

The Thermo Scientific Niton FXL field x-ray lab delivers XRF-based elemental analysis with lab-quality performance in a compact, portable package you can operate virtually anywhere on site. Experience superior test results in minutes rather than days, and save the significant expense of shipping samples to offsite testing labs.

## Thermo Scientific Niton FXL Field X-ray Lab



Niton FXL Mining analyzer (top)  
Niton FXL Consumer Goods/RoHS analyzer

### Fit. Form. Function.

**More than 25,000 Thermo Scientific Niton analyzers are hard at work today around the world, making our customers more efficient and competitive. We've now elevated our x-ray fluorescence (XRF) technology and product design to a totally new level.**

The Niton® FXL field x-ray lab offers our highest XRF-based performance and lowest levels of detection for up to 40 critical elements. It is constructed from durable Lexan® plastic that is both dust- and water-resistant to operate flawlessly in harsh environments.

Compact and weighing less than 30 pounds (14 kg), it's easy to transport and operate from the back of a truck, on a portable tripod, or at the loading dock or manufacturing line. The Niton FXL is based on our proven, purpose-built software: there's no PC required, alleviating the worry of a computer crash and loss of data.

Not only does this breakthrough instrument include advanced batteries that support extended continuous operation on a single charge, it is also free of air filters that can clog if not maintained.

### The Thermo Scientific Niton FXL field x-ray lab offers unmatched performance, features, and mobility.

- True lab-quality performance and lowest levels of elemental detection
- Nondestructive with accurate, consistent analysis in minutes – or less
- Easy to use, with little operator training required
- Lightweight and ruggedized for field and manufacturing operations
- Available with spot sizes from 1 mm to 8 mm
- Closed-beam design requires minimal licensing in most countries



# Take your lab anywhere you need it

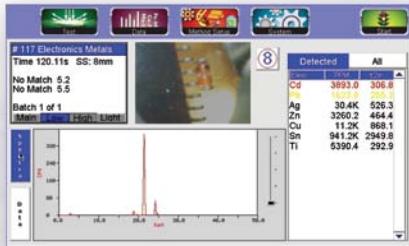
## Designed for operator ease of use.

The Niton FXL makes elemental analysis easy for everyone. Open the lid and place your sample into the 9" x 12" x 4.5" test chamber. Then simply press a button on the bright, 9" color touch screen to get accurate results within a few minutes or less. Thermo Scientific TestAll technology automatically selects the correct analytical testing mode for the operator. Select pre-determined analysis settings for your specific applications.

While the Niton FXL is powerful, fast, easy to use, and extremely mobile, you also get the critical features you expect from a commercial-quality test lab:

- **Integrated camera with small-spot feature:** The Niton FXL allows you to test areas as small as 1 mm and conveniently store sample measurements for later reference.
- **X-Y positioning:** After placing your sample in the test chamber, this feature lets you position the XRF head quickly to the precise spot you want to test.
- **Sample spinner:** The sample is rotated within the chamber during testing, ensuring an overall accurate reading that best characterizes the entire sample.
- **Closed-beam design:** The Niton FXL uses a closed-beam design that simplifies licensing requirements in most countries.

- Mining
- Soil
- Plastics
- Electronic metals
- Consumer paint
- General alloys
- Precious metals
- Coatings



**Fast.**  
**Accurate.**  
**Easy to use.**



## Niton FXL Technology: The GOLDD Standard for Superior Elemental Analysis

Thermo Scientific GOLDD technology makes it possible to deliver exceptionally sensitive results with remarkable speed – as much as 10-times faster than conventional Si-PIN detectors, and up to 3-times more precise than conventional silicon drift detectors (SDD).

By combining a 50 kV, 400 µA x-ray tube, closely optimized geometry, our industry-leading signal processing hardware and software, and proprietary drift detector, the Niton FXL achieves superior performance in the form of our fastest analysis and lowest detection limits. For example, in mining exploration you can now easily achieve lab-quality assays with basic sample preparation, or get exceptional light element LODs with the lowest Mg levels for dolomite in limestone.

