

QUICKTRACE™ M-7500

CVAAS Mercury Analyzer

The QuickTrace™ M-7500 Cold Vapor Atomic Absorption mercury analyzer is ideal for low ppt to sub-ppm mercury quantitation. The QuickTrace™ M-7500 is designed for routine use in a variety of settings, including environmental laboratories, industry, and research institutes, for virtually any aqueous acidified sample.



The QuickTrace™ M-7500 mercury analyzer achieves the trace mercury detection limit of < 1.0 ppt demanded by customers employing performance based EPA method 245.7. The QuickTrace™ M-7500 is also versatile enough to analyze samples > 500 ppb without dilution.

The QuickTrace™ M-7500 is used throughout the world to analyze samples in the broad spectrum of mercury samples from clinical / biological to seawater samples. Some of the common applications include water and waste-water, soil and sediment, and biological tissues and fluids.

The QuickTrace™ M-7500 is capable of switching between low ppm and ppt analysis without hardware or tubing configuration changes. Using the proven and reliable cold vapor atomic absorption (CVAA) technique combined with peltier stabilized detectors and multi-tasking Windows® based QuickTrace™ software package, the QuickTrace™ M-7500 is the most stable and sensitive mercury absorbance analyzer available today.

Minimum Computer Requirements

Windows NT 4 (Service pack 6)/Windows 2000 (Service Pack 3)/Windows XP (Service Pack 2)/Vista

64 MB of RAM for NT4, 128 MB of RAM for Windows 2000, 256 MB of RAM for Windows XP

Video running 800x600 with 256 colors or higher (1024x768 and 16 bit color is recommended)

Pentium® (400 MHz minimum for Windows NT4 and 2000, 1GHz for Windows XP)

Two free communication ports, either two serial or one serial and one USB

Internet Explorer 4 or higher must be installed for the online Help to function

Technical Specifications

Carrier Gas (N₂ or Ar): Supplied 120 psi

Power Requirements: 100-240 VAC +/- 10%, 50/60 Hz

Dimensions:

Height: 20 cm (8")

Width: 48 cm (19")

Depth: 56 cm (22")

Weight: 15.6 kg (34.4 lbs)

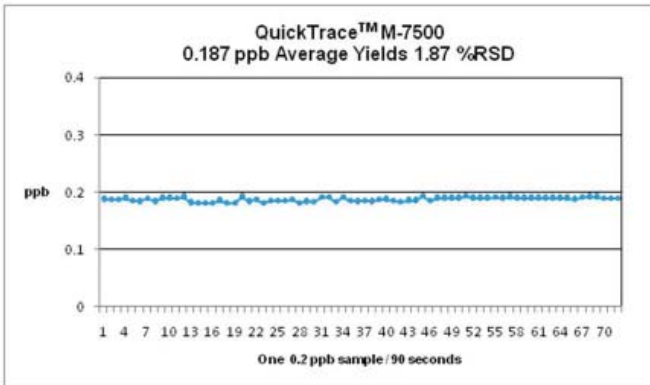
Computer Interfaces: RS-232 and USB

Autosampler: CETAC ASX-130, ASX-260, ASX-520, or EXR-8

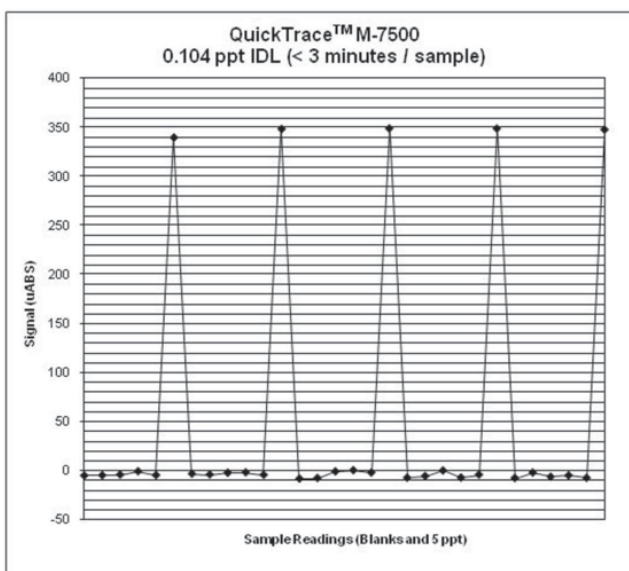
Warranty: 12 month limited

PERFORMANCE

Excellent short and long term stability are found in our QuickTrace™ M-7500 CVAAs analyzer. Less than 0.5 ppt instrument detection limits are typical for the QuickTrace™ M-7500 utilizing less than 10 mL of sample. We consistently achieve instrument detection limits of less than 0.3 ppt utilizing less than 3 minutes of total analysis time per sample.



