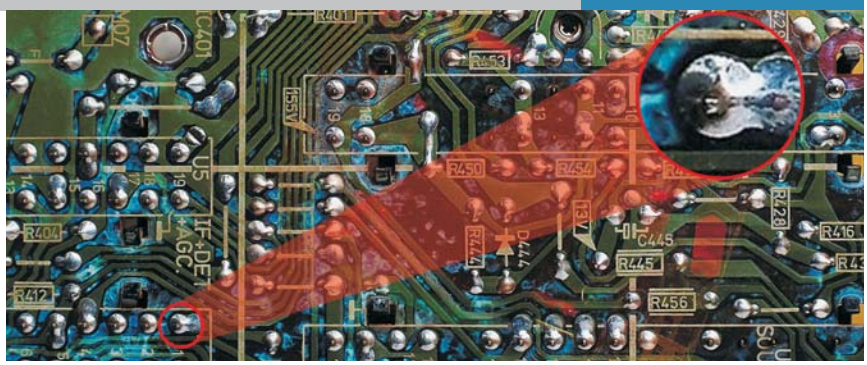
Product Specifications

The Thermo Scientific NITON XLt 797X is the ideal tool for first-pass RoHS compliance screening in electronics manufacturing. The XLt's fast, nondestructive small-spot analysis provides the information necessary for fast pass or fail decisions with the added ability to isolate small areas and individual components of heterogeneous materials.

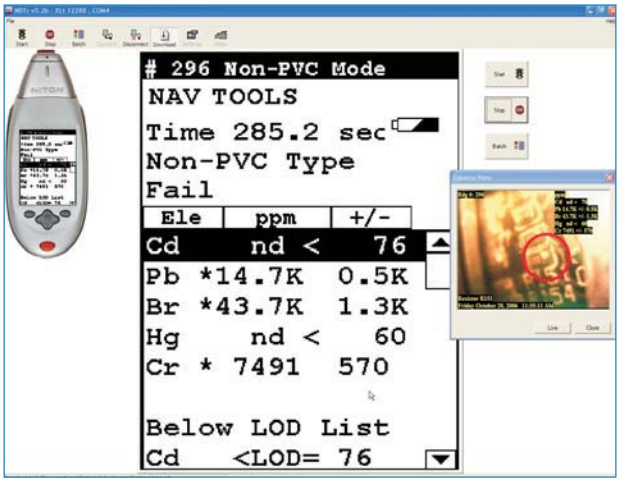
NITON XLt 797X

A Revolutionary Screening Tool for RoHS and WEEE Compliance



The NITON XLt 797X provides many distinct advantages:

- **Small-spot focus technology for screening of small components**
- **Integrated visualization technology with an internal CCD camera**
- **Little to no need for sample preparation**
- **Nondestructive test with instantaneous results**
- **Easy to use by anyone, anywhere**



The Expanding Nature of RoHS Directives

RoHS regulations took effect on July 1st, 2006 in the European Union (EU 2002/95/EC), restricting the quantities of certain hazardous elements (Cd, Hg, Pb, Cr(VI), and polybrominated biphenyls and diphenyls) in electrical and electronic materials. New legislation continues to be developed and implemented worldwide at lightening speeds, and keeping up can be a challenge. Of particular concern is China's "Prevention and Control of Pollution caused by Electronic Information Products" legislation, or "China RoHS," which is significantly more rigid than any previous RoHS regulations. China RoHS becomes effective on March 1, 2007, and has a broader scope with no exemptions for medical or other fields. In order to ensure compliance, suppliers, fabricators and assemblers must perform verification testing on components. This creates a need for new RoHS QA/QC protocols and analysis programs, where speed, accuracy, and cost effectiveness are critical. Thermo Fisher's NITON XLt 797X is the tool for this job.

The Revolutionary NITON XLT 797X

Screening and verification testing have been found to be necessary steps in proving that vendor declarations and certificates of compliance are accurate, and in preventing the introduction of a possibly noncompliant material into the manufacturing process. In-house screening, utilizing portable XRF (X-ray Fluorescence), has fast become a benchmark for compliance verification. However, small components have, until now, presented a challenge for handheld XRF analyzers. The revolutionary NITON XLt 797X has transcended this challenge. With a unique small-spot analysis area and integrated visualization technology, the 797X is the first RoHS screening tool that truly brings the laboratory to the field, offering:

- **Fast, reliable nondestructive elemental analysis in a fully portable package.**
- **Quantification of total Pb, Cd, Hg, Cr and Br within a matter of seconds, providing timely ROHS pass/fail designations.**
- **A revolutionary small-spot X-ray area, more than 20 times smaller than that of any other handheld XRF analyzer, allowing users to isolate and analyze individual small components such as leads or resistors on a populated PCB.**

