

I HARDWARE

- › Principles: thermal decomposition, amalgamation, and atomic absorption
- › Double beam spectrophotometer to enhance signal stability and reproducibility
- › Typical analysis time: 5 minutes
- › Auto-sampler: built-in 40 position plates with "on-the-fly" sample loading for high throughput (up to hundreds of samples)
- › Sample types: solids, liquids and gases
- › Max. sample weight (solid): 1.5 gram
- › Max. sample weight (liquid): 1.5 mL
- › Carrier gas: air or oxygen
- › Interference filter: 254 nm, 9 mm bandwidth
- › Detectors: UV enhanced photodiodes
- › Input pressure: 4 bar
- › Flow: ca. 100 mL/minute
- › Sample boats: multiple materials available such as metal or quartz
- › Combustion furnace: catalyst-filled quartz tube with dual-temperature zone: drying and thermal decomposition
- › Combustion temperature: time-to-temperature and time-at-temperature programs
- › Backlight logo indicates the analysis progress

	DMA-80 evo Double beam	DMA-80 evo Tricell Double Beam	DMA-80 evo Wide Range
Spectrophotometer Design	Double Beam		Single Beam
Light source	One low-pressure mercury lamp with 360° radial emission; 180° between reference and sample beam		One low-pressure mercury lamp
Wavelength	253.65 nm		
Detector	Two UV-enhanced photodiodes	Three UV-enhanced photodiodes	Two UV-enhanced photodiodes
Detection limit	0.001 ng Hg	0.0003 ng Hg	0.003 ng Hg
Working Range	0.01 ng to 1500 ng Hg	0.003 ng to 1500 ng Hg	0.03 ng to 30000 ng Hg
Typical precision	≤ 1 % @ 5 ng Hg	≤ 1 % @ 1 ng Hg	≤ 1.5% @ 10-20000 ng Hg
Calibration	Standard solutions and/ or certified reference materials		
Pre-concentration	Up to 10 samples		

| USER INTERFACE

- › Touch-screen industrial grade controller
- › 6.5" screen with 64,000 colors
- › 640x480 VGA resolution for sharp graphics
- › 5 USB ports for printers, keyboards, mouse, storage devices and other external peripherals
- › 1 RS-232 port for an analytical balance interface
- › 1 LAN port to enable network connection

| USER INTERFACE (PC REQUIREMENTS)

- › CPU Pentium III 800
- › 256 MB of RAM
- › 20 MB of usable space on the hard drive
- › 1 USB port
- › A network connection
- › 1 CD-ROM reader
- › Windows XP or newer

| SOFTWARE

- › Icon-driven multi-language software allowing the user to edit, save and run a virtually unlimited number of methods
- › Temperature driven methods to control sample decomposition
- › Auto-blank
- › Data post-processing
- › Data import/export from/to Excel
- › LIMS connectivity
- › Autosave function
- › System auto diagnosis
- › Fully compliant with FDA regulation 21 CFR part 11
- › History of applications, errors, system and log-ins

| MILESTONE CONNECT

- › Web based app for most devices (PC, tablets or smartphones) to control/monitor the unit
- › Database with an extensive library of information (list of parts, technical notes, user manuals, video tutorials, updated application notes, a complete library of relevant scientific articles, and an online help section)
- › Wireless control of the system from any device using Milestone Connect

| MERCURY DETERMINATION OF GAS

- › Mercury determination in gas via sorbent traps
- › Gas sampling done through a dedicated module using a sorbent trap
- › DMA-80 evo autosampler compatible with Milestone sorbent traps
- › Wide dynamic range (0.01 to 1500 $\mu\text{g}/\text{m}^3$)

| OFFICIAL METHOD COMPLIANCE

- › 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)

| OTHER INFORMATION

- › Dimensions: 800 (W) x 420 (D) x 300 (H) mm
- › Weight: 56 kg
- › Power supply: 230 V, 50-60 Hz
- › Weight: 84 kg