- Sub-ppt detection limits (< 0.5 ppt IDL)
- Linearity greater than 4 orders of magnitude
- Dynamic range < 0.5 ppt to > 500 ppb
- Without employing our smart rinse technology the system is ready to accurately measure a sample within four minutes following the ingestion of a 1 ppm sample
- < 2% RSD short term precision (5 samples @ 5 ppt)

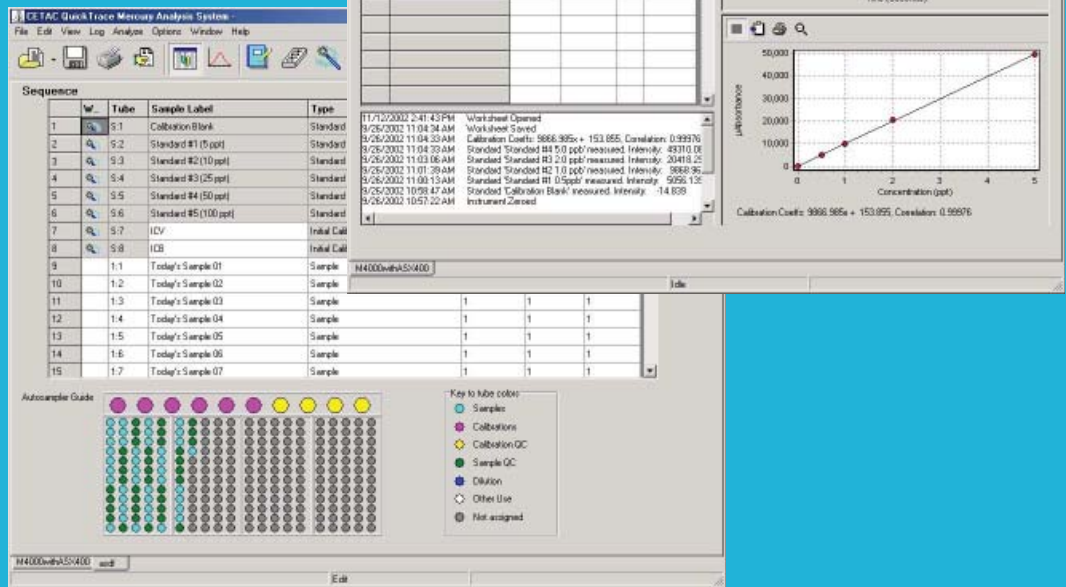


KEY FEATURES

- Patented non-foaming gas liquid separator (GLS)
- Overflow prevention system
- Double beam optics for superior baseline stability
- Ozone free low vapor pressure mercury excitation lamp thermally stabilized with feedback control
- Filtered deep well photovoltaic detection system
- Full computer control of instrument parameters
- Maintenance free Nafion® dryer
- Analyze samples with or without assistance of an autosampler
- Optional autosamplers (ASX-130, ASX-260, ASX-520 and by special order, EXR-8) combined with powerful customizable software can process up to 10 standard/QC solutions and 84-50 mL sample/QC solutions in a single unattended run.
- Unlimited QC samples or positions
- Optional autodilution accessory (ADX-500)
- Automatic end of run standby routines
- Smart Rinse - prevents carryover from high concentration samples
- Powder coated metal construction
- 12 roller 4 channel peristaltic pump
- Sample volume 0.5 mL to > 10 mL
- Compatible with EPA methods such as EPA Method 245.1, 245.5, SW 846-7470 and SW 846-7471
- High capacity mode of < 60 seconds per sample
- QuickTrace™ software with built-in calibration, report generation and quality control features designed to make EPA compliance simple

For low level ppt analysis we recommend our autosampler enclosure (ENC-500) to protect the samples from determinate errors such as dust particles. The ENC-500 will also protect your investment from the harsh acid gases normally present in and around digested samples.

QUICKTRACE™ SOFTWARE



CETAC has designed the QuickTrace™ software package to be easy-to-use, providing valuable features and flexibility. We continuously add customer requested features which truly makes the software designed by the customer for the customer.

