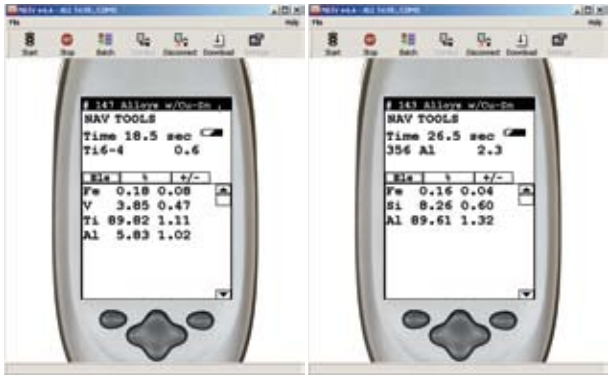
Product Specifications

The Thermo Scientific NITON XLt 898He is the first truly nondestructive handheld analyzer for light element analysis in alloy material. The XLt 898He provides fast, laboratory-quality chemical analysis of aluminum and titanium alloys, as well as nickels, superalloys, stainless steels and more.

Thermo Scientific NITON® XLt 898He

NITON XLt 898He analyzers provide many distinct advantages over traditional OES analysis:

- **Very easy to use – even by nontechnical personnel**
- **Little to no sample preparation is necessary**
- **A truly nondestructive test with instantaneous results**
- **Powerful NDT© data management software suite**



NITON NDT© software utilities feature a suite of powerful data management functions and remote instrument operation via wireless connection to a PC or PDA.

The need for material verification is an increasingly important issue across a wide range of industries. Specially engineered alloys are continually being developed that can better withstand the specific stresses and requirements of many different specialized applications. Though necessary and exciting, these new introductions dramatically increase the complexity of material verification and QC testing needs.

Material inspection is intensely critical in certain industries such as aircraft and aerospace manufacturing, since human lives may depend on the proper performance of alloy components. A simple material mix-up on a commercial aircraft can be disastrous. On a spacecraft or commercial satellite, it can mean millions of dollars and years of effort wasted. For a scrap recycling facility, misidentified material can result in a returned load and a loss of consumer confidence.

Thermo Scientific NITON XRF analyzers, manufactured by Thermo Fisher Scientific, are designed to quickly and reliably provide accurate alloy material verification, and have become the worldwide standard for material analysis in industries ranging from primary metal production to scrap metal recycling. They provide immediate nondestructive chemical analysis of alloy materials from titanium to nickel superalloys, from castings to fasteners, dip switches to scrap cuttings and turnings, incoming raw materials to final product QC. Further, they also supply fast, nondestructive analysis of high-temp, nickel and stainless steel, as well as screening for the presence of prohibited materials such as Sn, Se, Cd, and Zn in spacecraft applications, and Pb, Cr, Cd, Br, and Hg for RoHS compliance.

The NITON XLt 898He system takes the analytical capabilities of handheld XRF to a new level. Now, the XLt 898He system fills the void for inspectors or scrap metal sorters who once were forced to turn away from the convenience of portable XRF to Optical Emission Spectroscopic (OES) instrumentation for light element analysis. Best of all, the non-destructive nature of the XRF technique allows testing of finished or sensitive parts without concern.

Light Element Analysis with the XLt 898He

When activated, the NITON XLt 898He system fills the interior of the XLt's unique measurement head with pure helium, purging atmospheric air from the x-ray analysis path and allowing light element x-rays to contact the XLt's high-resolution x-ray detector. As a result, NITON XLt operators can confidently measure light element alloy content with the same analyzer that they use to test their high-temp alloys – a feat previously impossible with a handheld analyzer.

The XLt 898He directly quantifies Al, Si and Mg levels in aluminum alloys, Si in steels, Al in nickel and titanium alloys, and a host of other chemical analyses previously unattainable using portable XRF technology. The XLt 898He provides immediate alloy identification from its comprehensive, user-editable grade library, while the advanced Fundamental Parameters-based chemistry algorithm presents lab-quality compositional data within seconds.

NITON XLt 898He Specifications

Weight	**1.4 kg (3.0 lbs.)**
Dimensions	**248 x 273 x 95 mm (9.5 x 10.5 x 3.75 in.)**
Excitation Source	**Miniature x-ray tube – 40kV/100µA maximum**
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 hours each; 2-hour recharge**
Display	**¼ Backlit VGA touch screen LCD**
Standard Testing Modes	**Alloy Chemistry Mode** **Signature Match Mode**
Analysis Range	**Mg, Al, Si, P, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Se, Zr, Nb, Mo, Ru, Hf, Ta, W, Re, Pb, Bi, Pd, Ag, Sn, Sb**
Data Storage	**Internal – 6000 readings + spectra**
Standard Accessories	**Testing stand (for benchtop use)** **Shielded belt holster** **Shielded waterproof carrying case** **110/120 VAC charger/adapter** **RS-232 PC data transfer cable** **Integrated barcode reader** **NDT PC software utilities**
He Purge for light element analysis (Mg, Al, Si, P)	**50 - 75 cc/min He flow** **Fixed-flow regulator** **Portable aluminum cylinder – 1.5 lbs**
Data Entry	**Three methods for user data entry:** **Virtual touch screen keyboard;** **User programmable pull down lists;** **Integrated barcode reader**
Data Transfer	**RS-232 serial cable or optional Bluetooth™ wireless connection** **NITON NDT PC software utility easily exports data for use in common PC applications, and provides data encryption QA/QC documentation**
Security	**Password protected user security**
Licensing/Registration	**Varies by region. Contact Thermo's NITON Analyzers business unit or your local distributor**

The NITON XLt 898He is just one of Thermo Fisher's handheld NITON Analyzer solutions, which include analysis tools for metal alloy identification, lead-based paint testing, RCRA metals in soil, RoHS and WEEE compliance screening, and a host of other analysis needs.

NC 8-215
PS44005_E0807B

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