Figure 1

Figure 2

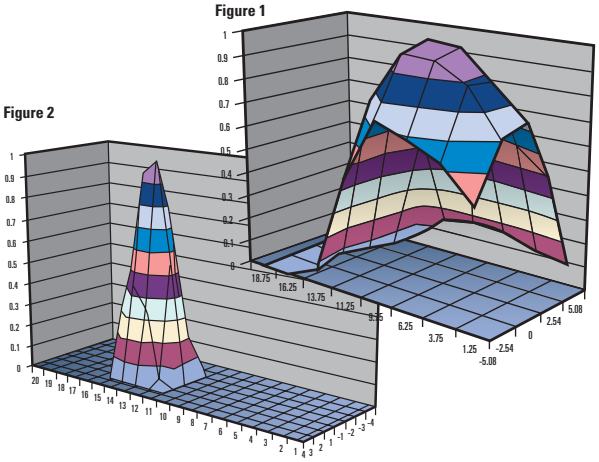


Figure 1 represents the intensity distribution of the signal from the surface of a homogeneous sample for an uncollimated (standard) primary beam, versus Figure 2, which represents the signal for a 3mm collimated primary beam (797X). Note the 20X reduction in beam size!

- **Integrated visualization technology with the first ever color CCD camera to be incorporated into a portable XRF analyzer to visually identify, locate, specify, and save the image together with elemental analysis of an individual component.**

NITON XLt 797X for RoHS Compliance

The handheld NITON XLt 797X small-spot analyzer provides a fast, reliable and nondestructive means of screening plastics, metals and electronic components for RoHS-prohibited substances, combining the precision and portability that is a hallmark of Thermo Fisher's NITON Analyzers with never-before-seen technology. Small-spot focus technology is ideal for identifying, analyzing, and recording the analytical results of small components – something previously only achievable with bench-top XRF analyzers. With the simple pull of a trigger, the NITON XLt 797X provides rapid quantitative analysis of cadmium, lead, mercury, total chromium and total bromine – as well as additional elemental constituents – in as little as 30 seconds. In addition, Thermo Scientific small-spot focus technology allows users to better pinpoint the analysis of solder joints and small components. Integrated visualization technology, paired with the Thermo Scientific NITON NDT© software, displays a picture image of the sample from the perspective of the detector, with a bulls-eye indicating the 7mm^2 (3mm diameter) area being analyzed. NITON NDT© software allows users to store this picture of the sample area along with the analysis data for easy reference, data management, and data integrity. The NITON XLt 797X eliminates production delays associated with waiting on costly lab results and reduces the chances that RoHS restricted materials will enter the manufacturing process. Be the first to put the power of technology for RoHS screening in your hand with the "X."

The NITON XLt 797X is just one of Thermo Scientific's Portable NITON Analyzer Solutions which include analysis tools for metal alloy identification, lead-based paint testing, RCRA metals in soil, mining applications and a host of other analysis needs.

NITON XLt 797X Specifications

Weight	**1.4 kg (3.0 lbs.)**
Dimensions	**248 x 273 x 95 mm (9.5 x 10.5 x 3.75 in.)**
X-Ray Tube	**Anode - Au** **Tube Voltage- 40kv Max** **Tube Current- 35 µA Max** **Primary Filters- Multi (P.E.R.F.E.C.T Technology)**
X-ray Analysis Area	**Approx. 3 mm Diameter (7mm^2)**
Detector	**High performance Si-PiN**
System Electronics	**Hitachi SH-4 CPU** **ASICS high-speed DSP** **4096 channel MCA**
Batteries	**2 Rechargeable Li-ion batteries** **8-12 hrs each, 2hr. recharge**
Display	**¼ Backlit VGA touch screen LCD**
Image System	**0.5 + megapixel color ccd camera** **30 frames/ sec. frame transfer** **LED Illumination Source** **Image Output- NTSC Compatible** **-Composite Video Output**
Testing Modes	**Plastics - RoHS Threshold mode (cables & packaging)** **Electronics - (solders & components)**
Analysis Range	**Plastics: Cl, Ti, V, Cr, Fe, Ni, Cu, Zn, As, Se, Br, Ag, Cd, Sn, Sb, Au, Hg, Pb, Bi,** **Electronics: Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Se, Zr, Nb, Mo, Pd, Ag, Cd, In, Sn, Sb, Hf, Ta, Pt, Au, Pb, Bi**
Data Storage	**Internal - ~6000 readings + spectra** **External- Image + RoHS Element Data (Includng Sample I.D.)**
Standard Accessories	**Testing stand (for benchtop use)** **100 sample cups** **Shielded belt holster** **Shielded waterproof carrying case** **110/220 VAC charger/adapter** **RS-232 PC data transfer cable** **Integrated barcode reader** **NDT PC software utilities including live image display** **External USB video adapter and cable**
Data Entry	**Three methods for user data entry:** **Virtual touch screen keyboard;** **User programmable pull down lists;** **Integrated barcode reader**

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