

METALYSER SOILS HM4000



PORTABLE HEAVY METALS
ANALYSIS IN SOILS

In our heavily industrialised and polluted world, monitoring of heavy metal contamination in soil is of great importance. Unchecked, these toxic contaminants can freely enter food chains and water supplies, with potentially disastrous consequences.

The **Metalysers Soils HM4000** has been developed to offer precise and safe monitoring of 5 key heavy metals, commonly found in contaminated soils.

Designed for simple on-site monitoring of heavy metals, the HM4000 can be utilised for a variety of soil types, such as; clay, sand, loam, sediment and compost.

This portable unit is equipped with a balance and a digester for accurate weighing of soil samples and extraction of the metal contaminants from the soil particles into water. The extract can then be analysed for heavy metals content using the Metalysers, which is based on the powerful method of stripping voltammetry.

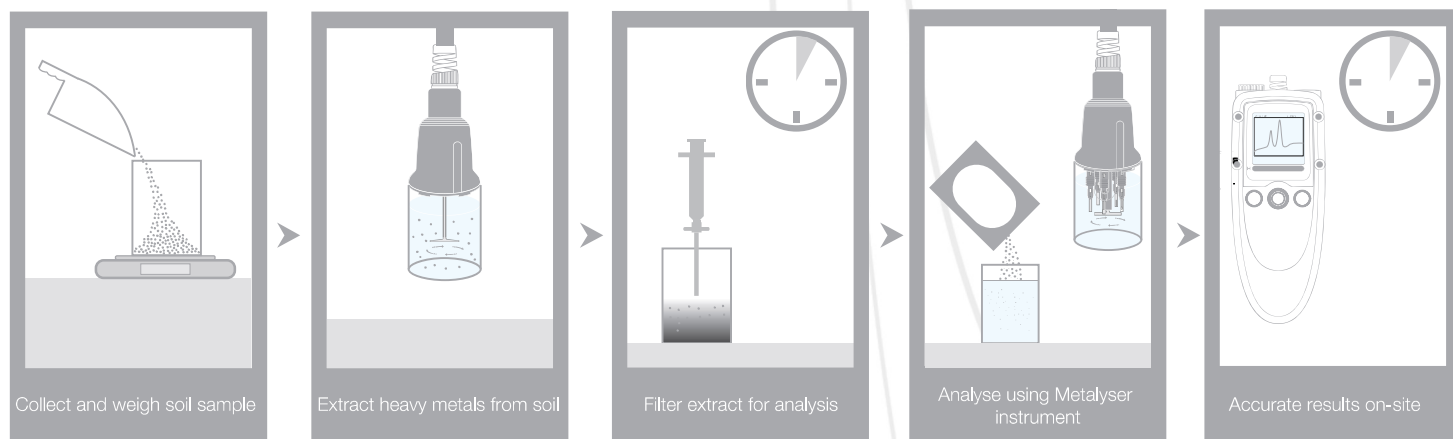
Patent No. GB2481541

Developed and manufactured in the UK by our internationally recognised team of scientists and engineers, the HM4000 offers an accurate yet simple-to-use portable system for all your on-site soil monitoring needs.

The design of the Metalysers Soils HM4000 allows the unit to be updated remotely without the need to upgrade or change the hardware.



SIMPLE ANALYSIS



BENEFITS

- Field-based detection of heavy metals in soils to mg/kg concentrations using the Metalyser instrument
- Fast results with live data enabling rapid response
- Ability to measure 5 metals – Arsenic (As), Cadmium (Cd), Copper (Cu), Lead (Pb) & Mercury (Hg)
- Easy, safe and precise sample handling, preparation and analysis in field, with no need for microwave digestion
- Step-by-step pictorial guides allowing non-experienced personnel to use the instrument quickly and easily
- Lower equipment cost than ICP, Atomic Absorption, or XRF
- More accurate and statistically valid data obtained compared to XRF handheld units
- No PC required for sample analysis
- Rugged and durable instrumentation built for tough environments, allowing operation even in adverse weather conditions



FEATURES

- Mini balance and accessories for accurate sampling and weighing of soil samples
- Protective equipment for safe handling of chemicals
- Rugged, acid-resistant soil digester powered and controlled by handheld Metalyser unit
- Robust instrument design, dustproof and waterproof to IP67 standard
- User-removable electrodes with quick-release action
- Internal data logger with memory for 1000 results
- USB connectivity
- Windows-based analysis software
- LCD graphical display and joystick cursor control
- Multiple power options – rechargeable battery, mains AC, vehicle cigarette lighter
- Multi-lingual user interface



SONDE

The uniquely-designed Sonde utilises the familiar three electrode system comprising reference, counter and working electrodes.

In addition, the Sonde incorporates a temperature probe, stirrer and space for an extra two working electrodes. This allows multi-parameter measurement within a single unit, without the use of a computer. The intelligent unit (capable of storing 1000 results) will select the electrode according to the metal of interest.

- Maintenance free
- Push fit quick-release electrodes
- Integral temperature sensing
- Up to 3 working electrodes in one Sonde



SPECIFICATION

OPERATION	Analytical principle: Stripping voltammetry using disc working electrodes Parameters measured: As (Total), Cd, Cu, Hg & Pb Operating temperature: -20°C to + 70°C
DATA	Results obtained in 15 minutes (10 minutes extraction + 5 minute analysis) Internal memory: 1000 data sets with possibility to enter sample number time and date Transfer via USB to PC New application methods can be downloaded to the unit via USB
USER INTERFACE	LCD full graphics backlit display: 128 x 128 pixels Joystick cursor control Menu driven software
POWER	Rechargeable battery providing in excess of 50 tests per charge (analysis only) Rechargeable battery providing in excess of 20 tests per charge (soil digestion + analysis) Alternative power supply via mains adaptor or vehicle cigarette lighter
APPROVALS	Waterproof to IP67; CE Mark
KIT	Dimensions: Peli 1: 470mm(L) x 370mm (W) x 170mm (D) Net weight : 9 kg Peli 2: 625mm(L) x 500mm (W) x 218mm (D) Net weight : 12 kg

LINEAR RANGE

Parameter		Lower Limit in soil extract (ppb)	Upper Limit in soil extract (ppb)	Lower Limit in soil (mg/kg)	Upper Limit in soil (mg/kg)
Arsenic	As	10	500	10	500
Cadmium	Cd	5	500	5	500
Copper	Cu	10	500	10	500
Mercury	Hg	5	500	5	500
Lead	Pb	5	500	5	500

ORDERING INFORMATION

► HM4000 - Metalyser Soils

Portable Heavy Metals Analyser, incorporating innovative extraction and digestion equipment, for easy detection of heavy metals in soil samples. Supplied with consumable kit and buffers and standards for 50 tests each of 5 metals. Supplied in 2 x waterproof & shockproof peli-cases.

CONSUMABLES

- For information on available consumables please ask when ordering or visit www.trace2o.com.

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