



**better analysis counts**

# HD Rocksand<sup>®</sup>

**Conserve Time. Conserve Money.**

**Powerful Heavy Metal Detection in Soil and Water.**

Offering much more than simple screening, HD Rocksand delivers a quantifiable analysis for heavy metals in the field.



**Complies with ASTM D8064 & EPA 6200 methods**

## **Applications:**

- Environmental Risk Assessments of Soil and Water
- Industrial Site Characterization
- Remediation Validation

## **Features:**

- Patented HDXRF analysis technology
- Hands-free testing mode
- A lightweight, easy-to-carry portable test stand
- Snap-in sample rotator
- Handheld measurement capability

## **Benefits:**

- On-site data collection enables real-time decision making
- Time and cost savings by minimizing lab measurements
- Ultra low detection limits
- Results at the push of a button
- Ability to traverse large brownfield sites with ease
- Outstanding measurement repeatability and reproducibility

**Powered by**



**NEW:** Introducing HD Rocksand<sup>101</sup> - the ideal solution for customers seeking a best-in-class screening tool.

# HD Rocksand



**HD Rocksand** offers much more than simple screening. With best-in-class limits of detection, HD Rocksand delivers analysis below regulatory limits – particularly for elements like Cadmium, Arsenic, and Mercury. It features an easy-to-use sample cup rotator for soil and water samples enabling improved results for heterogeneous samples.

- On par with laboratory methods
- Best-in-class levels of detection
- Hassle-free operation



## Limits of Detection in Parts Per Million (ppm)

Elements	Soil In Test Stand	Water in Test Stand	Soil with Handheld Analyzer
As	0.5	0.1	1.0
Cd	0.8	0.9	3.0
Hg	0.5	0.3	2.0
Cr	5.0	1.0	10.0
Cu	1.5	0.9	5.0
Ni	3.0	0.3	8.0
Pb	0.5	0.2	2.0
Sb	5.0	5.0	15.0
Se	0.4	0.1	1.0
Ag	2.0	2.0	6.0
Zn	1.0	0.6	3.0
Ba	15.0	10.0	20.0

## Product Specifications

Test Method	ASTM D8064 & EPA 6200
Total Weight	<6.0 kg (13.2 lbs)
Test Stand Dimensions	25.4W x 21.8D x 37.8H cm
Sample Chamber Dimensions	22.1W x 16.3L x 5.1H cm
X-Ray Tube voltage, current	25-50kV, 200 $\mu$ A
Optics	3 Doubly Curved Crystal Optics
Detector	SDD
System Electronics	512 MB Dual Core Processor
Battery	Li-ion, ~8hr run time normal operation
Display	10.9 cm WVGA (800RGBx480) TFT with touch screen, 16.7M colors, 217 dpi for viewing in full sunlight
Elemental Range	14 elements displayed on results screen, maximum of 40 elements on secondary screen
Licensing / Registration	Varies by region, contact your local distributor
Compliance	CE
Power Requirements	Operates on shared analyzer battery power or plugin to 90-264VAC, 47 ~ 63Hz, 3A @ 115V

**Includes:** portable test stand with sample rotator, handheld analyzer and HIM (human interface module), cross-contamination analyzer cap (for soil), charger (100-250 AC, 1A), (2) batteries, AC power cord, travel carrying case, (3) NIST soil validation samples, (10) single open-ended sample cups, (1) pack of 100 polypropylene 12 $\mu$ m sample films

# NEW: HD Rocksand<sup>101</sup>



Large samples like long drill cores, pit walls, and chunks of material can be easily screened without the need to remove a sample.

## HD Rocksand<sup>101</sup>

is a streamlined option for customers who have screening needs today, but want the option to quantify results at low levels in the future. Customers can realize increased portability for easier screening analysis without forfeiting best-in-class precision. With its lightweight handheld analyzer and display, HD Rocksand 101 enables users to easily perform their testing in any terrain.

