

MODERNWATER

OVA5000

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.

OVA5000 has a built in PC with an industrial spec keyboard and integrated monitor. It also has a built in DVD drive for ease of storing and backing up results. The extra durable and secure metal cabinet has lockable doors, making the OVA5000 the ideal trace metal monitoring solution where security is an issue.

A range of telemetry options, including 4-20 mA analogue, RS232/485 and LAN allow for ease of integration into existing processing systems.

- Market leading customer support service and user training
- 24 hour monitoring of three to six sample streams (depending on type)
- Configured for customer requirements
- Low maintenance
- Results stored on hard drive, USB/DVD backup drives
- Programmable alarm outputs for out-of-range samples or system faults
- Solid electrodes - no hazardous mercury drop electrodes
- Multi-element analysis configurations available



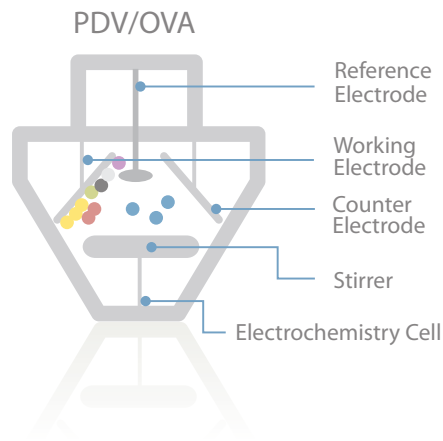
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Process explained

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.



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 | 1 nA |
| 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 |

OVA5000 SPECIFICATIONS

| | |
|----------------------|---|
| Power Supply | 110 or 220V AC 150VA |
| Computer | Industrial PC Pentium |
| Keyboard | Waterproof with industrial mouse |
| Display | 12.1" colour LCD |
| Disk drive | DVD |
| Communications | 1 x Ethernet (LAN), 2 x USB, 2 x serial, 1 x parallel |
| Outputs | 4-20 mA RS232, LAN, 12V alarm, local alarm sounder |
| Application Software | LabView OVA5000 |
| Dimensions | 1650mm x 700mm x 350mm (H x W x D) |
| Mass | 85 kg OVA 5000 (shipping weight) 135 kg |
| Modular | YES |

What it detects

The OVA5000 can detect a range of different metals (for example: As, Cd, Cr, Cu, Hg, Ni, Pb, Se, Tl, Zn, and others) to single figure micrograms per litre levels. 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

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



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