.35ml	72.00
406-318B-Q5	18B-Q-5	UV-VIS	Type 18B w/lid	Quartz	5mm	0.35ml	176.00
406-318B-I5	18B-I-5	UV-VIS-NIR	Type 18B w/lid	Quartz	5mm	0.35ml	176.00
406-318B-G10	18B-G-10	VIS	Type 18B w/lid	Optical Glass	10mm	0.7ml	72.00
406-318B-Q10	18B-Q-10	UV-VIS	Type 18B w/lid	Quartz	10mm	0.7ml	176.00
406-318B-I10	18B-I-10	UV-VIS-NIR	Type 18B w/lid	Quartz	10mm	0.7ml	176.00
406-318B-G20	18B-G-20	VIS	Type 18B w/lid	Optical Glass	20mm	1.4ml	86.00
406-318B-Q20	18B-Q-20	UV-VIS	Type 18B w/lid	Quartz	20mm	1.4ml	192.00
406-318B-I20	18B-I-20	UV-VIS-NIR	Type 18B w/lid	Quartz	20mm	1.4ml	192.00
406-318B-G40	18B-G-40	VIS	Type 18B w/lid	Optical Glass	40mm	2.8ml	102.00
406-318B-Q40	18B-Q-40	UV-VIS	Type 18B w/lid	Quartz	40mm	2.8ml	208.00
406-318B-I40	18B-I-40	UV-VIS-NIR	Type 18B w/lid	Quartz	40mm	2.8ml	208.00
406-321-Q-1	21-Q-1	UV-VIS	Type 21 w/stopper	Quartz	1mm	0.4ml	94.50
406-321-I-1	21-I-1	UV-VIS-NIR	Type 21 w/stopper	Quartz	1mm	0.4ml	94.50
406-321-Q2	21-Q-2	UV-VIS	Type 21 w/stopper	Quartz	2mm	0.7ml	94.50
406-321-I2	21-I-2	UV-VIS-NIR	Type 21 w/stopper	Quartz	2mm	0.7ml	94.50
406-321-G5	21-G-5	VIS	Type 21 w/stopper	Optical Glass	5mm	1.7ml	44.00
406-321-Q5	21-Q-5	UV-VIS	Type 21 w/stopper	Quartz	5mm	1.7ml	85.75

Part Number	Ref. P/N	Application	Model number	Glass Type	Path Length	Capacity	Price USD
406-321-I5	21-I-5	UV-VIS-NIR	Type 21 w/stopper	Quartz	5mm	1.7ml	85.75
406-321-G10	21-G-10	VIS	Type 21 w/stopper	Optical Glass	10mm	3.5ml	44.00
406-321-Q10	21-Q-10	UV-VIS	Type 21 w/stopper	Quartz	10mm	3.5ml	85.75
406-321-I10	21-I-10	UV-VIS-NIR	Type 21 w/stopper	Quartz	10mm	3.5ml	85.75
406-321-G20	21-G-20	VIS	Type 21 w/stopper	Optical Glass	20mm	7.0ml	57.20
406-321-Q20	21-Q-20	UV-VIS	Type 21 w/stopper	Quartz	20mm	7.0ml	101.75
406-321-I20	21-I-20	UV-VIS-NIR	Type 21 w/stopper	Quartz	20mm	7.0ml	101.75
406-321-G30	21-G-30	VIS	Type 21 w/stopper	Optical Glass	30mm	10.5ml	61.63
406-321-Q30	21-Q-30	UV-VIS	Type 21 w/stopper	Quartz	30mm	10.5ml	113.75
406-321-I30	21-I-30	UV-VIS-NIR	Type 21 w/stopper	Quartz	30mm	10.5ml	113.75
406-321-G40	21-G-40	VIS	Type 21 w/stopper	Optical Glass	40mm	14.0ml	66.00
406-321-Q40	21-Q-40	UV-VIS	Type 21 w/stopper	Quartz	40mm	14.0ml	122.13
406-321-I40	21-I-40	UV-VIS-NIR	Type 21 w/stopper	Quartz	40mm	14.0ml	122.13
406-321-G50	21-G-50	VIS	Type 21 w/stopper	Optical Glass	50mm	17.0ml	88.00
406-321-Q50	21-Q-50	UV-VIS	Type 21 w/stopper	Quartz	50mm	17.0ml	140.75
406-321-I50	21-I-50	UV-VIS-NIR	Type 21 w/stopper	Quartz	50mm	17.0ml	140.75
406-323-G5	23-G-5	VIS	Type 23 w/stopper	Optical Glass	5mm	1.7ml	70.38
406-323-Q5	23-Q-5	UV-VIS	Type 23 w/stopper	Quartz	5mm	1.7ml	160.50
406-323-I5	23-I-5	UV-VIS-NIR	Type 23 w/stopper	Quartz	5mm	1.7ml	160.50
406-323-G10	23-G-10	VIS	Type 23 w/stopper	Optical Glass	10mm	3.5ml	70.38
406-323-Q10	23-Q-10	UV-VIS	Type 23 w/stopper	Quartz	10mm	3.5ml	160.50
406-323-I10	23-I-10	UV-VIS-NIR	Type 23 w/stopper	Quartz	10mm	3.5ml	160.50
406-323-G20	23-G-20	VIS	Type 23 w/stopper	Optical Glass	20mm	7.0ml	92.38
406-323-Q20	23-Q-20	UV-VIS	Type 23 w/stopper	Quartz	20mm	7.0ml	217.75
406-323-I20	23-I-20	UV-VIS-NIR	Type 23 w/stopper	Quartz	20mm	7.0ml	217.75
406-323-G40	23-G-40	VIS	Type 23 w/stopper	Optical Glass	40mm	10.5ml	99.00
406-323-Q40	23-Q-40	UV-VIS	Type 23 w/stopper	Quartz	40mm	10.5ml	242.00
406-323-I40	23-I-40	UV-VIS-NIR	Type 23 w/stopper	Quartz	40mm	10.5ml	242.00

