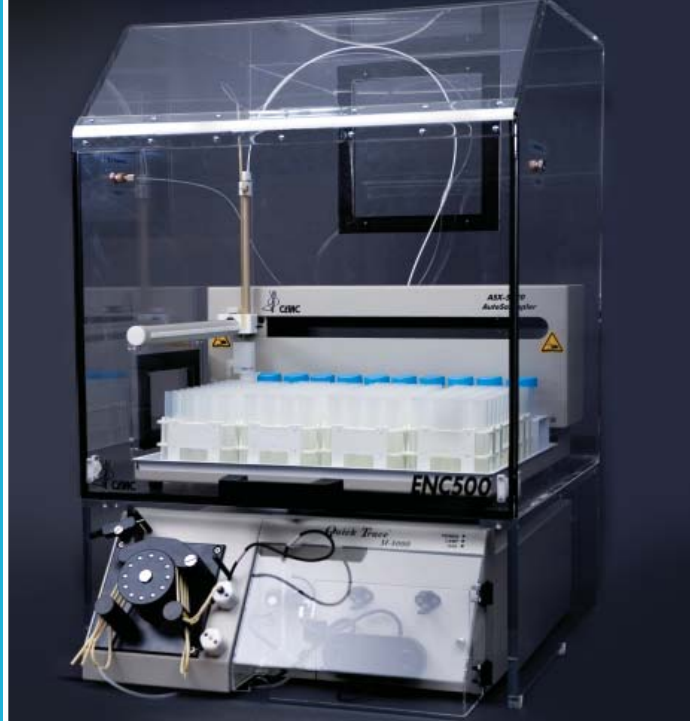


QUICKTRACE™ M-8000

CVAFS Mercury Analyzer

The QuickTrace™ M-8000 Cold Vapor Atomic Fluorescence mercury analyzer is ideal for sub-ppt to sub-ppm mercury quantitation. It provides the performance and productivity needed by today's laboratories to meet the tightening regulatory demands, while exceptional stability and user defined QC sequencing allow for long periods of unattended operation.



The QuickTrace™ M-8000 mercury analyzer easily achieves the ultra-trace mercury detection limit of < 0.05 ppt demanded by customers employing EPA method 1631. The QuickTrace™ M-8000 is also versatile enough to analyze samples > 400 ppb without dilution.

The QuickTrace™ M-8000 employs three modes of operation for mercury determination. It has the ability of switching modes via software method changes. Mode switching capabilities between low ppm and ppt analysis are accomplished without hardware or tubing configuration changes.

Mode 1: Cold Vapor Atomic Fluorescence Spectroscopy (CVAFS)

Mode 2: Cold Vapor Atomic Fluorescence Spectroscopy Single Gold Trap Amalgamation (CVAFS-SGTA)

Mode 3: Cold Vapor Atomic Fluorescence Spectroscopy Double Gold Trap Amalgamation (CVAFS-DGTA)

SMART RINSE TECHNOLOGY

We also employ cost saving features during the gold trap desorption such as shutting down the flowing rinse and slowing the SnCl₂ flow. These innovative features can save the laboratory thousands of dollars per year by reducing reagent and waste costs.

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 NT4 and Windows 2000, 1GHz for Windows XP)

Two free communication ports, either serial and/or USB
Internet Explorer 4 or higher must be installed for the online Help to function

Technical Specifications

Carrier Gas (Ar): Supplied at 35 psi

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

Dimensions:

Height: 20 cm (8")

Width: 48 cm (19")

Depth: 60 cm (23¾")

Weight: 16.8 kg (37 lbs)

