

## Metals Recycling



## Thermo Scientific Niton XRF Analyzers



*Delivering a new level of productivity and  
profitability to the metals recycling industry*



## With today's volatile commodity prices, the need for sorting recycled metals quickly and with accuracy is critical.

Each second lost and every wrong sorting call could affect your profitability, upset your customers, and place you at a real competitive disadvantage.

### **Thermo Scientific Niton x-ray fluorescence**

**(XRF) analyzers** are the first choice of metal recyclers around the world, delivering rapid, accurate results right in the palm of your hand. With point-and-shoot simplicity, you can view the alloy grade and chemistry on the built-in, color, touch-screen display.

Testing time is almost instantaneous for routine scrap sorting, and just a few seconds longer to obtain lab-quality chemistry. It's a nondestructive process requiring minimal training and little or no sample preparation, regardless of sample shape or size:

- Accurately measure up to 30 elements using GOLDD™ technology
- Test samples as small as 1 mm wires to massive structures
- Performs flawlessly in almost any environment or weather condition
- Take advantage of our unique integrated library of 400+ alloy grades



*The [Thermo Scientific] Niton [analyzer] is an essential piece of equipment for us. It enables us to give our customers the best possible price, since we know exactly what grade of alloy we are dealing with."*

*– James Varley, director, Morecambe Metals,  
("Alloy Analyzer Provides Instant Results for Scrap Metal  
Company)," Process and Control Today, May 8, 2008; Steel Guru*



**Thermo Scientific Niton XRF analyzers are the leading choice among scrap recyclers worldwide – by far.**

Scrap metal recyclers place their trust in our XRF analyzers for a reason: we've listened to you and learned the scrap metal business and its requirements. The result? A range of products purpose-built for today's metal recycling industry.

Thousands of our instruments are at work sorting and grading alloys on six continents around the world, in yards ranging from top-tier alloy processors to smaller-sized independents and regional recyclers. Our analyzers enable you to perform more than 1,000 readings in an 8-hour shift with full confidence in the accuracy of each sample ID.



# Thermo Scientific Niton XRF Analyzers

**Our handheld Thermo Scientific Niton analyzers are the perfect fit for metal recycling companies**

► **Exceptionally fast, easy to use**

Just point and shoot. Sort more scrap in less time than previously possible.

► **Purpose-built**

Ruggedized with sealed construction, analyzers are built with LEXAN® plastic and weigh approximately three pounds (1.36 kg); dust- and waterproof for worry-free use virtually anywhere. One-step system check requires no external accessories while advanced batteries support up to 10 hours of continuous operation on a single charge.

► **Optimized for scrap metal recycling**

Our smart and ever-evolving alloy grade library sorts alloys with greater accuracy than previously possible.

► **Flexible communications**

Bluetooth™ wireless and USB communications interfaces are included in every analyzer. Advanced Niton Data Transfer (NDT©) PC software lets you set user permissions, print certificates of analysis to document results, or operate the analyzer right from your PC.



**Niton XL2**  
VALUE LEADER

**Niton XL2  
GOLDD**  
PERFORMANCE  
LEADER

**Niton XL3t  
GOLDD+**  
ULTIMATE  
PERFORMANCE  
AND FEATURES



Niton XL2 Series	Niton XL2 GOLDD Series	Niton XL3t GOLDD+ Series
Ruggedized for scrap yard use	Light element analysis (Mg-S) for Al alloys and specialty alloys without helium purge or vacuum	Fastest sorting and chemistry
Value alternative for fast, accurate sorting	Improved sorting speeds	Best detection limits for tramp/trace elements
Standard analysis range of up to 25 elements	Rapid results for tramp/trace element analysis	Lab-quality performance for sorting Al, Ti, bronze, Zn, superalloys, and specialty steels
Fixed angle, color, touch-screen display		Superior light element performance (Mg-S) without helium purge or vacuum; helium purge option available for ultra-low Mg detection
		Tilting, color, touch-screen display

# metals recycling

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among scrap recyclers worldwide – by far.***

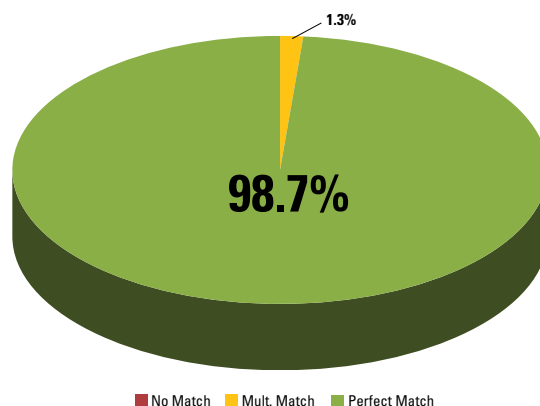
*More than 25,000 Thermo Scientific  
Niton XRF analyzers are in use daily in  
more than 75 countries on six continents.*

## **Thermo Scientific Niton analyzers provide unmatched accuracy in grade identification**

*delivering significant value to your sorting operation.  
Unfailing accuracy of your IDs means fewer  
rejections, more satisfied customers, and  
repeat business.*

Thermo Scientific Niton analyzers were engineered from the ground up to provide the industry with faster sorting and more accurate results. Analyze nearly every element of interest in virtually all types of metal alloys, from trace levels to pure metals, and everything in between – just point and shoot. Since our analyzers are known around the world for scrap metal sorting, you know your results will be highly comparable across the industry.