Part Number	Ref. P/N	Application	Model number	Glass Type	Path Length	Capacity	Price USD
406-323-G50	23-G-50	VIS	Type 23 w/stopper	Optical Glass	50mm	14.0ml	105.63
406-323-Q50	23-Q-50	UV-VIS	Type 23 w/stopper	Quartz	50mm	14.0ml	257.00
406-323-I50	23-I-50	UV-VIS-NIR	Type 23 w/stopper	Quartz	50mm	14.0ml	257.00
406-329-Q1	29-Q-1	UV-VIS	Type 29 w/stopper	Quartz	1mm	0.17ml	119.00
406-329-I1	29-I-1	UV-VIS-NIR	Type 29 w/stopper	Quartz	1mm	0.17ml	119.00
406-329-Q2	29-Q-2	UV-VIS	Type 29 w/stopper	Quartz	2mm	0.35ml	119.00
406-329-I2	29-I-2	UV-VIS-NIR	Type 29 w/stopper	Quartz	2mm	0.35ml	119.00
406-329-G5	29-G-5	VIS	Type 29 w/stopper	Optical Glass	5mm	0.7ml	60.00
406-329-Q5	29-Q-5	UV-VIS	Type 29 w/stopper	Quartz	5mm	0.7ml	119.00
406-329-I5	29-I-5	UV-VIS-NIR	Type 29 w/stopper	Quartz	5mm	0.7ml	119.00
406-329-G10	29-G-10	VIS	Type 29 w/stopper	Optical Glass	10mm	1.4ml	60.00
406-329-Q10	29-Q-10	UV-VIS	Type 29 w/stoppers	Quartz	10mm	1.4ml	119.00
406-329-I10	29-I-10	UV-VIS-NIR	Type 29 w/stopper	Quartz	10mm	1.4ml	119.00
406-329-G20	29-G-20	VIS	Type 29 w/stopper	Optical Glass	20mm	2.8ml	76.00
406-329-Q20	29-Q-20	UV-VIS	Type 29 w/stopper	Quartz	20mm	2.8ml	155.00
406-329-I20	29-I-20	UV-VIS-NIR	Type 29 w/stopper	Quartz	20mm	2.8ml	155.00
406-329-G30	29-G-30	VIS	Type 29 w/stopper	Optical Glass	30mm	4.2ml	82.00
406-329-Q30	29-Q-30	UV-VIS	Type 29 w/stopper	Quartz	30mm	4.2ml	167.00
406-329-I30	29-I-30	UV-VIS-NIR	Type 29 w/stopper	Quartz	30mm	4.2ml	167.00
406-329-G40	29-G-40	VIS	Type 29 w/stopper	Optical Glass	40mm	5.6ml	86.00
406-329-Q40	29-Q-40	UV-VIS	Type 29 w/stopper	Quartz	40mm	5.6ml	174.00
406-329-I40	29-I-40	UV-VIS-NIR	Type 29 w/stopper	Quartz	40mm	5.6ml	174.00
406-329-G50	29-G-50	VIS	Type 29 w/stopper	Optical Glass	50mm	7.0ml	94.00
406-329-Q50	29-Q-50	UV-VIS	Type 29 w/stopper	Quartz	50mm	7.0ml	185.38
406-329-I50	29-I-50	UV-VIS-NIR	Type 29 w/stopper	Quartz	50mm	7.0ml	185.38
406-329B-G5	29B-G-5	VIS	Type 29B w/stopper	Optical Glass	5mm	0.7ml	120.00
406-329B-Q5	29B-Q-5	UV-VIS	Type 29B w/stopper	Quartz	5mm	0.7ml	201.00
406-329B-I5	29B-I-5	UV-VIS-NIR	Type 29B w/stopper	Quartz	5mm	0.7ml	201.00

