

mercurio CV  swiss innotech

# mercurio CV

WORLDWIDE UNIQUE SYSTEM FOR THE  
**DETERMINATION OF MERCURY**  
IN PURE LIQUIDS AND GASES

# THINK AHEAD

Our solutions for  
laboratories

**swiss innotech ag**  
Auerstrasse 19  
9435 Heerbrugg  
Switzerland  
Phone: +41 (0)71 520 75 85  
[info@swiss-innotech.com](mailto:info@swiss-innotech.com)  
[www.swiss-innotech.com](http://www.swiss-innotech.com)

# SIMPLY

# SMART!

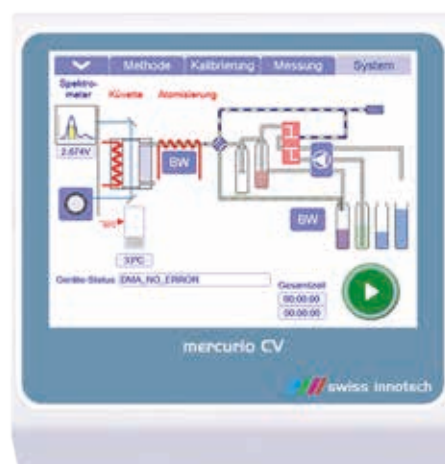


## μCONTROL TERMINAL

The mercurio CV is controlled via a compact terminal with an easy-to-read, bright, full-colour touchscreen display. Optimum handling is ensured by the variably adjustable viewing angle of the screen. The terminal has various USB and RS 232 interfaces, LAN interface and video interfaces for a possible camera connection.

## easyCONTROL SOFTWARE

The easyCONTROL is an operating and evaluation program developed in-house and optimally adapted to the requirements. User-friendly - multilingual - and equipped with matching icon symbols. It supports all methods, displays the element signals graphically, automatically calculates the concentration and outputs the calculated values in tabular form. A touch of a button is all it takes to call up and start the stored DIN-EN and EPA methods. The complete measurement logs with results can be printed out directly or via a PC as a report with diagrams.



## mercurio CV

### FACTS/PROPERTIES

Technology	CV-AAS (cold vapour technology)
Working range	0 to 1500 ng Hg
Sample volume	0.05 ml to 50 ml
Detection limit	< 0.0005 ng
Wavelength	253.65 nm
Conformity	CE-sign
Warranty	12 month

### TECHNICAL DATA

Power supply	220 V to 240 V / 50 Hz
Power consumption	max. 500 VA (heating phase)
Screen	Touchscreen (coloured)
Software	easyCONTROL (Hg-Software)
Accessories	Power cable, pump hoses
Dimensions WxDxH	32 x 46 x 40 cm (with Terminal)
Weight	16 kg

# mercurio CV

A **COMPACT** WORKPLACE FOR THE DETERMINATION OF **MERCURY** IN **PURE** SAMPLES AND DIGESTIONS



- Hg-CV analysis system for daily routine use
- Optionally with unique double-beam technology and automatic sample changer
- Mercury determination down to the extreme trace range
- Inexpensive analysis due to low investment costs
- Best detection limits <0.0005 ng
- Low operating costs per analysis
- Trouble-free analysis by Hg separation
- Measuring range from 0 to 1500 ng Hg with „dual signal technology“
- Compact system with colour graphics terminal and software
- Complete logging of all working parameters
- Elimination of spectroscopic perturbations

## FAST AND RELIABLE ANALYSIS BY COLD VAPOUR ATOMIC ABSORPTION TECHNOLOGY

With the mercurio CV system, the total Hg analysis of a sample with response and measurement time is achieved in just 2-3 minutes. For even lower detection limits and trouble-free analysis, the extremely sensitive enrichment process can be changed within a few seconds. Interference due to non-specific absorption is eliminated. The new cuvette design allows different sample volumes from high Hg concentrations as well as extremely low levels to <0.0005 µg / L to be determined. The advantage here is the low contamination susceptibility of the system by a parallel flushing. This prevents time-consuming cleaning and rinsing after high Hg values. The mercury analysis system with integrated AA

