

MODERNWATER

# OVA7000 Dual Cell

## 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.

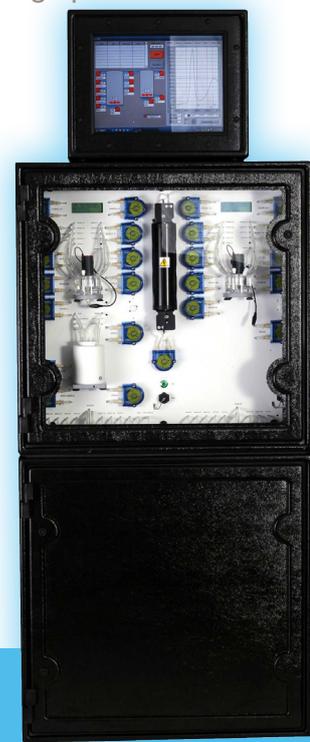
Modern Water's OVA7000 Dual Cell is designed to extend the range of detectable metals in a single unit. It has two analytical cells and each can be fitted with a different electrode, whilst sharing one pre-treatment unit.

Voltammetry methods often require different electrodes in order to optimise the detection of a specific metal. By having this single unit with two electrode sets the Dual Cell allows combinations of metals that would previously have required two separate instruments.

- 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
- Dual cell can monitor up to 10 different metals in a single unit.
- Single pretreatment



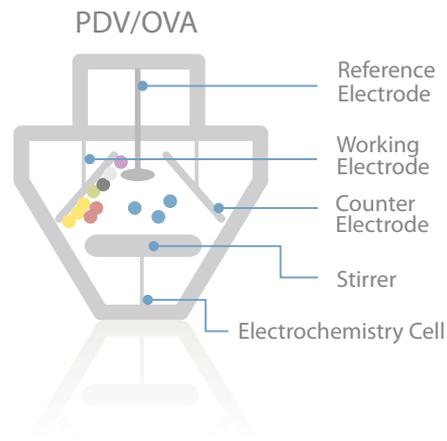
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## Process explained

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

### 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  $\mu\text{g/l}$  levels (typically 0.5-5 $\mu\text{g/l}$ ). 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.

### OVA7000 DUAL CELL SPECIFICATIONS

Product configuration	Two analytical cells with LCD screen for each cell
IP rating	IP 65
Power Supply	12 VDC, 90 - 240 VAC
Communications	LAN, modbus, TCP/IP, WIFI, USB
Outputs	RS232, LAN
Dimensions	715mm wide x 400mm deep x 1400mm tall (instrument and reagent cabinet together)
Weight	Approx. 50 kilograms

### OVA7000 DUAL CELL OPTIONS

15" touch screen control panel in box, IP65 rated
4 - 20mA output
Pre-treatment cell for sample digest and sample acidification for total metal content
UV pre-treatment for samples with high organic content
External pump and filter unit, can be used either for removing coarse solids or to bring samples to the instrument from up to 50m away

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