Part Number	Ref. P/N	Application	Model number	Glass Type	Path Length	Capacity	Price USD
406-329B-G10	29B-G-10	VIS	Type 29B w/stopper	Optical Glass	10mm	1.4ml	120.00
406-329B-Q10	29B-Q-10	UV-VIS	Type 29B w/stopper	Quartz	10mm	1.4ml	201.00
406-329B-I10	29B-I-10	UV-VIS-NIR	Type 29B w/stopper	Quartz	10mm	1.4ml	201.00
406-329B-G20	29B-G-20	VIS	Type 29B w/stopper	Optical Glass	20mm	2.8ml	127.50
406-329B-Q20	29B-Q-20	UV-VIS	Type 29B w/stopper	Quartz	20mm	2.8ml	211.00
406-329B-I20	29B-I-20	UV-VIS-NIR	Type 29B w/stopper	Quartz	20mm	2.8ml	211.00
406-329B-G40	29B-G-40	VIS	Type 29B w/stopper	Optical Glass	40mm	5.6ml	140.00
406-329B-Q40	29B-Q-40	UV-VIS	Type 29B w/stopper	Quartz	40mm	5.6ml	230.00
406-329B-I40	29B-I-40	UV-VIS-NIR	Type 29B w/stopper	Quartz	40mm	5.6ml	230.00
406-330-Q1	30-Q-1	UV-VIS	Type 30 w/stopper	Quartz	1mm	0.8ml	116.00
406-330-I1	30-I-1	UV-VIS-NIR	Type 30 w/stopper	Quartz	1mm	0.8ml	116.00
406-330-Q2	30-Q-2	UV-VIS	Type 30 w/stopper	Quartz	2mm	0.17ml	116.00
406-330-I2	30-I-2	UV-VIS-NIR	Type 30 w/stopper	Quartz	2mm	0.17ml	116.00
406-330-G5	30-G-5	VIS	Type 30 w/stopper	Optical Glass	5mm	0.35ml	64.00
406-330-Q5	30-Q-5	UV-VIS	Type 30 w/stopper	Quartz	5mm	0.35ml	116.00
406-330-I5	30-I-5	UV-VIS-NIR	Type 30 w/stopper	Quartz	5mm	0.35ml	116.00
406-330-G10	30-G-10	VIS	Type 30 w/stopper	Optical Glass	10mm	0.7ml	64.00
406-330-Q10	30-Q-10	UV-VIS	Type 30 w/stopper	Quartz	10mm	0.7ml	116.00
406-330-I10	30 -I-10	UV-VIS-NIR	Type 30 w/stopper	Quartz	10mm	0.7ml	116.00
406-330-G20	30-G-20	VIS	Type 30 w/stopper	Optical Glass	20mm	1.4ml	70.00
406-330-Q20	30-Q-20	UV-VIS	Type 30 w/stopper	Quartz	20mm	1.4ml	137.00
406-330-I20	30-I-20	UV-VIS-NIR	Type 30 w/stopper	Quartz	20mm	1.4ml	137.00
406-330-G30	30-G-30	VIS	Type 30 w/stopper	Optical Glass	30mm	2.1ml	74.00
406-330-Q30	30-Q-30	UV-VIS	Type 30 w/stopper	Quartz	30mm	2.1ml	143.00
406-330-I30	30-I-30	UV-VIS-NIR	Type 30 w/stopper	Quartz	30mm	2.1ml	143.00
406-330-G40	30-G-40	VIS	Type 30 w/stopper	Optical Glass	40mm	2.8ml	78.00
406-330-Q40	30-Q-40	UV-VIS	Type 30 w/stopper	Quartz	40mm	2.8ml	150.50
406-330-I40	30-I-40	UV-VIS-NIR	Type 30 w/stopper	Quartz	40mm	2.8ml	150.50

Part Number	Ref. P/N	Application	Model number	Glass Type	Path Length	Capacity	Price USD
406-330-G50	30-G-50	VIS	Type 30 w/stopper	Optical Glass	50mm	3.5ml	100.00
406-330-Q50	30-Q-50	UV-VIS	Type 30 w/stopper	Quartz	50mm	3.5ml	182.00
406-330-I50	30-I-50	UV-VIS-NIR	Type 30 w/stopper	Quartz	50mm	3.5ml	182.00
406-330B-G5	30B-G-5	VIS	Type 30B w/stopper	Optical Glass	5mm	0.35ml	120.00
406-330B-Q5	30B-Q-5	UV-VIS	Type 30B w/stopper	Quartz	5mm	0.35ml	200.00
406-330B-I5	30B-I-5	UV-VIS-NIR	Type 30B w/stopper	Quartz	5mm	0.35ml	200.00
406-330B-G10	30B-G-10	VIS	Type 30B w/stopper	Optical Glass	10mm	0.7ml	120.00
406-330B-Q10	30B-Q-10	UV-VIS	Type 30B w/stopper	Quartz	10mm	0.7ml	200.00
406-330B-I10	30B-I-10	UV-VIS-NIR	Type 30B w/stopper	Quartz	10mm	0.7ml	200.00
406-330B-G20	30B-G-20	VIS	Type 30B w/stopper	Optical Glass	20mm	1.4ml	127.50
406-330B-Q20	30B-Q-20	UV-VIS	Type 30B w/stopper	Quartz	20mm	1.4ml	211.00
406-330B-I20	30B-I-20	UV-VIS-NIR	Type 30B w/stopper	Quartz	20mm	1.4ml	211.00
406-330B-G40	30B-G-40	VIS	Type 30B w/stopper	Optical Glass	40mm	2.8ml	140.00
406-330B-Q40	30B-Q-40	UV-VIS	Type 30B w/stopper	Quartz	40mm	2.8ml	230.00
406-330B-I40	30B-I-40	UV-VIS-NIR	Type 30B w/stopper	Quartz	40mm	2.8ml	230.00
406-330F-G10	30F-G-10	VIS	Type 30F w/stopper	Optical Glass	10mm	0.7ml	84.00
406-330F-Q10	30F-Q-10	UV-VIS	Type 30F w/stopper	Quartz	10mm	0.7ml	210.00
406-330F-I10	30F-I-10	UV-VIS-NIR	Type 30F w/stopper	Quartz	10mm	0.7ml	210.00
406-332-G10	32-G-10	VIS	Type 32 w/stopper	Optical Glass	10mm	2.8ml	52.50
406-332-Q10	32-Q-10	UV-VIS	Type 32 w/stopper	Quartz	10mm	2.8ml	99.00
406-332-I10	32-I-10	UV-VIS-NIR	Type 32 w/stopper	Quartz	10mm	2.8ml	99.00
406-332-G20	32-G-20	VIS	Type 32 w/stopper	Optical Glass	20mm	5.6ml	55.00
406-332-Q20	32-Q-20	UV-VIS	Type 32 w/stopper	Quartz	20mm	5.6ml	107.00
406-332-I20	32-I-20	UV-VIS-NIR	Type 32 w/stopper	Quartz	20mm	5.6ml	107.00
406-332-G50	32-G-50	VIS	Type 32 w/stopper	Optical Glass	50mm	14.1ml	60.00
406-332-Q50	32-Q-50	UV-VIS	Type 32 w/stopper	Quartz	50mm	14.1ml	117.50
406-332-I50	32-I-50	UV-VIS-NIR	Type 32 w/stopper	Quartz	50mm	14.1ml	117.50
406-332-G100	32-G-100	VIS	Type 32 w/stopper	Optical Glass	100mm	28.2ml	64.00

