



**better analysis counts**

# HD Mobile<sup>®</sup> Analyzer

## HDXRF in a Portable Format



**Complies with ASTM F2853, F2617, & F963**

### Application Areas:

- Multi-element detection in toys and children's products for compliance with regulatory requirements of the CPSIA
- RoHS and EN-71
- Rapid, precise screening and quantification of toxic elements
- Compliance verification across the supply chain:
  - Manufacturing process and finished goods QA/QC
  - Warehouses and retailers
  - Regulatory agencies

### Features and Benefits:

- Unprecedented limits of detection for "true screening" and/or certification
- Pinpoint analysis plus ability to capture high-resolution sample image
- Increase testing frequency while reducing cost
- User-friendly interface and data management

### Compliance with the ultimate in convenience and flexibility

HD Mobile<sup>®</sup> extends the superior HDXRF<sup>®</sup> standard for compliance out of the lab and into many different work environments. Now the precision and confidence of HDXRF analysis is available for use in portable applications – on the manufacturing floor, at the shipping dock, in the warehouse, or on the retail shelf.



**Powered by**  
**HDXRF<sup>®</sup>**

# The Right Technology Matters

**HDXRF®** is an elemental analysis technique which uses XOS's patented DCC optics to enhance measurement precision and accuracy. Multiple DCC optics capture x-rays from a divergent x-ray beam emitted from the tube, and the optics redirect several select and narrow energy regions into an intense and focused beam on the surface of the product. Using multiple monochromatic-excitation, HDXRF eliminates the scattering background under the fluorescence peaks, greatly enhancing elemental detection limits. The technique of applying focused excitation beams also provides a true, highly focused, 1-mm analysis area. The diagram shows the basic configuration of HDXRF and its use of multiple monochromatic excitation.

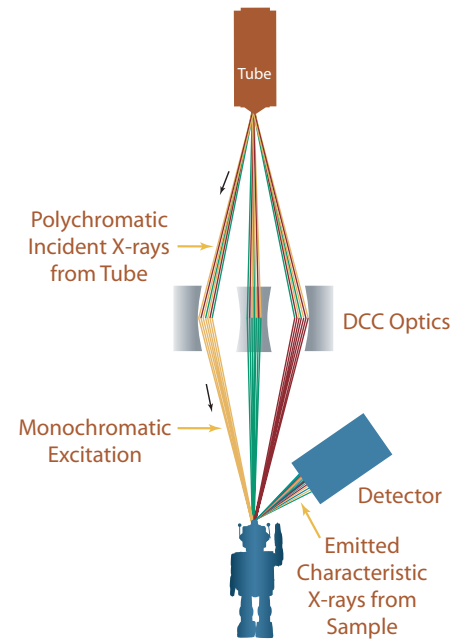
## Fast, True, Cost-Effective Compliance

XOS developed HD Mobile to extend HDXRF's proven technology beyond the laboratory and into the field. Compliant with **ASTM F2853, F2617**, and **F963**, HD Mobile will provide highly precise screening for lead well below the regulatory limits defined in CPSIA for both coatings and substrates.

HDXRF analyzers are able to analyze lead in paint and substrate materials with one measurement.

HD Mobile also precisely measures cadmium, arsenic, mercury, antimony, and other elements that may be of concern in consumer products.

Powered by  
**HDXRF®**



*Doubly Curved Crystal (DCC) optics and multiple energy beams reduce background noise and separate coating composition from base material.*

## The ultimate in convenience and flexibility

**Now you can analyze large and small products and components anywhere in the consumer supply chain using our new HD Mobile portable analyzer. Easily switches between stationary and handheld analysis.**

