

### 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, additional 40 positions plates with "on-the-fly" sample loading for high throughput (up to hundreds of samples)
- › Sample types: solids, liquids and gasses
- › 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 metals 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
- › Amalgamator heating: rapid heating to 900 °C in 4–6 seconds via dedicated coil, ensuring fast and reliable mercury release
- › ACT Ecolabel: Certification providing independent verification of the unit's environmental impact (applies to PN DMA8237 and DMA8238)

	DMA-80 evo	DMA-80 evo* <i>Dualcell Double Beam**</i>	DMA-80 evo* <i>Tricell Double Beam***</i>	DMA-80 evo* <i>Wide Range</i>
Spectrophotometers Design	Single Beam	Double Beam		Single Beam
Light source	One low-pressure mercury lamp	One low-pressure mercury lamp with 360° radial emission; 180° between reference and sample beam		One low-pressure mercury lamp
Wavelength	253.65			
Detector	One UV-enhanced photodiode	Two UV-enhanced photodiodes	Three UV-enhanced photodiodes	Two UV-enhanced photodiodes
Detection limit	0.003 ng Hg	0.001 ng Hg	0.0003 ng Hg	0.003 ng Hg
Working Range	0.03 ng to 1500 ng Hg	0.01 ng to 1500 ng Hg	0.003 ng to 1500 ng Hg	0.03 ng to 30000 ng Hg
Typical precision	≤ 1 % @ 10 ng Hg	≤ 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			

\* Applicable to the DMA-80 models - \*\* Applicable to dualCONC configuration - \*\*\* Applicable to triCONC configuration

### | USER INTERFACE

- › Touch-screen industrial grade controller
- › 6,5" screen with 64.000 colors
- › 640x480 VGA resolution for sharp process 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 and network connection
- › 1 CD-ROM reader
- › Windows XP or newer

### | SOFTWARE

- › Icon-driven multi-language software allowing the user the 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

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 ng)

### | OFFICIAL METHOD COMPLIANCE

- › US EPA method 7473 (Mercury in solidsand 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)
- › UOP Method 938-10 (Total Mercury and Mercury Species in Liquid Hydrocarbons)

### | OTHER INFORMATION

- › Dimensions: 800 (w) x 420 (d) x 300 (h) mm
- › Weight: 56 Kg
- › Power supply: 230 V, 50-60 Hz

### | SAFETY STANDARDS

- › IEC 61010-1:2010, IEC 61010-1:2010/AMD1:2016, EN 61010-1:2010/A1:2019, UL 61010-1:2012/R:2018-11, CAN/CSA-C22.2 No. 61010-1:2012/A1:2018-11