**Now your commercial lab comes to you – a valuable resource you can carry on the back of a truck or move easily throughout your inspection department, warehouse, or store. The Niton FXL is engineered for your applications:**

- **Exploration and mining:** from base metals and Au mining to mineral sands and PGE
- **Industrial minerals:** limestone, clay, steel slag, cement, and more
- **Oil and gas exploration:** exceptional performance for mud logging, plus gas and oil shale analysis
- **Consumer goods testing:** more precise testing for Pb, Cd in toys, jewelry, packaging, and more
- **RoHS compliance:** analysis of populated circuit board and consumer electronics with complete confidence
- **Precious metal alloys:** ideal tool for refiners and distributors
- **Environmental:** test for RCRA metals at less than 10 ppm in soils



*Small-spot feature: Isolate test areas as small as 1 mm and conveniently store sample measurements for later reference.*

### COMPARISON AT-A-GLANCE:

**Legend:**

- +++ Superior
- ++ Excellent
- + Good
- Not applicable/not available



	Handheld XRF analyzers	Handheld XRF analyzer in optional test stand	Field x-ray lab
Maximum portability	+++	++	+
Ease of use	+++	+++	+++
Highest performance and lowest levels of detection	++	++	+++
Laboratory features	-	-	+++
Ease of regulatory compliance	+	++	+++

# Product Specifications



	Niton FXL Mining – 10 Watt	Niton FXL Consumer Goods/RoHS – 10 Watt	Niton FXL Consumer Goods/RoHS – 2 Watt
<b>Weight</b>	< 30 lbs. (<14 kg)		
<b>Dimensions</b>	Outer: 10 x 14 x 12 in. (250 x 350 x 300 mm) Chamber: 9 x 12 x 4.5 in. (229 x 305 x 114 mm)		
<b>Tube</b>	Ag anode, 50 kV/400 µA/10 W	Ag anode, 50 kV/400 µA/10 W	Au anode, 50 kV/100 µA/2 W
<b>Detector</b>	Geometrically Optimized Large Area Drift Detector (GOLDD)	Geometrically Optimized Large Area Drift Detector (GOLDD)	Si-PIN
<b>System Electronics</b>	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 storage		
<b>Display</b>	9 in. tilting, color, touch-screen display		
<b>Standard Analytical Range</b>	Up to 40 elements from Mg to U	Up to 40 elements from Mg to U	Up to 25 elements from Cl to U
<b>Data Storage</b>	Internal >10,000 readings with spectra		
<b>Data Transfer</b>	USB		
<b>Security</b>	Password-protected user security		
<b>Mode (Varies by application)</b>	TestAll Geo: Soil, Mining Other Available Modes: General Alloy, Electronic Alloy, Plastics, Consumer Paint, Precious Metals, Coatings	TestAll: Plastics, Electronic Metals, Consumer Paint Other Available Modes: General Alloy, Precious Metals, Coatings, Soil, Mining	TestAll: Plastics, Electronic Metals, Consumer Paint Other Available Modes: General Alloy, Precious Metals, Coatings, Soil, Mining
<b>Data Entry</b>	Touch-screen keyboard User-programmable pick lists		
<b>Standard Accessories</b>	<ul style="list-style-type: none"> <li>• Sample spinner</li> <li>• 8 mm spot size</li> </ul>	<ul style="list-style-type: none"> <li>• X-Y positioning</li> <li>• 1 mm, 3 mm, 8 mm spot size</li> </ul>	<ul style="list-style-type: none"> <li>• X-Y positioning</li> <li>• 3 mm, 8 mm spot size</li> </ul>
	<ul style="list-style-type: none"> <li>• Integrated CCD camera for locating and storing images</li> <li>• One lithium-ion battery pack</li> <li>• USB cable</li> <li>• Niton Data Transfer (NDT©) software</li> <li>• Check sample/standards</li> </ul>		
<b>Optional Features and Accessories</b>	<ul style="list-style-type: none"> <li>• X-Y positioning</li> <li>• 1 mm, 3 mm small-spot size</li> <li>• Tripod</li> <li>• Field preparation kit</li> <li>• Helium purge (for ultra-low Mg-S)</li> </ul>	<ul style="list-style-type: none"> <li>• Sample spinner</li> </ul>	<ul style="list-style-type: none"> <li>• Sample spinner</li> </ul>
	<ul style="list-style-type: none"> <li>• 110/220 VAC battery charger/AC adaptor</li> <li>• Carrying bag</li> <li>• Pelican case</li> </ul>		
<b>Licensing/Registration</b>	Varies by region. Contact your local distributor		
<b>Compliance</b>	CE, RoHS		

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