Toys and Consumer Goods | RoHS

Thermo Scientific Niton XRF Analyzers

Screening children's products and electronics for lead and other toxic metals with speed, accuracy, and convenience

Thermo Scientific Niton analyzers simplify your compliance challenge

Testing toys, consumer products, and packaging for hazardous materials has moved well beyond government agencies. Manufacturers, importers, and retailers all must comply with regulations that limit permissible levels of lead, cadmium, and other toxic metals in products ranging from toys and jewelry to clothing, furniture, and packaging.

The further back in the supply chain that testing occurs, the easier it is to prevent toxic substances from entering the hands of a child or ending up on store shelves. The challenge is balancing compliance, cost efficiency, and productivity. Testing with handheld Thermo Scientific Niton XRF analyzers can help you achieve this balance, something you can't do when relying only on third-party laboratories.

Meeting the needs of CPSIA compliance

"The XRF analyzer allows us to do a quick, on-the-spot check for lead. It's portable, and we can use this technology and get immediate results."

Dr. Joel Recht, director Chemistry Division, U.S. Consumer Product Safety Commission,
"CPSC Utilizes New Tool to Crack Down on Toys with Lead – XRF Gun Helping Agency Protect Children from Lead,"
CPSC Video News Release, November 13, 2008

Test with confidence, from incoming parts to finished product

Thermo Scientific Niton XRF Analyzers

Niton XL2
VALUE LEADER

Handheld Niton XL2 and XL3t XRF analyzers are designed to meet testing challenges in any location – from production line to store shelves.

- ***Exceptionally fast, easy to use***
  Just point and shoot. See results in seconds on a bright, color, touch-screen display.
- ***Purpose-built***
  Analyzers are built with tough LEXAN® plastic and weigh approximately three pounds (1.36 kg) each; dust- and waterproof for worry-free use virtually anywhere. One-step system check requires no external accessories while advanced batteries support up to 10 hours of continuous operation on a single charge.
- ***Nondestructive***
  Unlike destructive testing methods, samples remain intact and undamaged.
- ***Application-optimized***
  High-performance x-ray detector options are ideally suited for toys, apparel, jewelry, furniture, and other consumer goods.
- ***Flexible communications***
  Bluetooth™ wireless and USB communications interfaces are included in every analyzer. Advanced Niton Data Transfer (NDT©) PC software lets you set user permissions, print certificates of analysis to document results, or operate the analyzer right from your PC.

Niton XL3t
FEATURE LEADER

Niton XL3t GOLDD+
ULTIMATE PERFORMANCE AND FEATURES

Niton XL2 Series	Niton XL3t Series	Niton XL3t GOLDD+ Series
Ideal for lead testing to help ensure regulatory (CPSIA) requirements	Optional CCD camera and 3 mm small-spot feature captures and stores images from components and tiny sample areas	Highest sensitivity and measurement accuracy; shortest testing time, particularly important for testing painted products
Test All™ technology automatic matrix determination feature	Screens for all 8 regulated elements in toys designed for children (ASTM F963-08)	CCD camera standard
Fixed angle, color, touch-screen display	Reliable screening for halogens <30 s	Lowest detection limits for Pb, including ultra-thin paint layers and metal substrates
Upgradeable to the Niton® XL2 GOLDD™	Tilting, color, touch-screen display	Best for halogen-free manufacturing
Standard analysis range of up to 25 elements	Upgradeable to the Niton XL3t GOLDD+	Light element analysis without helium purge or vacuum

Used by CPSC and PROSAFE

The U.S. Consumer Product Safety Commission (CPSC), PROSAFE, and others have chosen and trust Thermo Scientific Niton analyzers.

Toys and Consun

Choose the same analyzer the regulators use

Screen toys, jewelry, clothing, furniture, and more – just point and shoot for nearly instantaneous elemental analysis you can trust.

TestAll™ technology

This unique feature allows non-technical users to automatically differentiate the presence of lead on the surface or in the substrate of the tested object.