Part Number	Ref. P/N	Application	Model number	Glass Type	Path Length	Capacity	Price USD
406-332-Q100	32-Q-100	UV-VIS	Type 32 w/stopper	Quartz	100mm	28.2ml	126.00
406-332-I100	32-I-100	UV-VIS-NIR	Type 32 w/stopper	Quartz	100mm	28.2ml	126.00
406-334-G50	34-G-50	VIS	Type 34 w/stoppers	Optical Glass	50mm	14.1ml	78.00
406-334-Q50	34-Q-50	UV-VIS	Type 34 w/stoppers	Quartz	50mm	14.1ml	150.00
406-334-I50	34-I-50	UV-VIS-NIR	Type 34 w/stoppers	Quartz	50mm	14.1ml	150.00
406-334-G100	34-G-100	VIS	Type 34 w/stoppers	Optical Glass	100mm	28.2ml	90.00
406-334-Q100	34-Q-100	UV-VIS	Type 34 w/stoppers	Quartz	100mm	28.2ml	156.50
406-334-I100	34-I-100	UV-VIS-NIR	Type 34 w/stoppers	Quartz	100mm	28.2ml	156.50
406-334S-G50	34S-G-50	VIS	Type 34S w/screw caps	Optical Glass	50mm	14.1ml	140.00
406-334S-Q50	34S-Q-50	UV-VIS	Type 34S w/screw caps	Quartz	50mm	14.1ml	236.00
406-334S-I50	34S-I-50	UV-VIS-NIR	Type 34S w/screw caps	Quartz	50mm	14.1ml	236.00
406-334S-G100	34S-G-100	VIS	Type 34S w/screw caps	Optical Glass	100mm	28.2ml	170.00
406-334S-Q100	34S-Q-100	UV-VIS	Type 34S w/screw caps	Quartz	100mm	28.2ml	248.00
406-334S-I100	34S-I-100	UV-VIS-NIR	Type 34S w/screw caps	Quartz	100mm	28.2ml	248.00
406-337-G5	37-G-5	VIS	Type 37	Optical Glass	5mm	1.4ml	64.00
406-337-Q5	37-Q-5	UV-VIS	Type 37	Quartz	5mm	1.4ml	107.00
406-337-I5	37-I-5	UV-VIS-NIR	Type 37	Quartz	5mm	1.4ml	107.00
406-337-G10	37-G-10	VIS	Type 37	Optical Glass	10mm	2.8ml	64.00
406-337-Q10	37-Q-10	UV-VIS	Type 37	Quartz	10mm	2.8ml	107.00
406-337-I10	37-I-10	UV-VIS-NIR	Type 37	Quartz	10mm	2.8ml	107.00
406-396-G2.5	96-G-2.5	VIS	Type 96	Optical Glass	2.5mm		42.00
406-396-G5	96-G-5	VIS	Type 96	Optical Glass	5.0mm		42.00
406-396-G10	96-G-10	VIS	Type 96	Optical Glass	10mm		42.00
406-396-G20	96-G-20	VIS	Type 96	Optical Glass	20mm		46.00
406-396-G40	96-G-40	VIS	Type 96	Optical Glass	40mm		48.00
406-396-G50	96-G-50	VIS	Type 96	Optical Glass	50mm		50.00
406-396-G100	96-G-100	VIS	Type 96	Optical Glass	100mm		64.00

8.2 Hollow Cathode Lamp

8.2.1 Model number

Nwspec designs and manufactures a complete line of hollow cathode lamps to meet the strictest standards of most atomic absorption spectrometer instruments. We manufacture lamps of different sizes and with argon and/or neon gas fills to assure optimum results on a wide variety of instruments.



