Thermo Scientific Niton XL3t GOLDD+ XRF Analyzer



Thermo Scientific Niton XL3t GOLDD+ analyzers provide you with many advantages:

- Superior light element detection (Mg, Al, Si, P, S) without helium purge or vacuum
- High count rate for lower detection limits and faster analysis
- True lab-quality performance in a handheld instrument, including tramp/trace elements



CCD camera and small-spot feature isolates and stores small sample area measurements.

The Thermo Scientific™ Niton™ XL3t Handheld XRF Analyzer with GOLDD+ technology is purpose-built for your most demanding applications. Where low detection limits and high sample throughput are critical, our combination of hardware, software, features, and direct industry experience provides you with a solution to your most difficult analytical requirements.

GOLDD (Geometrically Optimized Large Area Drift Detector) technology delivers vast improvements in sensitivity and measurement times—as much as 10 times faster than conventional Si-PIN detectors, and up to 3 times more precise than conventional silicon drift detectors (SDD). We achieved this improvement by uniquely combining an improved Niton XL3t 50kV, 200 µA x-ray tube, closely optimized geometry, and patented signal processing hardware and software. These advantages are coupled with our proprietary drift detector, one of the largest area drift detectors that is commercially available in a handheld XRF analyzer, providing you with superior performance in the form of faster analysis and lower detection limits.

Applications

The Niton XL3t GOLDD+ is the instrument of choice when you require extreme accuracy, precision, and ease of use, with its fast analysis, high precision, and the ability to measure light elements without helium or vacuum assistance:

- Analyze metal alloys
- Carry out mining exploration and mapping
- Detect soil contaminants
- Test electronics and consumer goods for prohibited substances

For example, the Niton XL3t GOLDD+ delivers productivity for scrap metal recycling, and it can sort aluminum, titanium, and bronze alloys, as well as achieve superior performance for tramp and trace element analysis. Further, in mining exploration, the instrument's low detection limits permit identification of anomalies near the averages naturally found in the earth's crust. Similarly, detection limits have been improved for all elements in environmental applications, including target elements such as chlorine and sulfur in sediment, and arsenic in soil. It's limits of detection put the Niton XL3t GOLDD+ on par with most laboratory grade systems used in testing consumer products for toxic elements. Additionally, enhanced Mg-S performance can be achieved with the optional He purge.

You can pinpoint areas of interest on a sample using the integrated color charge-coupled device (CCD) camera and the optional integrated 3 mm small-spot collimation, and then store the test area image along with the analysis data. Take advantage of the standard Thermo Scientific™ Niton™ Data Transfer (NDT) PC software suite to customize the instrument. You can set user permissions, generate custom reports, print certificates of analysis personalized with your own company logo, or remotely monitor and operate the instrument hands-free from your PC. Integrated USB and Bluetooth™ communications provide direct data transfer to your PC or networked storage device, eliminating the cumbersome data synchronization procedures required by Windows Mobile™-based XRF analyzers.

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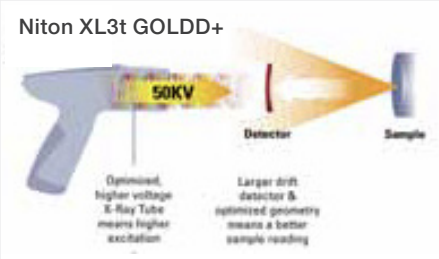

Large area drift detector and optimized geometry for more x-ray counts: you get faster and more precise readings.

Niton XL3t analyzers—the GOLDD standard

Whether you need an analyzer for metal alloy analysis, mining exploration, environmental applications, or electronics and consumer goods testing, the Thermo Scientific Niton XL3t GOLDD+ analyzer combines the outstanding analytical performance of lab-grade instrumentation with the high-speed performance, ease of use, and cutting-edge technology that you have come to expect from Thermo Scientific Niton XRF analyzers.

Thermo Scientific Niton XL3t GOLDD+ analyzers represent just one of our handheld analyzer solutions, which include XRF tools for metal alloy identification, mining and exploration, lead-based paint testing, RCRA metals in soil, toy and consumer goods testing, RoHS and WEEE compliance screening, and many other analysis needs.

Thermo Scientific Niton XL3t GOLDD+ specifications

Weight	< 3.0 lbs (< 1.3 kg)
Dimensions	9.60 x 9.05 x 3.75 in. (244 x 230 x 95.5 mm)
Tube	Ag anode (6–50 kV, 0–200 µA max)
Detector	Geometrically Optimized Large Area Drift Detector (GOLDD) Proprietary detector with 180,000 throughput cps Resolution: < 185 eV @ 60,000 cps @ 4µ sec shaping time
System electronics	533 MHz ARM 11 CPU 300 MHz dedicated DSP 80 MHz ASICS DSP for signal processing 4096 channel MCA 32 MB internal system memory/128 MB internal user storage
Display	Tilting, color, touchscreen display
Standard analytical range	Up to 30 elements from Mg to U (varies by application)
Optional light elements	Ultra-low light element detection via He purge
Data storage	Internal >10,000 readings with spectra
Data transfer	USB, Bluetooth, and RS-232 serial communication
Security	Password-protected user security
Mode (varies by application)	Alloy modes: Metal alloy, electronics alloy, precious metals Bulk modes: Soil, mining, TestAll Plastic modes: RoHS plastics, toy & consumer goods, plastics, TestAll, painted products Custom modes: Upon request (based on application feasibility)
Data entry	Touchscreen keyboard User-programmable pick lists Optional wireless remote barcode reader
Standard accessories	Integrated CCD camera for locating and storing images Locking shielded carrying caser Shielded belt holster Two lithium-ion battery packs 110/220 VAC battery charger/AC adaptor PC connection cables (USB and RS-232) Niton Data Transfer (NDT) PC software Safety lanyard Check samples/standards
Optional features and accessories	3 mm small-spot collimation Thermo Scientific™ SmartStand portable test stand, stationary (benchtop) test stand, mobile test stand, Field Mate Thermo Scientific™ Extend-a-Pole extension pole Welding mask Thermo Scientific™ HotFoot hot surface adapter Soil testing guard
Licensing/registration	Varies by region. Contact your local distributor.
Compliance	CE, RoHS

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