- *Limited user training required*
- *Automatically determine appropriate testing parameters*
- *Test almost any sample with confidence*

Plastic | Metal | Solder | Paint | Ceramic

Camera/Small Spot

The Niton XL3t analyzer's optional camera with small-spot feature lets you locate, capture, and store sample data from components and tiny sample areas.

- *Improve accuracy by better positioning very small samples*
- *Know exactly what you're testing*
- *Capture a visual record of your test*

Delivering cost-effective compliance: European Union (EU) Restriction of Hazardous Substances (RoHS) Directive (2002/95/EC)

The need for our XRF analyzers has never been greater, as new initiatives regarding toxic substances are implemented around the world. "Green" manufacturing also means "halogen-free."

Following RoHS, industry initiatives are now in place to produce halogen-free flame retardant products, ranging from consumer electronics to furniture.

IEC 61249-2-21, defines halogen-free as:

- *900 ppm maximum Cl*
- *900 ppm maximum Br*
- *1,500 ppm maximum total halogens*

With detection limits well below industry-defined thresholds, our XRF analyzers deliver reliable screening for halogens in less than 30 seconds, reducing your costs and eliminating production delays.

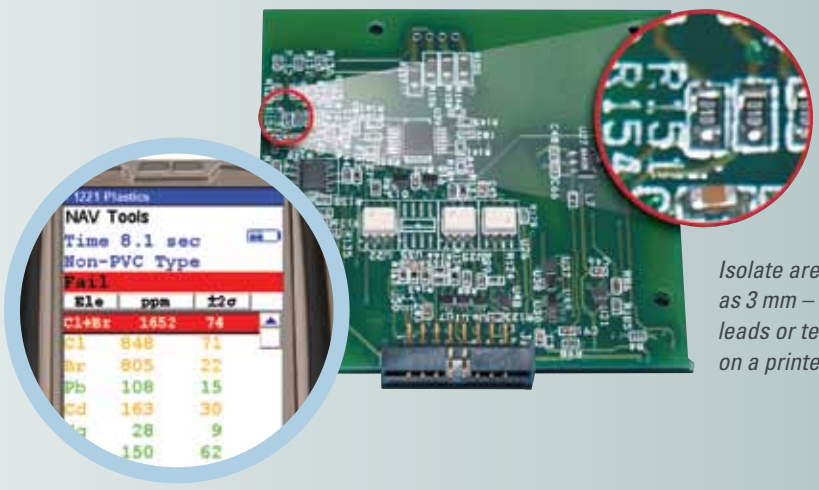


Photo courtesy of Photos.com

Isolate areas as small as 3 mm – such as leads or terminations on a printed circuit board

More than 25,000 Thermo Scientific Niton XRF analyzers can be found in more than 75 countries on six continents

"We deal with components no larger than a grain of sand and we use the small spot every time.