Hollow Cathode Lamp

Lamp Characteristics

Category	Data
Glowing starting voltage:	300 V
Radiation stability:	1% over 30 minutes
Size: 2" for Perkin-Elmer	Diameter: 50 mm, Length: 180 mm
Size: 1.5" lamps	Diameter: 38 mm, Length: 160 mm

1.5" Hollow Cathode Lamp

- Regular 1.5" lamps for all systems except Perkin-Elmer system.
- Self-reversal 1.5" lamps for Shimadzu, Thermal Jarrel Ash, LEEMAN Labs whose AAS system requires self-reversal background correction abilities.
- Even though Varian systems do not require self-reversal lamps, they are suggested and recommended because of longer life time and higher intensity.

2" Hollow Cathode Lamp

- Uncoded (regular) 2" lamps can be used for all Perkin-Elmer atomic absorption spectrometers.
- Some models use a 9 – pin connector while the AAnalyst Series use a 4 –pin connector as pictured below. Please select the right lamp as pictured on the attached page for your instrument.
- Nwspec lamps are designed to provide the longest life possible. Therefore, it is important to note the recommended current setting listed for each lamp. Operator can start at this setting and then increase current setting in the instrument until optimum lamp performance is reached. Such calibration protocol only has to be done one time for each element.

8.2.2 Listing and Prices

Element	Symbol	2" uncoded (9 pin) P/N	Price USD	2"uncoded (4 pin) P/N	Price USD	1.5" regular P/N	Price USD	1.5" self-reversal P/N	Price USD
Aluminum	Al	201-101	250.00	201-101-4	295.00	203-101	169.00	223-101	188.00
Antimony	Sb	201-102	295.00	201-102-4	330.00	203-102	169.00	223-102	208.00
Arsenic	As	201-103	345.00	201-103-4	380.00	203-103	199.00	223-103	239.00
Barium	Ba	201-104	250.00	201-104-4	289.00	203-104	175.00	223-104	198.00
Beryllium	Be	201-105	399.00	201-105-4	439.00	203-105	225.00	223-105	245.00
Bismuth	Bi	201-106	295.00	201-106-4	330.00	203-106	169.00	223-106	188.00
Boron	B	201-107	250.00	201-107-4	289.00	203-107	175.00	223-107	198.00
Cadmium	Cd	201-108	295.00	201-108-4	330.00	203-108	175.00	223-108	198.00
Calcium	Ca	201-109	250.00	201-109-4	289.00	203-109	169.00	223-109	188.00
Cerium	Ce	201-163	850.00	201-163-4	895.00	203-163	215.00	223-163	245.00
Cesium	Cs	201-164	850.00	201-164-4	895.00	203-164	215.00	223-164	245.00
Chromium	Cr	201-110	250.00	201-110-4	289.00	203-110	169.00	223-110	188.00
Cobalt	Co	201-111	250.00	201-111-4	289.00	203-111	175.00	223-111	198.00
Copper	Cu	201-112	250.00	201-112-4	289.00	203-112	169.00	223-112	188.00
Dysprosium	Dy	201-113	345.00	201-113-4	380.00	203-113	215.00	223-113	245.00
Erbium	Er	201-114	345.00	201-114-4	389.00	203-114	215.00	223-114	245.00
Europium	Eu	201-115	345.00	201-115-4	380.00	203-115	215.00	223-115	245.00
Gadolinium	Gd	201-116	345.00	201-116-4	380.00	203-116	215.00	223-116	245.00
Gallium	Ga	201-117	399.00	201-117-4	439.00	203-117	215.00	223-117	245.00
Germanium	Ge	201-118	399.00	201-118-4	439.00	203-118	215.00	223-118	245.00
Gold	Au	201-119	489.00	201-119-4	529.00	203-119	215.00	223-119	245.00
Hafnium	Hf	201-120	345.00	201-120-4	380.00	203-120	215.00	223-120	245.00
Holmium	Ho	201-121	345.00	201-121-4	380.00	203-121	215.00	223-121	245.00
Indium	In	201-122	295.00	201-122-4	330.00	203-122	215.00	223-122	245.00
Iridium	Ir	201-123	760.00	201-123-4	795.00	203-123	215.00	223-123	245.00

