

DMA-80 Technical Specifications

DMA-80 Wide Range

DMA-80 Dual Cell

DMA-80 Tri Cell

Principle	Sample thermal decomposition, amalgamation, atomic absorption		
Typical analysis time	5 minutes		
	Sample loading		
Auto-sampler	Built-in, 2x40 plates with 'on-the-fly' samples loading		
Sample type	Solid, liquid and gas		
Max. sample weight (solid)	1,5 gram		
Max. sample volume (liquid)	1,5 mL		
	Mercury detection		
Carrier gas	Air or oxygen		
Input pressure	4 bar		
Flow	Ca. 100 mL/minute		
Sample boat	Multiple materials available		
Combustion furnace	Catalyst-filled quartz tube with dual-temperature zone		
Combustion temperature	Time-to-temperature and time-at-temperature programs		
	Mercury detection		
Light source	One low-pressure mercury lamp		
Wavelength	253,65 nm		
Detector	Two UV-enhanced photodiodes	One UV-enhanced photodiode	Two UV-enhanced photodiodes
Detection limit	0,003 ng Hg		0,001 ng Hg
Working range	0,03 ng to 30000 ng Hg	0,03 ng to 1500 ng Hg	0,01 ng to 1500 ng Hg
Typical precision	< 1,5% @ 10-20000 ng Hg	< 1,0% @ 10 ng Hg	
Calibration	Standard solutions and certified reference materials		
Pre-concentration	Up to 10 times		

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	Mercury detection
<i>Terminal 660</i>	Touch-screen industrial grade controller 6,5" screen with 64.000 colors VGA resolution 640x480 for sharp process graphic 5 USB ports for printer, keyboard, mouse, storage devices and other external peripherals 1 RS-232 port for analytical balance interface 1 LAN for network connection
<i>Terminal 1660</i>	Touch-screen industrial grade controller 12,1" screen with 64.000 colors SVGA resolution 800x600 for sharp process graphic 5 USB ports for printer, keyboard, mouse, storage devices and other external peripherals 1 RS-232 port for analytical balance interface 1 LAN for network connection
<i>PC (minimum requirements)</i>	CPU Pentium III 800 RAM 256 MB 20 MB free space on hard disk 1 USB port 1 CD-ROM reader Windows 7, XP or Vista

	Mercury detection
<i>Dimensions</i>	800 (w) x 420 (d) x 300 (h) mm
<i>Weight</i>	56 kg
<i>Power supply</i>	110-230 V, 50-60 Hz

	Mercury detection
<i>Direct gas analysis</i>	Injection block for sampled delivery and vacuum pump Analysis time approximately 3 minutes per sample Wide dynamic range (0,01 to 1500 µg/m³)
<i>Indirect gas analysis</i>	By mercury sorbent traps

	Mercury detection
<i>Standard methods</i>	US EPA method 7473 (Mercury in solids and solutions by thermal decomposition, amalgamation, and atomic absorption spectrophotometry) ASTM method D-6722-01 (Standard test method for total mercury in coal and coal combustion residues by direct combustion analysis) ASTM method D-7623-10 (Standard test method for total mercury in crude oil using combustion-gold amalgamation and cold vapor atomic absorption method)
<i>Operating software</i>	EasyCONTROL software is fully compliant with FDA regulations 21 CFR Part 11