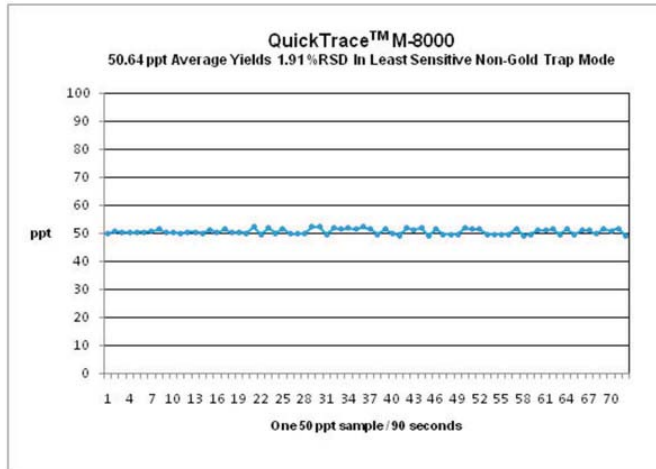
Computer Interfaces: RS-232 or USB

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

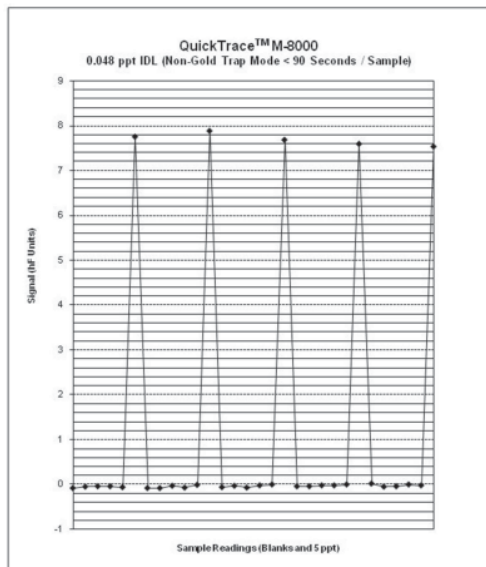
Warranty: 12 month limited

PERFORMANCE

Excellent short and long term stability are found in our QuickTrace™ M-8000 CVAF analyzer. Less than 0.02 ppt instrument detection limits are typical for the QuickTrace™ M-8000 gold trap modes utilizing less than 25 mL of sample. Non-gold trap instrument detection limits of less than 0.1 ppt utilizing less than 10 mL of sample can be achieved.



- Sub-ppt detection limits (< 0.05 ppt IDL)
- Linearity greater than 4 orders of magnitude
- Dynamic range < 0.05 ppt to > 400 ppb
- In Mode 1 by response comparison to a 100 ppt standard, the system exhibits < 0.01% memory effect of a 1 ppm standard immediately following the ingestion of a 1 part per million (ppm) sample.
- 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
- < 1% RSD short term precision (5 samples @ 5 ppt)

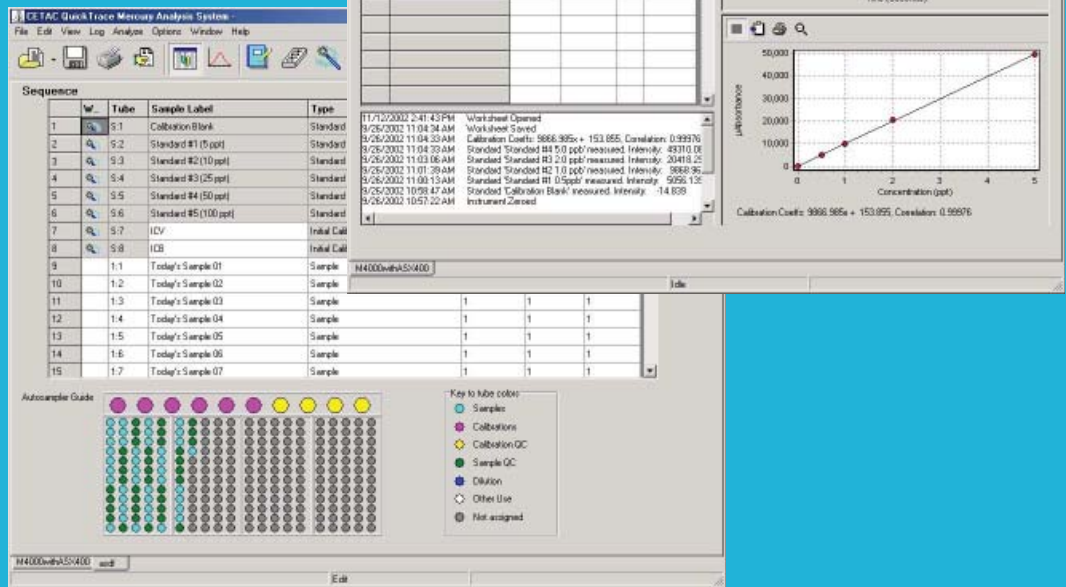


KEY FEATURES

- U.S. EPA 1631 and U.S. EPA 245.7 compliant
- European standard EN-13506 and EN-12338 compatible
- Patented non-foaming gas liquid separator (GLS)
- Reagent saving gold trap stand-by routine
- GLS overflow protection
- Ozone free low vapor pressure mercury excitation lamp
- Filtered photo multiplier tube detection system (PMT)
- Maintenance free Nafion® dryer
- Universal power supplies
- 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 > 50 mL
- 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 sub-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