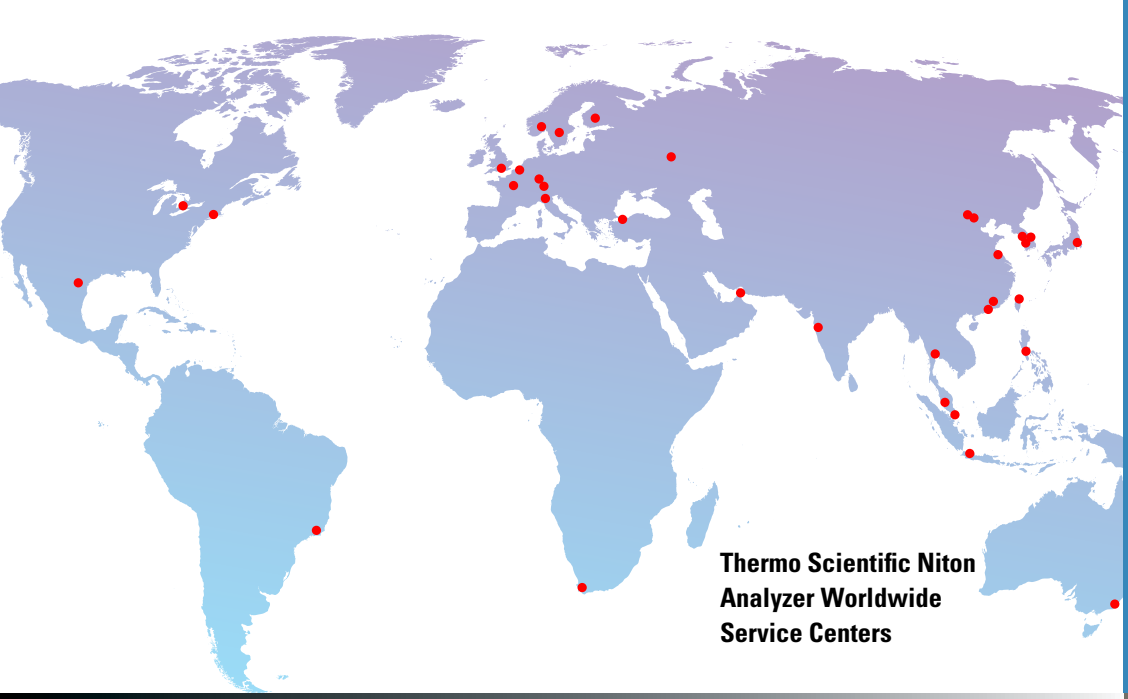
With the camera, it's complementary support to have the actual analysis photograph on the certificate accompanying the component… we can provide both a standard Certificate of Conformance in addition to copies of the actual alloy composition breakdown…"

Philip P. Thurman, quality assurance director, QMS

"A manufacturer of boys' dress shirts needed to test 360,000 garments for the possible presence of lead. Using three [Thermo Scientific] Niton XRF analyzers, it performed 7,000 readings per day, six days per week, for three months.

Using the unit's optional CCD camera, the company saved about 442 hours alone just by rapidly locating the specific garment test area prior to each reading."

Seth Hanson, Hanson Associates, presenting at the American Apparel & Footwear Association's Product Safety/Supply Chain Compliance Seminar, New York, N.Y. June, 2009



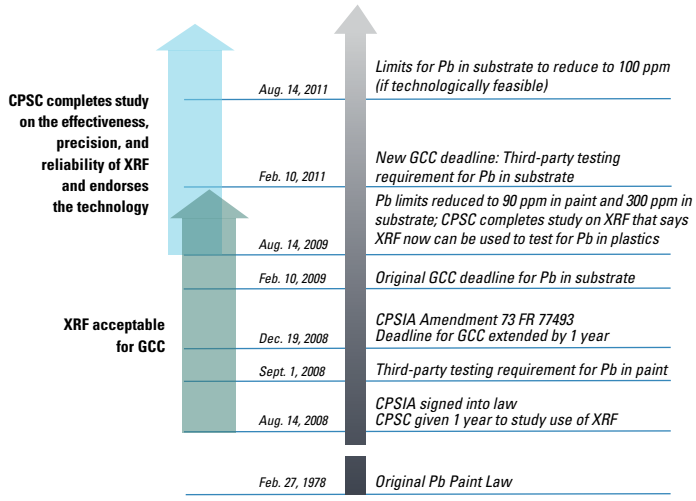
Superior XRF analysis solutions, backed by our worldwide sales and service

We are recognized as the leader in XRF analysis technology, serving companies in more than 75 countries on six continents. We serve our customers through corporate resources and a dedicated network of more than 70 distributors and 30 factory-trained service centers around the world to provide the most effective customer service possible. Our global reach and resources not only ensure worry-free product support, we also offer comprehensive services including application consulting and training anywhere you need them.

Thermo Scientific Niton analyzers: enabling cost-effective compliance, year after year

Our handheld XRF analyzers are the cost-effective solution for maintaining compliance for lead and other toxins as regulations become even more stringent over time.

Although lead has been the main focus of the toxic recalls and CPSIA, it is only one of eight elements that is regulated in toys designed for children (ASTM F963-08). Additional elements that require monitoring are arsenic (As), selenium (Se), cadmium (Cd), antimony (Sb), barium (Ba), mercury (Hg), and hexavalent chromium (CrVI).



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