Element	Symbol	2" uncoded (9 pin) P/N	Price USD	2"uncoded (4 pin) P/N	Price USD	1.5" regular P/N	Price USD	1.5" self-reversal P/N	Price USD
Iron	Fe	201-124	250.00	201-124-4	289.00	203-124	169.00	223-124	188.00
Lanthanum	La	201-125	345.00	201-125-4	380.00	203-125	205.00	223-125	230.00
Lead	Pb	201-126	250.00	201-126-4	289.00	203-126	175.00	223-126	188.00
Lithium	Li	201-127	250.00	201-127-4	289.00	203-127	169.00	223-127	188.00
Lutetium	Lu	201-165	850.00	201-165-4	895.00	203-165	215.00	223-165	245.00
Magnesium	Mg	201-128	250.00	201-128-4	289.00	203-128	169.00	223-128	188.00
Manganese	Mn	201-129	250.00	201-129-4	289.00	203-129	169.00	223-129	188.00
Mercury	Hg	201-130	295.00	201-130-4	330.00	203-130	189.00	223-130	198.00
Molybdenum	Mo	201-131	250.00	201-131-4	289.00	203-131	169.00	223-131	188.00
Neodymium	Nd	201-132	345.00	201-132-4	380.00	203-132	215.00	223-132	245.00
Nickel	Ni	201-133	250.00	201-133-4	289.00	203-133	169.00	223-133	188.00
Niobium	Nb	201-134	250.00	201-134-4	289.00	203-134	175.00	223-134	198.00
Osmium	Os	201-166	850.00	201-166-4	895.00	203-166	320.00	223-166	348.00
Palladium	Pd	201-135	399.00	201-135-4	439.00	203-135	235.00	223-135	255.00
Phosphorus	P	201-136	345.00	201-136-4	380.00	203-136	275.00	223-136	298.00
Platinum	Pt	201-137	399.00	201-137-4	439.00	203-137	235.00	223-137	255.00
Potassium	K	201-138	250.00	201-138-4	289.00	203-138	175.00	223-138	198.00
Praseodymium	Pr	201-139	345.00	201-139-4	380.00	203-139	215.00	223-139	245.00
Rhenium	Re	201-140	399.00	201-140-4	439.00	203-140	275.00	223-140	298.00
Rhodium	Rh	201-141	669.00	201-141-4	705.00	203-141	329.00	223-141	348.00
Rubidium	Rb	201-167	850.00	201-167-4	895.00	203-167	175.00	223-167	198.00
Ruthenium	Ru	201-142	399.00	201-142-4	439.00	203-142	295.00	223-142	315.00
Samarium	Sm	201-143	345.00	201-143-4	380.00	203-143	215.00	223-143	245.00
Scandium	Sc	201-144	399.00	201-144-4	439.00	203-144	275.00	223-144	298.00
Selenium	Se	201-145	345.00	201-145-4	380.00	203-145	215.00	223-145	245.00
Silicon	Si	201-146	250.00	201-146-4	289.00	203-146	175.00	223-146	198.00
Silver	Ag	201-147	250.00	201-147-4	289.00	203-147	169.00	223-147	188.00

Element	Symbol	2" uncoded (9 pin) P/N	Price USD	2"uncoded (4 pin) P/N	Price USD	1.5" regular P/N	Price USD	1.5" self-reversal P/N	Price USD
Sodium	Na	201-148	250.00	201-148-4	289.00	203-148	169.00	223-148	188.00
Strontium	Sr	201-149	250.00	201-149-4	289.00	203-149	175.00	223-149	198.00
Tantalum	Ta	201-150	250.00	201-150-4	289.00	203-150	205.00	223-150	230.00
Tellurium	Te	201-151	295.00	201-151-4	330.00	203-151	205.00	223-151	230.00
Terbium	Tb	201-152	345.00	201-152-4	380.00	203-152	215.00	223-152	245.00
Thallium	Tl	201-153	295.00	201-153-4	330.00	203-153	215.00	223-153	245.00
Thulium	Tm	201-154	399.00	201-154-4	439.00	203-154	215.00	223-154	245.00
Tin	Sn	201-155	295.00	201-155-4	330.00	203-155	205.00	223-155	230.00
Titanium	Ti	201-156	250.00	201-156-4	289.00	203-156	169.00	223-156	188.00
Tungsten	W	201-157	250.00	201-157-4	289.00	203-157	175.00	223-157	198.00
Vanadium	V	201-158	250.00	201-158-4	289.00	203-158	215.00	223-158	245.00
Ytterbium	Yb	201-159	345.00	201-159-4	380.00	203-159	215.00	223-159	245.00
Yttrium	Y	201-160	345.00	201-160-4	380.00	203-160	215.00	223-160	245.00
Zinc	Zn	201-161	250.00	201-161-4	289.00	203-161	169.00	223-161	188.00
Zirconium	Zr	201-162	250.00	201-162-4	289.00	203-162	175.00	223-162	198.00
Calcium/Magnesium	Ca/Mg	201-181	350.00	201-181-4	385.00	203-181	259.00	223-181	299.00
Copper/Zinc	Cu/Zn	201-182	350.00	201-182-4	385.00	203-182	259.00	223-182	299.00
Aluminum/Strontium	Al/Sr	201-183	350.00	201-183-4	385.00	203-183	269.00	223-183	308.00
Silver/Cadmium	Ag/Cd	201-184	395.00	201-184-4	430.00	203-184	259.00	223-184	299.00
Copper/Beryllium	Cu/Be	201-185	495.00	201-185-4	530.00	203-185	325.00	223-185	375.00
Aluminum/Tin	Al/Sn	201-186	445.00	201-186-4	480.00	203-186	325.00	223-186	345.00
Platinum/Rhodium	Pt/Rh	201-187	995.00	201-187-4	1030.00	203-187	495.00	223-187	545.00
Selenium/Tin	Se/Sn	201-188	545.00	201-188-4	580.00	203-188	335.00	223-188	355.00
Sodium/Potassium	Na/K	201-189	350.00	201-189-4	385	203-189	269.00	223-189	298.00

8.3 Deuterium Lamp

8.3.1 Model number

Nwspec can provide standard deuterium lamps for existing instruments or we can engineer lamps specific to the unique requirements of each manufacturer's spectrophotometers, liquid chromatography detectors, medical analyzers and pollution measuring devices. Each lamp is designed to provide long life, consistent intensity and high stability. Our technical ability to customize a lamp to meet the optical and electrical specifications of each instrument is only surpassed by the company's customer service and on-time delivery responsiveness.



