



## Portable XRF for Consumer Products Testing



- Reduced Time and Regulatory Compliance Costs
- Nondestructive Safety Testing
- RoHS Compliance
- Halogen-free
- HR4040/CPSIA/EN71-3
- Simple Screening Solution

# Portable XRF for Consumer Products Testing

See and feel the DELTA difference. Our analyzers are compact and robust from probe to trigger to display, with sophisticated XRF technology that's better, faster, and more responsive. From initial boot-up to the final result, the DELTA is the optimum solution for all your analytical needs.

The DELTA line gives you the ultimate experience in field-portable handheld XRF analysis with super fast measurements with amazing accuracy, precision, detection limits, and light element measurement capability built into a compact single-chassis frame wrapped in robust industrial-grade casing.

## DELTA: The Portable XRF Edge

**High throughput:** Keep production running fast! Check incoming materials instantly with no disassembly required.

**Make Any Lab Testing Surgically Precise:** Portable XRF pinpoints possible problem components – use laboratory analysis for only those components

**Field-proven screening methods:** With thousands of handheld XRFs in daily use worldwide, Olympus Innov-X provides field-proven screening methods.

**Virtually eliminate compliance risk:** Focus portable XRF testing on components that routinely contain restricted substances. DELTA portable XRF yields rapid, nondestructive results in seconds and delivers high-volume testing at minimal costs.



## DELTA: Dramatically Reduce Testing Times; Significantly Increase Confidence

The DELTA handheld XRF analyzer offers accurate, sensitive analysis with easy to use reporting software in an ergonomic and dependable package. Olympus Innov-X analyzers are used for rapid screening of imported toys, jewelry, clothing, consumer electronics and other commodities to gauge compliance with HR4040, CPSIA, and EN71-3 regulations. Use what the regulatory and watchdog agencies use; rely on the DELTA for accurate screening, compliance verification, on-site QC and documented traceability.

Sending samples to an outside lab for testing costs significant money and time. Bring testing in-house with the DELTA which can easily be integrated into your supply chain when items are received, or at final QC before they are shipped out. The DELTA can screen many samples within seconds and give a clear pass/fail result on-the-spot.

## DELTA: Fast, Accurate, On-the-Spot Screening for Toxic Metal Contaminants

When it comes to safety, there are no compromises. The DELTA handheld XRF is a key part of any reasonable testing program for general conformity certification (GCC).

### 5 Essentials

- Product specifications
- Certification testing
- Production testing
- Remedial action plan
- Documentation

### Multiple Material Testing

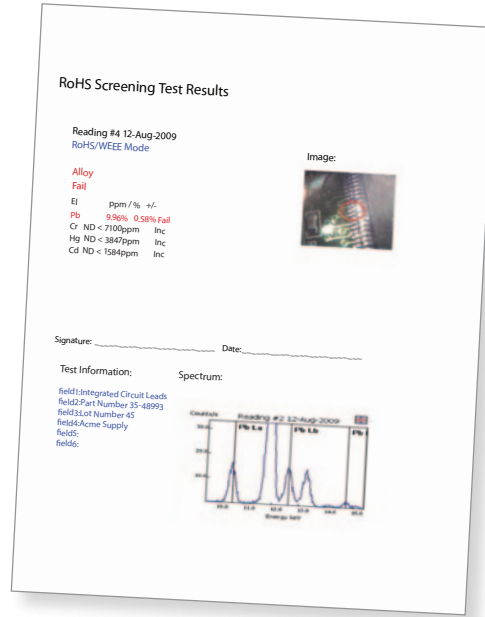
- In paint
- In coatings
- In substrates
- In bulk material
- In all accessible parts



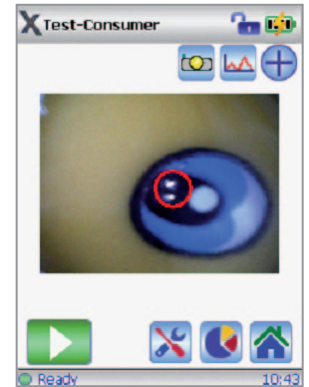
# DELTA: The Portable XRF Edge—Not Just a Pretty Picture

In focus and on target for every shot, DELTA RoHS and consumer goods analyzers come with an optional integrated camera. This high resolution CCD camera takes a snapshot of the sample analyzed for data integrity and archiving. The sample photo is saved to memory with analysis results, and can be included in the data results report. Camera can be operated at quarter or full VGA resolution for optimal clarity, even on low contrast samples.

The optional small spot collimation is a fully automated, electronic collimation focusing the standard 10 mm diameter XRF analysis spot down to a small < 3 mm diameter spot size. Use the collimation for single component analysis on PCBs, weld bead analysis, and testing small painted areas on toys. The DELTA provides an on-screen indicator of the analysis spot, showing the operator exactly what part of the sample is being analyzed. Spot location is archived with sample image and exported with data results for comprehensive reporting.



