thermo scientific

Thermo Scientific Niton XL5

Handheld XRF Analyzer

Powerful. Fast. Light.

ThermoFisher SCIENTIFIC

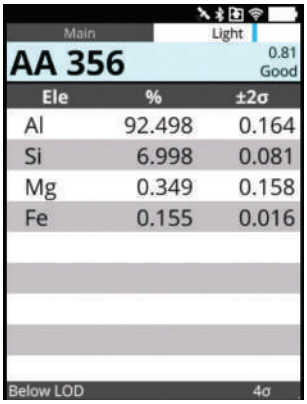
Discover the future of handheld XRF

Introducing the Thermo Scientific™ Niton™ XL5 analyzer - the lightest, smallest, most powerful handheld XRF analyzer available for elemental determination. Part of the industry leading Niton family of products, the Niton XL5 offers unmatched speed, performance and portability never seen in a handheld analyzer, ***until now***.

Niton XL5 **Quick Glance**

Designed to perform

When versatility, low limits of detection (LODs) and high sample throughput are critical, industrial businesses rely on the Niton XL5 handheld XRF analyzer. Providing customers with solutions designed to meet their most demanding applications, the Niton XL5 maximizes performance and productivity.



Advanced analytical performance

Powered by a proprietary 5W x-ray tube, the Niton XL5 generates fast and accurate results. Designed to work just as hard as you do, a dynamic current adjustment ensures optimum sensitivity for each measurement. By optimizing the space between the x-ray detector and sample, the Niton XL5 guarantees the lowest limits of detection - especially for light elements - ensuring that you receive lab quality results every time. Identify alloys, detect tramp elements, analyze precious metals, determine coating weight and plating thickness, perform real-time geochemical analysis, or screen for polluted soil. Whatever your needs, the Niton XL5 is ready to work.

Expanded field use

Small but mighty, and weighing an industry leading 2.8 pounds (1.3 kilograms), the Niton XL5 is the lightest and smallest handheld XRF analyzer available for elemental determination and alloy identification. A miniaturized footprint and featherweight design reduce operator fatigue, while increasing productivity. Tight spots become no match for the Niton XL5. Discover expanded field use with new, compact geometry, enabling users to reach awkward or tight welds, corners and joints for critical measurements.

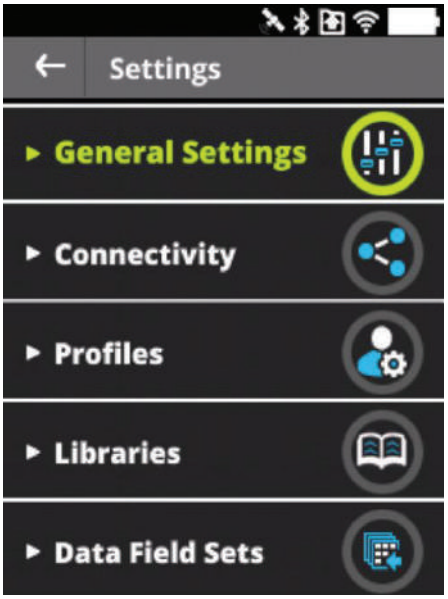
Increased productivity

Vivid new icons and an application interface ease navigation and configuration. Utilize swipe and touchscreen functionality, even with a gloved hand. The Niton XL5's optional directional keys provide added usability. In a snap, you'll experience better record keeping too. The Niton XL5 comes equipped with micro and macro cameras designed to support sample positioning and collect full-scale sample imagery. An optional 3mm small-spot collimator provides a zoomed in analysis for small areas. Using the Niton XL5, various analytical needs are solved using one versatile instrument.

Smart technology

Intuitive, simplified software with customizable workflow solutions create a unique user experience engineered to meet your needs. The Niton XL5 offers unmatched flexibility with custom data field sets and user profiles. Define specific data captures, or create operator permission sets. The Niton XL5 enables easy access to sample readings via wireless transfer to your network share. Using NitonConnect, control your device from the comfort of your computer, or opt to download sample readings. The Niton XL5 features a tilting, color touchscreen to empower viewing from multiple angles. A streamlined interface eases access to scanning (Analyze), reviewing data (Data) and modifying device settings (Settings).

Data scan results screen



Settings screen

Unmatched versatility

General metals mode

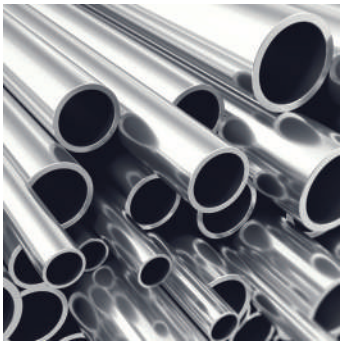
From analyzing pipes in an oil refinery, to sorting metal in a scrap yard, utilize general metals mode to determine alloy grade and chemistry in seconds. Designed to enhance workflow efficiency, the Niton XL5 delivers accurate metal analysis while conquering your toughest environments. Now more than ever, quality and safety standards around the world encourage manufacturers to implement programs for material verification. Using the Niton XL5, petrochemical refiners, metal fabricators and aerospace/ automotive manufacturers are able to obtain peace of mind knowing that critical-use alloys are not subject to premature or catastrophic failure.