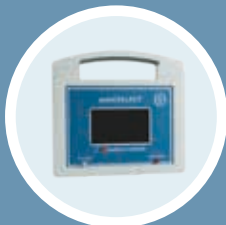
spectrometer, automatic 6-channel pump, gas / liquid separation unit and the special low-pressure plasma Hg lamp ensures excellent sensitivity. The efficient evaporation and enrichment offers a range of application from 0 to 1500 ng Hg without dilution steps. The mercurio CV can also check and calibrate the pump delivery channels before each use. The system is based on the cold vapour atomic absorption method (CV-AAS) and complies with all common methods such as: EPA 245.2, EN 12846, EN 12338, CEN / TC 230, EN 13806, etc. Optionally, the mercurio CV system can also be equipped with Atomic Fluorescence Spectroscopy (AFS) technology.

### APPLICATIONS

### USE

• Environmental engineering	→	Drinking water, groundwater, seawater, sewage, surface water, rainwater, soil, gases / air, solvents
• Food industry	→	Fish, drinks, cereals, dairy products
• Medicine	→	Blood, urine, tissue
• Research and Development	→	Material investigations
• Geology	→	Rock, minerals, ceramics
• Industry	→	Paper, plastics, ceramics, waste gases, waste water
• Petrochemistry	→	Solvents, oils, petrochemical products
• Waste Management	→	Sewage sludge, residues

# ALL IN ONE



autoCOLLECT-G



adsoQUICK-Cartridge



Hg-Gold-Cartridge



Amalgam-Unit

## autoCOLLECT and mercurio CV in interaction

With the advanced gas analysis unit, mercurio CV is transformed from a Hg analyzer for pure, aqueous samples to a multi-functional system for liquids and gases. In a few minutes, the collected samples of autoCOLLECT-G can be analyzed directly in the mercurio CV device. By using an active gold coating, only metallic mercury in the form of Au amalgam is retained.

### DUAL SIGNALING TECHNOLOGY

Dual signal technology guarantees maximum selectivity and precision. Thanks to 2 signals per sample, a measuring range of 0.00005 to 1500 ng Hg is covered.

### WET-CHEMICAL PARTS

The wet chemical parts are designed to be quickly and easily cleaned or replaced. The monitoring by droplet sensor results in an extremely high sensitivity of approx. 20 pg Hg (1% A) and a detection limit below <0.0005 ng Hg.

Specially developed gold-quartz cartridges are used according to the methods HJ 910 - 2017 (China) and EPA Method IO - 5.0. The accumulated data is imported directly from the autoCOLLECT-G into the dataset of the mercurio CV via USB interface. The Hg-Gold cartridge is used on the gas AAC-unit of mercurio CV and the analysis can be started.

### AMALGAM TECHNOLOGY

The amalgam technique allows complete Hg retention for the entire measurement range and automatic elimination of spectral interference. Thanks to 100 times improved sensitivity, extremely accurate readings can be achieved.

### DOUBLE-BEAM

The new protected double-beam technology with its loss-free efficacy light output improves the signal-to-noise ratio and provides the lowest detection limits. Equipped with the double-beam technology, the device is quickly in optimal operating condition.



AS 36/89

AUTOMATIC



## AUTOMATIC SAMPLE CHANGER

The use of the sample changer with built-in rinsing module allows automatic measurement of aqueous samples. There is a turntable with 36 samples of up to 50 ml each and a second version with 89 samples of 10 ml each. The device program automatically recognizes the sample holder which is operated and controlled directly via the mercurio CV colour screen. An automatic volume adjustment optimizes the determination limits. After each sample, the capillary moves to the rinsing position (overflow system), cleans the hose lines, prevents contamination and reduces the blank value.



## AUTOMATIC CHEMICAL CLEANING FOR COLD VAPOUR TECHNOLOGY



The Hg-PUR system automatically cleans the chemicals such as stannous chloride and acids for cold vapour technology. The system is connected to the peristaltic pump and the gas supply of the cold vapour unit. The cleaning in the Hg-PUR takes place without the use of additional chemicals during the reaction. A costly cleaning with helium or nitrogen overnight is no longer necessary. This significantly reduces the time and expense required.

CLEAN

CHEMISTRY