Report includes analytical results, Image of tested sample, test spectrum, and sample information



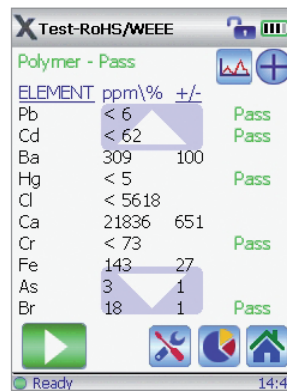
The 3 mm spot collimation allows analysis to be focused on distinct parts of samples, like specific paints or components

# DELTA: Compliance Verification—On-Site QC—Documented Traceability

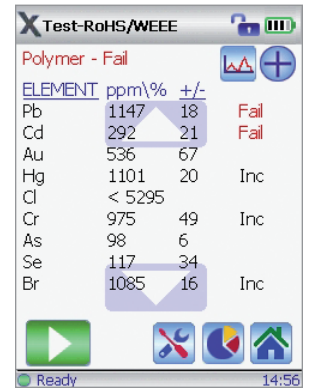
## Screen Imported Consumer Products for Lead (Pb), Cadmium (Cd), and Other Metals

The DELTA is specially designed to test consumer products based on government-regulated levels of the following toxic metals: Pb, Ba, Cr, Hg, and Cd. Results are automatically saved and documented for compliance. Elements and action levels can be easily modified in line with current legislation.

The DELTA can be applied to each link in the supply chain, e.g. manufacturers, suppliers, distributors and end users.



Sample pass screen shot



Sample fail screen shot

## DELTA Premium – Typical Limits of Detection (LOD) in ppm (except when noted)

Element	PE	PVC	Al	Brass (Cu/Zn)	Solder	Steel
Cl	0.1-0.3%	-	-	-	-	-
Cr	10-25	20-35	50-80	60-80	800-1000	75-100
Hg	2	4	2-5	300-500	50-70	60-90
As	2	4	-	-	-	-
Br	2	4	-	-	-	-
Pb	2	4	2-5	40-70	50-70	50-70
Cd	8-12	15-30	7-10	40-60	80-150	30-50
Sb	10-20	20-30	10-20	60-100	300-500	150-300

120 s test time, 3-sigma LOD

LODs shown were determined using optimized measurement settings and interference-free standards. Actual "real-world" samples may contain interfering elements causing actual working LODs to be higher than those shown above.



DELTA in WorkStation

# DELTA: In-House Portable XRF Testing Integrated within Supply Chains

Government agencies are responsible for protecting the public from unreasonable risks, such as toxicity and pollution associated with consumer products and electronics. Due to their fast, nondestructive and on-the-spot screening capabilities, Innov-X handheld XRF analyzers have been chosen repeatedly by the US Customs, the FDA, the EPA, the DOE and international customs agencies when it comes to rapid screening analysis of regulated toxic elements such as lead (Pb) and cadmium (Cd).

## Construction • Renovation • Repair



- Windows, sills, doors, and moldings
- Caulking w/in older homes
- Defective, stinky drywall
- Construction or demolition project waste

## Testing of Products Made for Children



- Toys, jewelry, trinkets, crayons, chalk, plastics, lunch boxes, and backpacks
- Apparel and accessories: Clothing, zippers, buttons, appliqué, rhinestones, trim, bags, and wallets
- Sporting goods, swing sets, picnic tables, decks, and fences
- Decorative food ware, colored ceramics, and silver plated holloware
- Candy wrappings, baby food, supplements, and foodstuff
- Drapery, furnishings, and rugs

## Recycled Products



- Batteries, paint, fertilizers, plastics, and metal coatings
- ELV - cars, car seats, leather, fiber, trim, knobs, wheels, and mats
- Wood, paper, and cardboard
- WEEE - Waste Electronics and Electrical Equipment

## Consumer Electronics



- RoHS (Restriction of Hazardous Substances) compliance—Pb, Hg, Cr, Br, Cd
- Pb-free compliance in boards, cables, connectors, PCBs, metal components, and solders
- Packaging material

## DELTA for Worldwide Legislation & Compliance Regulations

- EU RoHS Directive (2002/95/EC)
- EU WEEE Directive (2002/96/EC)
- China RoHS Directive (RCPCEP)
- Japan RoHS
- Korean RoHS Directive
- USA State Laws
- USA ASTM F2617-08
- USA EPA Method 6200
- USA NIOSH Method 7702
- USA OSHA Methods OSHA1-OSS1
- USA Halogen Free Directive
- USA HR4040
- USA CPSC-CH-E1002-08 SOP
- USA American Society for Testing & Materials (ASTM)
- USA ASTM F963
- Specification for Toy Safety
- USA Electronic Product Environmental Assessment Tool (EPEAT)
- USA Green Electronics (GEC)
- USA Consumer Product Safety Act 16 CFR 1303 (CPSIA/CPSC)

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Product group from well-managed  
forests, controlled sources and  
recycled wood or fiber  
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