Precious metals mode

Small uncertainties in the knowledge of precious metal content may result in significant financial losses for your business. Precious metals mode was designed to deliver outstanding accuracy for the determination of gold, platinum, silver, palladium, and their alloying elements. By using our patented AuDIT feature, you'll be alerted to gold plating and characteristics of adulterated materials. Use precious metals mode to preserve the profitability of each transaction, ranging from manufacturing and trading, to recycling and refining.

Coatings mode

Coatings are typically applied to metals, alloys and plastics to increase corrosion resistance and/or for decorative purposes. In order to ensure correct component properties, coat weight and thickness must be controlled in metal finishing and fabrication, as well as in the automotive and aerospace industries. The Niton XL5 non-destructivley measures coating weight and plating thickness at manufacturing lines. Using a standardless Fundamental-Parameter (FP) calibration, the Niton XL5 adapts to numerous testing situations. Use coatings mode to determine coat thickness or weight for up to four (4) layers over a substrate. Users have the ability to measure layers consisting of pure metals, alloys and compounds, and define substrates consisting of pure metals, alloys, plastics and wood.



Spectral fingerprint mode

Use spectral fingerprint mode to collect spectra from materials and create an asset library. During each XRF analysis, spectra are collected to create a unique identifiable signature. With high selectivity, you'll unlock the potential to differentiate similar materials based on their spectra. Unknown samples can then be scanned to authenticate their origin and uncover counterfeit goods.

Mining mode

With substantial capital investments at stake, successful mining companies are those that are able to quickly identify and recover the most economically viable resources. Utilize mining mode to gather accurate, real-time geochemical data and maximize overall productivity. Mining mode enables users to determine the concentration of elements from Mg to U in various types of geochemical materials. Reduce overhead by implementing the Niton XL5 for cost effective oil and gas exploration, mineral discovery, and mining operations. Bring your lab to the field and discover the difference of the Niton XL5.

Soil mode

The detection and remediation of environmental contaminants from industrial and mining operations is a global challenge. Collecting and analyzing thousands of samples on-site is a requirement for screening, risk assessment and hazardous site modeling. The Niton XL5's high sensitivity rapidly analyzes soil samples in situ while providing information on heavy metal contaminates. Using soil mode, users can easily detect RCRA metals, priority pollutants and U.S. EPA target analytes with instant and legally-defensible results. Fast decision making means you'll also achieve results at a fraction of the time and cost of off-site laboratory testing.

Product Specifications

Weight	2.8 lbs with battery (1.3 kg)
Dimensions	9.54 x 8.19 x 2.67 in. (242.56 x 208.17 x 67.9mm)
Tube	Ag anode (6-50kV, 500uA max, 5W max) Dynamically adjustable current for optimal sensitivity for every analysis
Detector	Geometrically Optimized Large Area Drift Detector (GOLDD) Proprietary detector with up to 180,000 cps throughput Typical Resolution: 150 ev- 185 eV depending on shaping time used
System Electronics Processor	iMX6 quad core ARM A9 running at 800 MHz 80 MHz ADC ASIC for digital pulsed processing 4096 channel MCA 512 MB internal system memory / 16 GB industrial grade storage
Standard Alloy Analytical Range	More than 30 common elements for rapid alloy identification Ultra-low light element detection
Modes Available	General Metals, Precious Metals, Coatings, Mining, Soils, Spectral Fingerprint
Libraries	Users may create, clone and edit libraries Default alloy libraries based on: - SAE, AISI, ASTM, AA standards - DIN standards - GB standards
Display	Tilting, color, touch-screen display
Data Storage	Approximately 130,000 readings with spectra (fewer, if micro and macro images are saved)
Data Transfer	WiFi, USB
Global Positioning	GPS data included with sample information
Bluetooth	Supports print functionality and external GPS connectivity
Security	Password-protected user security
Data Entry	Touch-screen keyboard User-programmable pick lists Customizable data field sets
Camera	Integrated CCD Macro Camera for capturing overview images of parts and tagging measurement locations Integrated CCD Micro Camera for locating and recording measurement positions
Languages	English, Chinese, Spanish, Portuguese, Russian, Japanese, German, Korean, French, Turkish, Italian
Standard Accessories	Locking shielded carrying case Two lithium-ion battery packs 110/220 VAC battery charger/AC adaptor PC connection cables (USB) NitonConnect PC software Safety lanyard Check samples
Optional Features and Accessories	3mm small-spot collimation Thermo Scientific™ portable test stand Thermo Scientific™ mini test stand Thermo Scientific™ backscatter shield Thermo Scientific™ hotwork stand off Thermo Scientific™ soil guard Belt holster
Compliance	CE, RoHS, FCC, Industry Canada, Safety to IEC 61010-1:2010, IP54
Licensing/Registration	Varies by region. Contact your local distributor.

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