Small size, big power

Fast, accurate, versatile XRF analysis

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

Applications

- Verification of metals and alloys in manufacturing operations
- Non-destructive field inspections for positive material identification
- Point-and-shoot sorting at scrap recycling operations
- Measurement of single or multi-layer coat weight and coating thickness in surface treatment control
- Precious metal assay of bullion and jewelry
- Real-time geochemical analysis for mining exploration
- On-site heavy metal screening of polluted soils
- Screening for hazardous substances in consumer goods
- Custom applications on demand

Analytical performance

Designed to return lab quality results, the Niton XL5 Plus' low limits of detection allow operators to scan a broad range of materials for diverse applications. Identify pure metals and alloys, obtain geochemical data, screen for heavy metals or determine plating and coating thickness. From metals to mining, and everything in between, the Niton XL5 Plus is ready to work.

Rapid results

Powered by a 5W x-ray tube, the Niton XL5 Plus generates fast and accurate results. An upgraded graphene window ensures optimum sensitivity for each measurement - even light elements. Results are displayed in real time, enabling you to make faster decisions. And with a standard system health check designed to verify operating parameters, your device will operate smoothly.

Size and weight

Make light work of heavy industrial tasks utilizing the Niton XL5 Plus. Weighing an industry leading 2.8 pounds (1.3 kilograms), the Niton XL5 Plus is the lightest handheld XRF analyzer available for elemental determination and alloy identification.[1] It's small footprint and featherweight design reduce operator fatigue while increasing productivity.

Design

Tight spots are no match for the Niton XL5 Plus. Discover expanded field use with improved compact geometry and ergonomics. Reaching tight welds, corners and joints, are no longer defined as awkward test spots for the Niton XL5 Plus. Standard Detector ProGuard protection also reduces risk when measuring sharp items.

The Niton XL5 Plus in use, analyzing a tight weld in an oil refinery.

Functionality

Vivid new icons and an application interface ease navigation and configuration. Utilize swipe and touchscreen functionality, even with a gloved hand. Optional directional keys provide added usability. A hot swap battery keeps you up and running when it's time to replace a low battery. Micro and macro cameras enable precise sample positioning and collect images for better record keeping. Finally, WiFi accessibility automatically transmits data from your device to PC.

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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 67.90 mm)
X-Ray Source	X-Ray Tube: Ag anode (6-50kV, 0-500uA, 5W max) Filter: Six (6) position filter wheel for enhanced spectral range coverage Current: Dynamically adjustable current for optimal sensitivity on every analysis
Detector	High count rate, high resolution, extra large area silicon drift detector (1µm graphene window) Detector ProGuard protection included
Spot Size	Standard: 8mm collimation Optional: 3mm small-spot collimation
Analytical Range	Mg-U (ultra low light element detection), Na (spectrum based detection)
Calibration Modes	General Metals, Precious Metals, Coatings, Mining, Soils, Electronic Alloys, Plastics, Industrial Lead in Paint, Spectral Fingerprint, TestAll™
Libraries	Default alloy libraries based on SAE, AISI, ASTM, AA,DIN, GB standards Users may create, clone and edit libraries
System Check	Built-in standardization and health check verifies system integrity and operating conditions
IP Rating	IP54 (splash and dust proof)
Operating Environment	Temperature: 0°C to 50°C (external fan recommended when ambient temperature is greater than 33°C) Humidity: 10% to 90% relative humidity non-condensing
Display	Tilting, color, resistive touchscreen display
Power	12V lithium-ion battery, or 12V DC, 3A, 3.6W power supply Hot swap functionality keeps analyzer powered during battery replacements
Macro Camera	Integrated CCD macro camera for capturing overview images of parts and tagging measurement locations
Micro Camera	Integrated CCD micro camera for locating and recording measurement positions
Global Positioning System	Internal GPS and optional external GPS (via Bluetooth) GPS data included with sample information
Bluetooth	Supports print functionality, external GPS connectivity and barcode reader
Memory / Data Storage	512 MB internal system memory / 16 GB industrial grade storage Stores approximately 130,000 readings with spectra (fewer if macro and micro images are saved)
Data Entry	Touchscreen keyboard User customizable data entry Optional wireless remote barcode reader
Data Transfer	WiFi, USB-c
Operating System	Linux
Support Software	NitonConnect PC software
Security	Password-protected user security
Languages	English, Chinese, Spanish, Portuguese, Russian, Japanese, German, Korean, French, Turkish, Italian
Standard Accessories	Locking shielded carrying case Two (2) lithium-ion battery packs One (1) 110/220 VAC battery charger/ AC adaptor Check samples Safety lanyard PC connection cable (USB)
Optional Accessories	Thermo Scientific™ portable test stand Thermo Scientific™ mini test stand Thermo Scientific™ backscatter shield Thermo Scientific™ hotwork stand off Thermo Scientific™ soil guard Thermo Scientific™ belt holster Bluetooth printer
Compliance	Compliance CE, RoHS, FCC, Industry Canada, Safety to IEC 61010-1:2010
Licensing / Registration	Varies by region. Contact your local distributor.

1. The Thermo Scientific™ Niton™ XL5 Plus handheld XRF analyzer weighs 2.8lbs (1.3 kg). The Niton XL5 Plus is the smallest and lightest handheld XRF analyzer leveraging x-ray tube technology.

Learn more at **thermofisher.com/NitonXL5Plus**

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