- Improves in-the-field workflow
- Handheld analysis without the need to remove a sample
- Upgrade package available for lab-quality results

### Limits of Detection (ppm)

Elements	Soil
As	1.0
Cd	3.0
Hg	2.0
Cr	10.0
Cu	5.0
Ni	8.0
Pb	2.0
Sb	15.0
Se	1.0
Ag	6.0
Zn	3.0
Ba	20.0

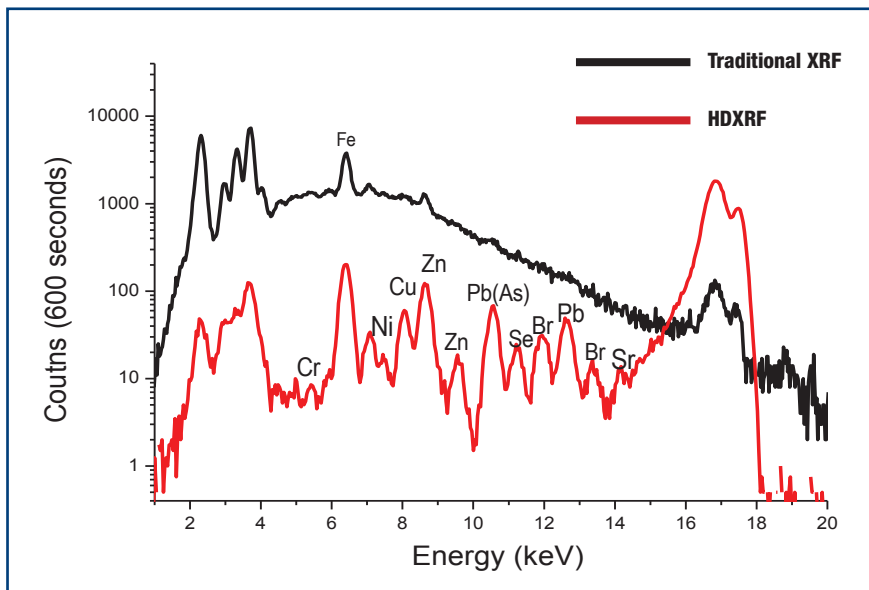
### Product Specifications

Total Weight	<2.5 kg (5.6 lbs)
Analyzer Weight	1.7 kg (3.8 lbs)
HIM Weight	0.8 kg (1.8 lbs)
X-Ray Tube voltage, current	25-50kV, 200 $\mu$ A
Optics	3 Doubly Curved Crystal Optics
Detector	SDD
System Electronics	512 MB Dual Core Processor
Battery	Li-ion, ~8hr run time normal operation
Display	10.9 cm WVGA (800RGBx480) TFT with touch screen, 16.7M colors, 217 dpi for viewing in full sunlight
Elemental Range	14 elements displayed on results screen, maximum of 40 elements on secondary screen
Licensing / Registration	Varies by region, contact your local distributor
Compliance	CE

**Includes:** handheld analyzer and HIM (human interface module), charger (100-250 AC, 1A), cross-contamination analyzer cap (for soil), (2) batteries, hard carrying case

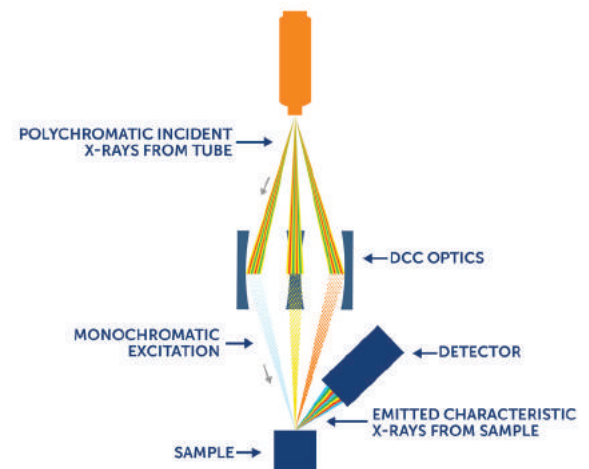
# The Right Technology Matters

**HDXRF** is an elemental analysis technique which uses XOS's patented Doubly Curved Crystal (DCC) optics to enhance measurement sensitivity, precision, and accuracy. Multiple optics capture x-rays from a divergent x-ray beam. The optics redirect several select and monochromatic energy beams to focus intensely on the sample. By using focused monochromatic excitation beams in three different energy regions, HDXRF is able to eliminate scattering background and reduce interferences that hinder measurement sensitivity, repeatability, and speed. The diagram at the bottom right shows the basic configuration of HDXRF and the use of optics to create monochromatic excitation.



By eliminating the background signal from the polychromatic source x-rays, HD Rocksand is able to achieve dramatically better signal definition that produces its best-in-class limits of detection and quicker results.

Powered by  
**HDXRF**



Double Curved Crystal (DCC) optics and multiple energy beams reduce background noise providing best-in-class sensitivity, repeatability, and speed.



## Environmental Hazard Investigations

Brownfield sites possess many unique characteristics. They are large with uneven terrain, presenting many challenges to sampling. The HD Rocksand provides the flexibility to measure samples in numerous ways for simple, quick, accurate, and reliable analysis.



**better analysis counts**

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