KEY FEATURES

- Windows® NT, 2000, XP or Vista compatible
- User defined method threshold Smart Rinse technology
- User defined smart rack technology within a given method. This technology allows the largest load capacity autosampler the use of up to four racks varying in size from 90, 60, 40, 24 or 21 tube position racks for samples, standards or quality control
- Simultaneously run analyses, develop methods, and print reports
- EPA 1631 and EPA 245.7 quality control compliant
- User defined blank acceptance criteria for EPA 1631 and EPA 245.7
- Customizable quality control features
- Integrate via peak height or peak area

- User defined one or two point baseline offset correction
- Scheduled consumable maintenance tracking
- Data files are efficiently exported to a network via the Ethernet port for convenient linking to a LIMS system
- Data files can be emailed to and opened by a CETAC representative on a CETAC PC
- Online help and interactive tutorial - immediate software support
- Automatic detection limit calculation - determine EPA defined IDL/MDL
- Real time exportable data-tracking log
- Individualized reports - customize printouts by selecting from several parameters
- Master worksheets - ready-to-run worksheets allow quick operation for new users
- Free upgrades

Download the demo software at
http://www.cetac.com/service_support/downloads.asp

MERCURY ANALYZERS



FREEDOM OF CHOICE

CETAC Technologies provides our customers the freedom to choose an autosampler for their Mercury system that will meet their laboratories sample load requirements. The choice of autosampler is available for any of our QuickTrace™ Mercury Analyzers. Available CETAC autosamplers include the ASX-130, ASX-260, ASX-520 and the EXR-8. Manual sampling is also available with the option to add autosamplers as sample demand increases.



ASX Autosampler Specifications

	ASX-130	ASX-260	ASX-520	EXR-8
Tray	9 Standards, 1 Sample Rack	10 Standards, 2 Sample Racks	10 Standards, 4 Sample Racks	10 Standards, 8 Sample Racks
Capacity	90 samples	180 samples	360 samples	720 samples
Dimensions (H x W x D)	61 cm x 33 cm x 33 cm (24" x 13" x 13")	61 cm x 33 cm x 51 cm (24" x 13" x 20")	61 cm x 52 cm x 48 cm (24" x 20.5" x 19")	61 cm x 95 cm x 53 cm (24" x 37.5" x 21")
Weight	8.4 kg (18.5 lbs)	8.4 kg (18.5 lbs)	10.5 kg (23 lbs)	19.5 kg (42 lbs)
Computer Interfaces	RS-232 and/or USB	RS-232 and/or USB	RS-232 and/or USB	RS-232 and/or USB
Power Requirements	100-240 VAC +/- 10%, 50/60	100-240 VAC +/- 10%, 50/60	100-240 VAC +/- 10%, 50/60	100-240 VAC +/- 10%, 50/60

CETAC QuickTrace™ Mercury Analyzers Comparison

	M-6100	M-7500	M-8000
Detection Range	< 10 ppt to > 500ppb	< 1 ppt to > 500ppb	< 0.05 ppt to > 400ppb
System Type	CVAA	CVAA	CVAF
Detector	CCD	Deep well photovoltaic	Filtered photomultiplier
Peristaltic Pump	2 Speed	Variable speed	Variable speed
Sample Uptake	≈ 5 mL/min	Variable	Variable
Gas Flow Control	Manual	Computer control	Computer control
Autosampler	ASX-130, ASX-260, ASX-520, EXR-8	ASX-130, ASX-260, ASX-520, EXR-8	ASX-130, ASX-260, ASX-520, EXR-8
Sample Racks	Maximum 8	Maximum 8	Maximum 8
Sample Capacity	Autosampler Dependent Max = 720	Autosampler Dependent Max = 720	Autosampler Dependent Max = 720
EPA Methods	245.1, 245.5, SW 846, (7470, 7471)	245.1, 245.5, 245.7, SW 846, (7470, 7471)	245.1, 245.2, 245.7, 1631, SW 846, (7470, 7471)
Optional Autodilutor	Yes	Yes	Yes
Throughput at:			
▪ 0.2 ppb MDL	1 sample/60 seconds	1 sample/60 seconds	1 sample/60 seconds
▪ 0.5 ppt MDL	N/A	N/A	1 sample/90 seconds
GLS Overflow Sensor	No	Yes	Yes
Enclosure	Yes	Yes	Yes