Product Specifications

Thermo Scientific NITON XLt, XLp and XLi 700 Series analyzers have become the industry standard for elemental analysis in applications ranging from environmental site characterization and soil analysis to thin film and coatings measurements.

NITON XLt / XLp / XLi 700

The Ideal Screening Tool for Environmental Testing

Thermo Scientific NITON 700 Series analyzers provide many distinct advantages:

- **Very easy to use - even by nontechnical personnel**
- **Portable GPS integration for real-time contamination mapping**
- **High-strength, rugged, environmentally sealed housing**

Prepared soil sample analysis offers laboratory grade results at a fraction of the cost.

Requirements for identification of environmental contaminants in residential, commercial and industrial settings continue to increase globally. Common toxic metals – including lead, arsenic, cadmium, chromium and mercury – are frequently found in the environment as the result of industrial activity. Whether the unintended consequence of industrial processes or through willful disregard for environmental regulations, the issue cannot be ignored. Analysis must be performed to identify and quantify these contaminants to assess risk and develop remediation plans.

Regulators, consultants and other environmental professionals are faced with the daunting task of collecting and analyzing hundreds or thousands of samples to identify the scope and boundaries of potential contamination, often encompassing large sites. More problematic, sample types are numerous, including soils, sediments, painted surfaces and dust inside structures; ambient air and personal monitoring samples may also be required. Laboratory costs often run into the hundreds of US$ per sample, with results frequently taking several weeks due to laboratory capacity.

The need to obtain real-time results is evident; by obtaining analytical results on-site, users dynamically modify inspection and remediation plans based upon hard data, driving efficiencies previously unavailable with more "conventional" approaches. Applications ranging from elevated blood lead (EBL) investigations to site assessment, emergency response to site remediation, and brownfield cleanup to occupational safety and health (OSHA) compliance all directly benefit from the use of field-portable NITON X-ray fluorescence (XRF) analyzers.

NITON Analyzers provide qualitative and lab-quality quantitative results in real-time. They are the worldwide standard for XRF analysis, providing on-site analysis of everything from phosphorus through plutonium with accurate quantification from parts per million (ppm) through percent concentration.

NITON 700 Series analyzers provide 3-sigma precision while maintaining the speed necessary for use as rapid assessment tools. With ease-of-use as their hallmark, they combine light weight with high sensitivity,

Get fast test results in the field with either collected or in-situ sampling.

especially for all 8 RCRA metals, 12 Priority Pollutants and 19 US EPA Target Analytes. A Compton normalization algorithm eliminates the need for time-consuming site-specific calibrations, while maintaining the ability to optimize calibration curves for more sophisticated users.

For the quickest results, NITON 700 Series analyzers are placed directly on the ground, providing in-situ analysis with screening-level results – the ideal way to perform trend analysis or surgically delineate the boundaries of contamination. Placing samples in plastic bags roughly homogenizes the sample for semi-quantitative results, while grinding and sifting the sample provides a more uniform composition, making quantitative analysis possible; these two methods are also known as ex-situ analysis. They comply with US EPA Method 6200 and are the industry standard for site characterization, on-site clearance screening, soil stabilization and remediation quality control. Complete with a full suite of sample preparation and analysis accessories, NITON XRF Analyzers are also available with optional Bluetooth™ wireless capability.

Whether your application requires site screening for potential contamination, emergency response to suspected contamination, or work-site clearance testing, a Thermo Scientific NITON Analyzer provides rapid, high-precision results in a fraction of the time required for traditional laboratory analysis.

Thermo Scientific NITON 700 Series analyzers are just one of Thermo Fisher's Portable 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.

NITON XLt / XLp / XLi 700 Series Specifications

Weight	**XLt / XLp: 3.0 lbs (1.4 kg)** **XLi: 1.7 lbs (0.8 kg)**
Dimensions	**XLt / XLp: 9.75 x 10.5 x 3.75 inches (248 x 273 x 95 mm)** **XLi: 11.5 x 3.5 x 3.0 inches (292 x 89 x 76 mm)**
Batteries	**(2) Rechargable Quick Swap Li-ion battery packs.** **6-14 hour use.**
Excitation Source	**XLt: Low power (1.0W) X-ray tube with Ag anode target** **XLp / XLi: One or more of the following sealed radioisotope sources: ^{241}Am (Infiniton), ^{55}Fe, ^{109}Cd**
X-ray Detector	**High-performance Si-PiN detector; Peltier cooled**
Analysis Range	**Up to 25 elements (standard) from P to Pb**
System Electronics	**Hitachi SH-4 CPU** **ASICS high-speed DSP** **4096 channel MCA**
Display	**Backlit VGA touch screen LCD**
Testing Modes	**Bulk Sample Mode** **Thin Sample Mode, including Dust Wipe mode, 37mm Filter Mode** **User-Defined Thin Sample Mode** **Lead-Based Paint Mode**
Data Storage	**Internal ~6000 readings + spectra**
Data Entry	**Three methods for user data entry:** **Virtual touch screen keyboard** **User programmable pull-down lists** **Integrated barcode reader** **Optional Portable GPS**
Data Transfer	**RS-232 serial cable or optional Bluetooth™ wireless connection** **NDT© PC software utility easily exports data for use in common PC applications and provides encrypted data for safe, secure project documentation.**
Standard Accessories	**Soil Sampling Kit/ Thin Sample Kit (varies by model & config.)** **Portable test stand or Inverted stand** **Check / verification standards** **Shielded belt holster** **Locking shielded waterproof carrying case** **110/220 VAC charger/adapter** **Spare Li-ion battery pack with holster** **RS-232 PC data transfer cable**
Optional Accessories	**Benchtop test stand** **Bluetooth™ wireless communication** **Wireless Printers and Portable GPS**
Security	**Password protected user security**
Licensing/Registration	**Varies by region. Contact Thermo Scientific NITON Analyzers business unit or your local NITON product distributor**

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