**Niton XL2 Alloy Identification Accuracy**



*The Thermo Scientific Niton XL2 was tested against 76 representative certified reference materials (CRM) to determine its ability to correctly identify the grade of metal alloy. Although each measurement was performed for a total of 30 seconds, correct grade identification is often provided in less than 3 seconds.*





## Thermo Scientific Geometrically Optimized Large Area Drift Detector (GOLDD) technology

Advanced GOLDD technology gives scrap metal recyclers an edge:

- Fastest alloy grade ID
- Superior detection limits for tramp/trace elements
- Unrivaled light element performance for sorting Al, Ti, bronze, Zn, superalloy, and specialty steels
- Unparalleled accuracy for confident results every time
- True lab-quality performance in a handheld instrument

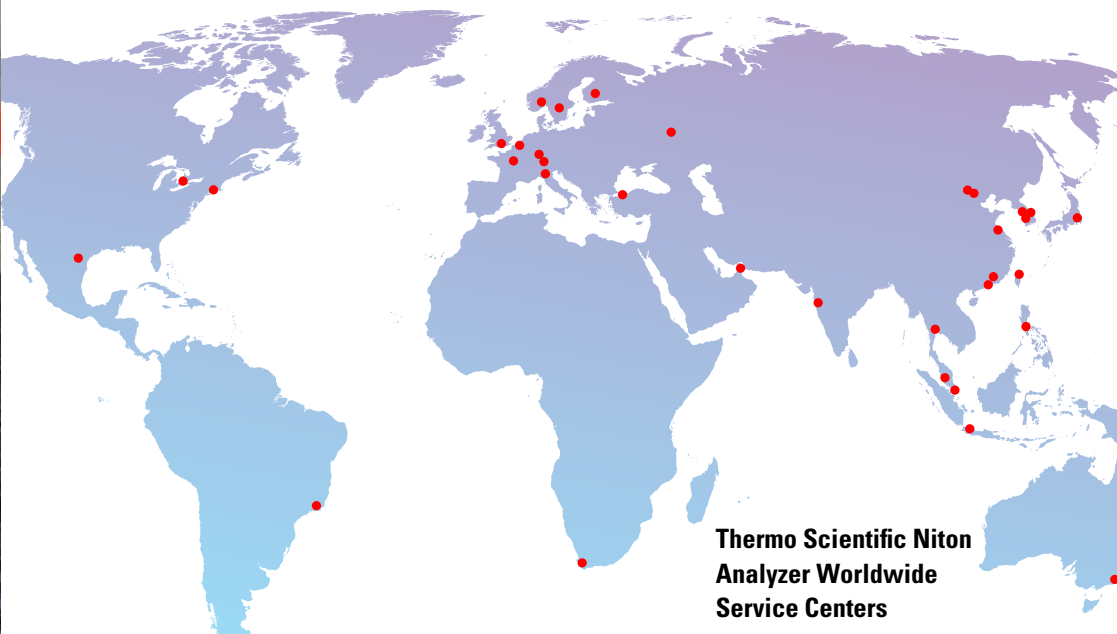
Families of alloys that can be accurately analyzed with an Niton® XL2 Series or XL3t Series analyzer include:

- **Stainless steels**
- **Copper (Cu) alloys**
- **Nickel (Ni) alloys**
- **Titanium (Ti) alloys**
- **Cobalt (Co) alloys**
- **Wrought aluminum (Al) alloys**
- **Ni/Co alloys**
- **Low alloy steels**
- **Tool steels**
- **Chromium-molybdenum (Cr-Mo) steels**
- **Zirconium (Zr) alloys**
- **Exotic alloys of most types (alloys of tantalum, hafnium, and tungsten)**



"We bought the Niton XL3 for the speed it can sort and grade material. Man hours are precious to us, and this new instrument effectively gives us more."

— **Mark Westwood,**  
director, Cronimet GB



**Thermo Scientific Niton  
Analyzer Worldwide  
Service Centers**

## Superior XRF analysis solutions, backed by our worldwide sales and service

We are recognized as the leader in XRF analysis technology, serving companies in more than 75 countries on six continents. We serve our customers through corporate resources and a dedicated network of more than 70 distributors and 30 factory-trained service centers around the world to provide the most effective customer service possible. Our global reach and resources not only ensure worry-free product support, we also offer comprehensive services including application consulting and training anywhere you need them.



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