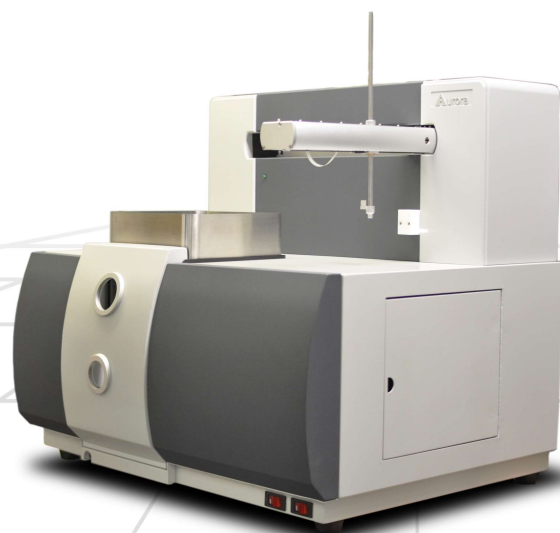


TRACE Ai1200 Plus Atomic Absorption Spectrometer

The TRACE Ai1200 Plus atomic absorption spectrometer is the 4rd generation AAS instrument developed by Aurora. For more than 30 years, Aurora's TRACE Ai1200 Plus has built a reputation in elemental analysis research, with unbeatable performance, sensitivity and flexibility. These instruments are used in a variety of fields including environmental, agriculture, clinical, and mining. Standard configurations include the **TRACE Ai1200P Flame (F)**, **TRACE Ai1200P Flame/Graphite Furnace (F/GF)**, **TRACE Ai1200P Flame/Vapour Generation (F/VG)** and **TRACE Ai1200P Flame/Graphite Furnace/Vapour Generation (F/GF/VG)** enabling analyses at multiple concentration levels.

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| Optics | High light throughput, full reflection, switchable single/double beam optic. Narrow beam optical design for flame and furnace configuration. Aberration corrected 300mm focus length Czerny-Turner monochromator with software controlled wavelength selection and optimization. |
| Dimensions | W 85 x D 75 x H 43cm (W 85 x D 75 x H 77cm with Autosampler) |
| Band Pass | Software adjustable computerized control of slit |
| Grating | Diffraction grating with 1800lines/mm. |
| Wavelength Range | 185-900 nm controlled by software |
| Wavelength Scan / Optimization | From 185-900 nm in any selected range with Zoom Function Automatic wavelength optimization with graphical display |
| Background Correction | Ultra high, Rapid self-reversal method. 1000Hz modulated Deuterium lamp with 1 ms rapid response for accurate correction. Electronic modulation with deuterium current control and aperture attenuation |
| PMT | High quantum efficiency, 185-900 nm, automatic gain control |
| Data Sampling Rate | D2 and hollow cathode lamps operate up to 1000 Hz data sampling rate |
| Light Source | 8 lamp motorized turret with independent power supply Automatic alignment and coded lamp capability |
| Built-in High Intensity Hollow Cathode Lamps | 3 channel independent high intensity power supply provides improved sensitivities and lower detection limits |
| Communications | USB Communication between AAS and Computer |
| Sensitivity | 2 mg/L Cu: Abs \geq 0.4, RSD<0.5% |



Eight-Lamp
Motorized Turret

Atomizers

The configuration of the atomization compartment allows rapid changeover between atomization sources.

Flame

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| Gas control | Software controlled with automatic changeover between different flame systems |
| Spray Chamber | Solid Teflon spray chamber, inert to acids and organic solvents |
| Burner | Corrosion resistant titanium burners available for both air/acetylene and nitrous-oxide/acetylene |
| Flow-rate / Control | Software controlled |
| Sample Introduction | Automatic on-line dilution and preparation of calibration curves from a single standard (Optional) |
| Fume Exhaustion | Conventional laboratory extraction system |
| Safety System | Safety interlock mechanism that monitors the burner type, burner fitted, gas pressures. Flame on/off sensors; Power failure automatic shutdown. Liquid trap system, pressure relief plug and flame shield to protect from UV radiation |
| Nebulizer | Pre-optimizer nebulizer, no adjustment required. High performance, chemically inert glass nebulizer with a metal jacket for acid sample. Platinum Capillary nebulizer is available as an option. |

Transversely-heated Graphite

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| Purge Gas | Computer controlled flow rate of Ar or He from 0 to 5.0 L/min |
| Furnace Tube | Pyrolytically coated integrated contact cuvette, 5.7mm internal diameter x 19mm, transversely heated, temperature gradient of less than 20°C |
| Temperature Range | Programmable from ambient up to 3000°C. Full range temperature sensors for direct real-time temperature display and control over the full temperature range |
| Furnace heating rate | Up to 3800 K / s |
| Program flexibility | Heating programs of up to 30 steps. Each step can be programmed separately |
| Ramp Time | The heating time of the graphite tube to the preprogrammed temperature can be varied in steps of 0.1 sec |
| Hold Time | Selectable from 0 s up to 25 s in steps of 0.1 sec |

Vapor and Hydride

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| Absorption Cell | Constant temperature electrothermally heated quartz absorption cell with temperature range of ambient to 1000 °C |
| Pump | Continuous flow peristaltic pump with speed control |
| Accessories | High efficiency mixing section, gas-liquid separator, tubing and connectors included |
| Performance | Cold vapor and hydride generation determinations of Hg, As, Se, Te, Bi, Sb, Sn and other hydride-forming elements at sub-trace levels |

Autosampler:

Optional XYZ Autosampler for Flame, GF and/or VG atomizers:

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| Autosampler design | Free movement in XYZ directions allows user to adapt system to any suitable sample container |
| Sample Introduction | Combined with on-line dilution, the flame autosampler offers calibration from a single standard and automatic dilution of over-range samples |

XYZ Autosampler:

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| Dispensable reagent volume | Up to 1000µL, selectable in increments of 1µL |
| Sampling capacity | Holds standard 192 sample cup/test tube (0.5 or 10 mL) sample racks. Also compatible with standard solvent extraction test tubes, ICP test tubes, micro plates and custom made trays |
| Super Fast-Dry function | Software controlled preheating and sample injection speed. Allows for 3 sample/min turn-around time with Graphite Furnace |
| Sample Introduction | Random access with adjustable sample/reagent volume, automatic standard and sample preparation, and bulk standard calibration mode |

NOTE: Instrument specifications may change without notice as an ongoing effort of product improvement.

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