Deuterium Lamp

Features

- 2000 hour long-life lamp for economical, operator convenience
- Consistent intensity for excellent and reliable performance
- Signal stability for continuous stable operation
- Quality, JIT delivery, customer service – your expectations are always met

8.3.2 Custom OEM Partner

Nwspec will design and build a lamp specific for any analytical instrument. Give us the electronic specifications of your instrument and desired lamp dimensions. Do you want a base, flange, leads, timer...what are the dimensions? Let us know your requirements and Nwspec will build you a lamp even though it is not listed below.

8.3.3 Long-Life Series

a. The following is a listing of the more common mounted lamps we have available:

Manufacturer	Instrument Model	Part Number	Unit Price USD
Shimadzu	SPD10A/20A	705-550	270.00
	SPDM10A/M20A	705-554	270.00
	SPD6A	705-551	270.00
	LC2010	705-552	310.00
	Nexera LC2030 DAD	705-555	290.00
	UV-120,3000, 1601, 2450, 2550	705-553	270.00
	AA-670		
SSI		712-550	
Hitachi	7000	704-551	310.00
	L6000/7000/7420/2400/2500	704-550	340.00
	U1800/2800/1900/2900	704-552	340.00
	U2000	704-553	340.00
Knauer	2500	713-550	340.00
	UVD2.1s (*)	713-551	350.00
Lineur	100	714-550	350.00
Agilent	1100/1200/VWD	710-550	350.00
	1100/1200DAD	710-551	370.00
	8453 UV Spec	710-552	370.00
	1260DAD/1290 (*)	710-553	390.00
	1260VWD (*)	710-554	370.00
Waters	Alliance 2489	708-553	370.00
	Alliance 2487	708-550	400.00
	Acquity 996/2996	708-551	370.00
	486	708-552	400.00
Perkin Elmer	PE 200	701-550	370.00
	PE 100	701-551	270.00
	Lambda	701-552	270.00
Hach	DR4000U	720-550	330.00
	DR5000/6000	720-551	270.00
Jasco	1575/2075	715-550	270.00
Beckman	5510	721-550	270.00
	MDQ	721-551	270.00
	DU 600 to 7500 Series	721-552	270.00
	DU500, 20, 30	721-553	270.00
Buck Scientific	210/220 AAS System	707-510	270.00
Analytic Jena	UV-Vis	722-550	349.00
	AAS	722-551	270.00
Varian	ProStar 325/335	702-552	270.00
	23881A	702-551	270.00
Scinco	S3100	726-550	270.00
Thermo	UV6000LP	709-550	270.00
	AAS	709-551	270.00
Dionex	UV3000VWD	729-550	270.00
ABI	757	727-550	370.00
Gilson		719-550	270.00

(*) Indicates a marker chip is not supplied with lamp

b. The following is a listing of the more common bare lamps we have available:

Company	Instrument Model	Part Number	Unit Price
Shimadzu	SPD10A/20A	705-530	Contact us for Pricing
	Nexera LC2030 DAD	705-535	
	SPDM10A/M20A	705-534	
	SPD6A	705-531	
	LC2010	705-532	
	UV-120/3000	705-533	
	AA-670		
SSI		712-530	
Hitachi	7000	704-531	
	L6000/7000/7420/2400/2500	704-530	
	U1800/2800/1900/2900	704-532	
	U2000	704-533	
Knauer	2500	713-530	
	UV D2.1s (*)	713-531	
Linear	100	714-530	
Agilent	1100/1200VWD	710-530	
	1100/1200DAD	710-531	
	8453 UV Spec	710-532	
	1260 (*)	710-533	
Waters	Alliance 2489	708-533	
	Alliance 2487	708-530	
	Acquity 996/2996	708-531	
	486	708-532	
Perkin Elmer	PE 200	701-530	
	PE 100	701-531	
	PE Lambda 750	701-532	
Jasco	1575/2075	715-530	
Beckman	5510	721-530	
	MDQ	721-531	
	DU 600 to 7500 Series	721-532	
	DU500, 20,30	721-533	
Jena	UV Vis	722-530	
	AAS	722-531	
Scinco	S3100	726-530	
Thermo	UV6000LP	709-530	
	AAS	719-531	
Dionex	UV3000VWD	729-530	
ABI	757	727-530	
Varian	23881A	702-531	
	ProStar 325/335	702-532	

c. list with images

Part Number	Instrument brand/model	Images	Part Number	Instrument brand/model	Images
210-1052	BUCK 230ATS 235ATS		701-551	PE100	
731-551	BUCK BUV-3041 BUV-7040		701-552	PE Lambda 750	
710-550	Agilent 1100/1200V WD		704-550	Hitachi L7000/7420/2 400	
710-551	Agilent 1100/1200 DAD		704-551	Hitachi 7000	
710-552	Agilent 8453		704-552	Hitachi U2800/2900 SERIES	
710-553	Agilent 1260		704-553	Hitachi U2000	
705-550	Shimadzu LC SPD10A/20A		709-550	Thermo UV6000 LP	
705-551	Shimadzu SPD6A		709-551	Thermo AAS	
705-552	Shimadzu LC2010		712-550	SSI	picture as 714-550, without bracket
705-553	Shimadzu UV-120/3000 & AA670		713-550	Knauer 2500	
705-554	Shimadzu SPDM10A/M 20A		713-551	Knauer UVD 2.15	