Remove handheld unit from case for portable applications and screening

Easy to read interface makes navigation easy and intuitive



**Handheld Mode**

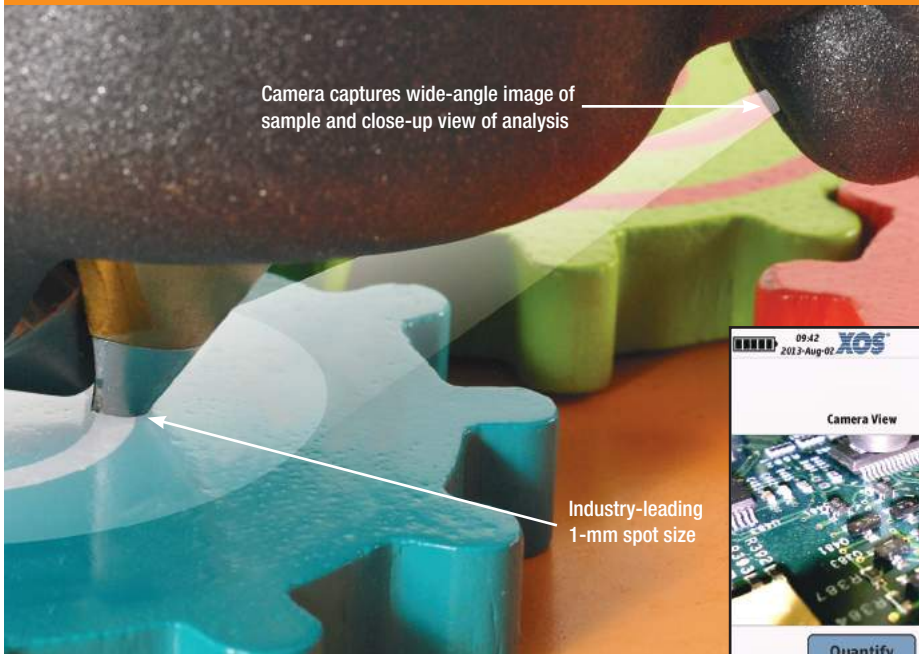


**Benchtop Test Stand**



**Portable Transporter Case**

# Advanced Imaging Capability

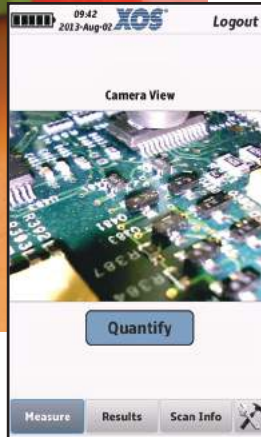


Camera captures wide-angle image of sample and close-up view of analysis

Industry-leading 1-mm spot size

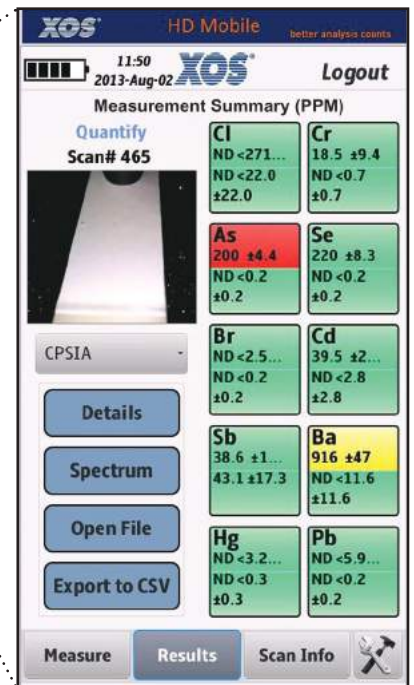
The built-in camera allows the operator to precisely pinpoint the position of the 1-mm analysis area and record the image. This unique design makes the operator's job easier and provides a traceable record of the analysis for robust auditing and compliance.

**HD Mobile records image view of sample and analysis area and stores it with each test for documentation in a tamper-evident format.**



## User-Friendly Interface and Data Management

- Color-coded indicators present results as Pass or Fail separately for the product's substrate and coating.
- Elemental concentrations are indicated in ppm and, for coatings,  $\mu\text{g}/\text{cm}^2$  is also reported.
- The analysis spectrum is recorded and viewable for each measurement.
- High-resolution image of analysis area is stored with each test.
- All test results are recorded in tamper-evident format.
- Data export capability in electronic and hard copy form.



## Detection Limits

LOD in ppm	Pb	Cd	Cr	As	Br	Sb	Se	Hg	Ba	Cl
Plastic Substrate	0.8	2	2	.8	1	5	1	1	10	100*
PVC Substrate	1	2	5	1	1	5	1	2	10	N/A
Coating on Plastic	5	50*	15	5	5	100*	5	8	100	150*
Metal Substrate	10	5	15	8	N/A	15	5	10	200	N/A
Coating on Metal	15	30*	15	8	5	60*	5	10	200	150*

\*Longer measurement time

## Product Specs

Analyzer Weight	3.6 lbs (1.6 kg)
Interface Module Weight (with battery)	1.75 lbs (0.8 kg)
Analyzer Dimensions	12.3 x 3.7 x 8.6 in
Interface Module Dimensions	3.1 x 6.6 in
X-Ray Tube voltage, current	25-50kV, 200uA
Detector	25 mm SDD
System Electronics	512MB Dual Core Processor
Display	4.3" WVGA (800RGBx480) TFT with touch screen, 16.7M colors, 217dpi
Analysis Area	1 mm
Elemental Range	10 elements displayed in icons on results screen, up to maximum of 40 on secondary screen
Test Results	Concentration in substrate ppm (wt). Color coded pass/fail indicators (user adjustable) Concentration in coating ppm (wt). And ug/cm2 Color coded pass / fail indicators (user adjustable) Spectrum analysis capability
Data Entry	Touch screen keyboard with icons
Data Storage	Up to 10,000 readings including camera images
Data Transfer	SDHC Card
Security	Password-protected user security
Integrated CCD Camera for aligning analysis area and storing images	High resolution image focused at measurement spot with 25 degree wide angle view
Battery	Li-ion, ~8hr run time normal operation (2 included)
Licensing / Registration	Varies by region, contact your local distributor
Compliance	CE

## Test Stand/Transport Case

Benchtop Test Stand	21.8 x 16.7 x 10.6 in.
Sample Chamber	9.5 x 10 x 4 in.
Portable Transporter Case - Modified Pelican 1610 with handle and wheels	25.5 x 19 x 11.5 in.
Sample Chamber	9 x 16 x 9.5 in.
Power Requirements	90-264VAC, 47 ~ 63Hz, 3A @ 115V
Charging Station	Rapid battery charger
Standard Accessories	Operators manual, check samples and standards



## better analysis counts

15 Tech Valley Drive • East Greenbush, New York 12061, USA • 518.880.1500 • Fax: 518.880.1510  
e-mail: [info@xos.com](mailto:info@xos.com) • website: [www.xos.com/hdxrf](http://www.xos.com/hdxrf)

HDXRF is a registered trademark of XOS.  
HD Mobile is a trademark of XOS.

Room 311, UnitD, Building Tianzhan, Tian'an Cyber PK, Futian District, Shenzhen 518040 China  
Tel:+86 755 82502481/82502482 Fax:+86 755 82502480