MODERNWATER | OVA7000

On-line metal monitor

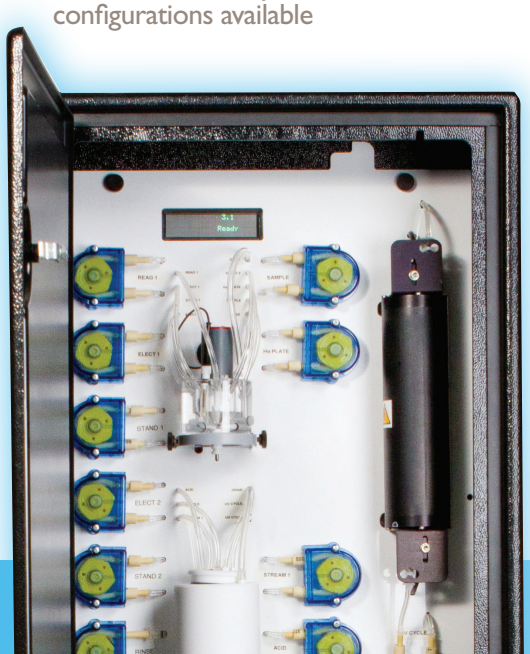
Measuring trace metals in water, soil and food has always been a vital part of modern environmental monitoring. Voltammetry offers an internationally accepted alternative to laboratory analysis or automatic samplers. Modern Water's range of OVA products are cost effective, accurate, simple to use and easy to integrate into existing systems.

Modern Water's tried and tested on-line monitors have been market leaders for over twenty years. They provide an easy way to generate and store continuous real-time data, which allows real-time decision-making. A Modern Water OVA can also be self-financing, due to savings in process chemicals and discharge penalties. The system is easily integrated into standard process systems.

The OVA7000 has a built in PC, which can be controlled by separate VGA screen and keyboard or by laptop connected via Wi-Fi or LAN. This external control prevents unauthorised users from making any changes. It is housed in a modular cabinet made of durable, light weight plastic which enables the user to separate the reagent cabinet from the main body of the unit, for easier transportation and installation.

The OVA7000 runs on a dual voltage: 110/220 VAC 50/60Hz power supply or a DC supply (battery or solar power).

- Market leading customer support service and user training
- 24 hour monitoring of three to six sample streams (depending on sample type)
- Lightweight construction with separable analytical and reagent cabinets
- Results stored on solid-state internal memory
- Programmable alarm outputs for out-of-range samples or system faults
- Solid electrodes – no hazardous mercury drop electrodes
- Multi-element analysis configurations available



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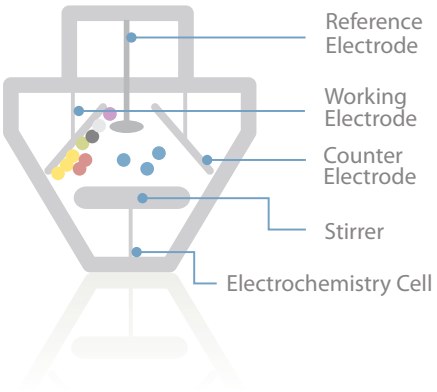
Process explained

In Voltammetry metals are drawn onto the working electrode when a specific voltage is applied to the water sample under test.

When a stripping voltage is applied, the metals return to the sample solution, generating a small current. Each metal has a specific voltage at which it returns to solution. So the metal is identified by its stripping voltage and the current generated indicates the concentration of metal in the sample.

PDV/OVA



OVA SPECIFICATIONS

Working Electrode	Glassy carbon, used with a variety of films, or solid gold
Counter Electrode	Platinum
Reference Electrode	Ag/AgCl in KCl
Cell Material	Acrylic and PTFE
Cell Stirrer	Adjustable speed stirrer
Cell Volume	10 ml nominal
Drain	Pumped to waste
CE Compliant	YES
Voltammetry Range	-2V to +2V
Sensitivity	1nA
Analysis methods available	Anodic stripping, Cathodic stripping
Waveforms available	Linear sweep, square wave and differential pulse
Calibration	Standard comparison
Result Output	Voltammetry curves, element concentration(s), historical data
Variation (% CV)*	5 to 10%
Operating Software	Windows OS

OVA7000 SPECIFICATIONS

Power Supply	Dual voltage: 110/220 VAC 50/60Hz or DC supply
Operating Temp	5°C - 60 °C
Humidity	5% - 95% non-condensing
IP Rating	IP 65
Communications	LAN Modbus TCP/IP, wireless, USB
Outputs	RS232, LAN, 12V alarm, (4-20 mA optional)
Dimensions	1400mm (analytical compartment 700mm, reagent compartment 700mm) x 482mm x 400mm (H x W x D)
Mass	22 kg (analyser) 6kg (reagents)
Application Software	LabView OVA7000

** All values are dependent upon the metal(s) being analysed and the nature of the sample*

What it detects

The OVA7000 can detect a range of metals (for example: As, Cd, Cr, Cu, Hg, Ni, Pb, Se, Tl, Zn, and others) to single figure µg/l levels (typically 0.5-5µg/l). Colour or turbidity does not affect the method. Samples range from waste water, process water, river water to drinking water. Acid/ UV digest and filtration are treatment options.

Applications

- Accidental or deliberate contamination events
- Drinking water intake and distribution
- Groundwater monitoring / natural attenuation
- Industrial effluent monitoring
- Mining and metals processing
- Monitoring of rivers, lakes, reservoirs, seawater
- Wastewater recycling and WWTP influent monitoring

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