Part Number	Instrument brand/model	Images	Part Number	Instrument brand/model	Images
705-555	Shimadzu Nexera Prominence		714-550	Lineur 100	below picture , but it without bracket
708-550	Waters Alliance 2487		714-550, with bracket	Lineur 100	
708-551	Waters Acquity 996/2996		715-550	Jasco 1575-2075	
708-552	Waters 486		727-550	ABI 757, PE200	
708-553	Waters Alliance 2489		702-552	Varian ProStar 325/335	
701-553	PE-403	-	726-550	Scinco S3100	
721-550	Beckman 5510		720-550	Hach Ham-L6637	
721-551	Beckman MDQ		720-551	Hach5000	
721-552	Beckman DU600-7500		719-550	Gilson 24363A	
721-553	Beckman DU500, 20, 30	-	729-550	Dionex U3000VWD (no chip)	
722-550	Jena		729-551	Dionex PDA100 and 300	

9 Custom Manufacturing (OEM) Services & Training

9.1 Custom Manufacturing (OEM) Services

Our Core Capabilities

NW Spec provides comprehensive Original Equipment Manufacturing (OEM) services for analytical instruments and precision accessories. Managed through our specialized facilities in Xiong'an and the Tianjin Port Free-Trade Zone, we partner with clients to take custom solutions from prototype to full-scale production.

Complete Instrument Systems: We design and manufacture Spectroscopy (AAS, UV-Vis), Chromatography (HPLC, GC), Mass Spectrometry (MS), and Sample Preparation (Microwave Digestion) systems.

Precision Components & Accessories

Optical: Lenses, UV cuvettes, and flow cells.

Graphite: Tubes, platforms, electrodes, and crucibles.

Machined Parts: Custom housings, chassis, and fittings.

Advanced Manufacturing Infrastructure

Our facilities are equipped for end-to-end production, featuring:

Fabrication: Injection molding, precision CNC machining, and a food-grade molding center.

Quality Control: Automated optical screening, 3D coordinate measuring (CMM), and rigorous surface/hardness testing.

Engineering Support

Our R&D team supports every stage of the OEM partnership, offering custom optical design, Design for Manufacturing (DFM) optimization, regulatory compliance (ISO/CE), and scalable production flexibility.

9.2 Training and Operation Manual

Training course number	Training Course Name
863-801	GC Practical Operation、 Maintenance Training-910
863-802	GC Application Training-910
863-803	GC Practical Operation and Maintenance Training-GC20
863-804	GC Application Training-GC20
863-805	HPLC Practical Operation and Maintenance Training-1100&5100 Models
863-806	HPLC Application Training-1100&5100
863-807	HPLC Practical Operation and Maintenance Training-LC20
863-808	HPLC Application Training-LC20
663-601	ICPO30 Practical Operation and Maintenance Training
663-602	ICPO30 Application Training
663-603	AAS Practical Operation and Maintenance Training-210&235
663-604	AAS Application Training-210&235
663-605	AFS Practical Operation and Maintenance Training
663-606	AFS Application Training
463-301	FTIR Practical Operation and Maintenance Training
463-302	FTIR Application Training
463-303	Practical Operation and Maintenance Training for Ultra-Trace Photometer
463-304	Training on Application of Ultra-Trace Spectrophotometer

Method Manual Number	Method Manual Name
473-300	FTIR Method Manual
673-600	AAS Method Manual
873-800	GC Method Manual
873-801	HPLC Method Manual
673-601	ICP Method Manual
673-602	AFS Method Manual

History of New Spec

Headquartered in Xiong'an, China, NW Spec specializes in developing and manufacturing advanced scientific instruments for spectroscopy, chromatography, and mass spectrometry.

Although founded in 2025, our expertise runs deep. We are built on over 30 years of industry experience, inheriting the legacy of Varsal Instruments (est. 1993) and Buck Scientific (acquired 2019). Led by Dr. Pingxin Wang—a Ph.D. chemist from the University of Texas at Austin—our team operates state-of-the-art manufacturing facilities in Tianjin and innovative R&D labs in Tangshan.

Our mission is to bridge high-end innovation with accessibility. We distinguish ourselves by integrating "Trusted Data" technology directly into our hardware. By featuring built-in smart chips and encrypted architecture, NW Spec instruments ensure that every result is traceable, tamper-proof, and audit-ready from the moment it is captured.

With over 200 employees worldwide and full ISO, GMP, and FDA compliance, we provide affordable, customized, and secure solutions. NW Spec is shaping a new era of scientific instrumentation—delivering the reliability scientists need with the data security regulators demand.

Ordering and Warehouse Locations

Ordering Information:

North America, Europe, South and Central America:

Buck Scientific Instruments, LLC. Headquarters
1 Water Street • Ansonia, CT 06401, USA
Phone: 203-853-9444
Fax: 203-853-0569 • 1-800-562-5566
E-mail : sales@bucksci.com

Asia:

NWSPEC (Xiongan) Co., Ltd.
15-051# Xiongan Pilot Free Trade Zone
Comprehensive Bonded Zone, Hebei Province,
China
Phone: +86 189 6516 4839
E-mail : sales@nwspec.com