

Mercury Analyzers At A Glance

OVERVIEW

				
Principle Analytical Technique	Chemical reduction followed by cold vapor atomic absorption (CVAA)	Chemical reduction followed by cold vapor atomic absorption (CVAA)	Chemical reduction with or without Hg pre-concentration followed by cold vapor atomic fluorescence (CVAF)	Thermal decomposition followed by amalgamation and atomic absorption
Sample Matrix	<ul style="list-style-type: none"> Aqueous samples Hg measured from low ng/L to mg/L levels 	<ul style="list-style-type: none"> Aqueous samples Hg measured from sub ng/L to high µg/L levels 	<ul style="list-style-type: none"> Aqueous samples When the lowest detection levels are required 	<ul style="list-style-type: none"> Solid, semi-solid and aqueous matrices Analysis without sample preparation
Instrument Detection Limit	≤ 5 ng/L	≤ 0.5 ng/L	Pre-concentration mode ≤ 0.05 ng/L	≤ 0.001 ng
Short Term Precision (% RSD @ 95% Confidence, N=5)	@ 20 ng/L ≤ 3.3	@ 20 ng/L ≤ 1.2	Pre-concentration mode @ 5 ng/L ≤ 2.5	@ 10 ng ≤ 4
Usable Range	5 ng/L – 1 mg/L	0.5 ng/L – 500 µg/L	<0.05 ng/L – 400 µg/L	0.001 ng – 1500 ng; <25,000 ng with extended range option

KEY CAPABILITIES

		QuickTrace M-7600	QuickTrace M-8000	
High Performance Gas/Liquid separator	Y	Y	Y	NA
Priority Samples	Y	Y	Y	Y
Dual cell detection system for wide dynamic range	Y	N	N	Y
Built in high concentration protection system	Y	Y	Y	NA
Flow through rinse to minimize carryover even at ultra-trace levels	Y	Y	Y	NA
Counter-flow Nafion® membrane dryer to minimize vapor formation in detector cells	Y	Y	Y	Y
Can be reconfigured to liquids analysis	NA	NA	NA	Y
Can be reconfigured to solids analysis	Y	N	N	NA
Ultra-trace analysis mode with gold amalgamation for lower detection levels	N	N	Y	Y
Choice of Autosamplers	N	Y	Y	NA
Manual Operation	Y	Y	Y	Y

METHOD SELECTION GUIDE (COMMON METHODOLOGIES)

				
(US) EPA 245.1	X	X		
(US) EPA 245.5	X	X		
(US) EPA 245.6	X	X		
(US) EPA 245.7				X
(US) EPA 7470A	X	X		
(US) EPA 7471B	X	X		
(US) EPA 7473				X
(US) EPA 7474				X
(US) EPA 1631				X
ASTM D6722				X
ASTM 7623				X
EN 1483	X	X		
EN 13806	X	X		
EN 12338				X
ISO 17582				X
ISO 12846	X	X		
Methods Not Listed			Contact Sales	