Katana™

Laser Precise, Rigaku Strong, Cutting-Edge Analysis

Designed for on-the-spot identification of the most difficulty alloys grades, Katana™ represents the latest in handheld metal analysis. Katana enables durable and accurate alloy identification for use in:

- **Scrap metal sorting**
- **Quality assurance in metal fabrication**
- **Positive material identification (PMI) in mission critical applications**

Integrating our proprietary **Breakthrough Laser Ablation & Detection Engine (BLADE™)** into a durable, fit-for-purpose platform, provides users with advantages that weren't previously attainable, such as:

- **Smaller and lighter for greater efficiency**
- **Rugged, field-proven design, built for your harshest environment**
- **Longer battery life for less downtime**
- **Certification to protect against dust**

Rigaku
Analytical Devices

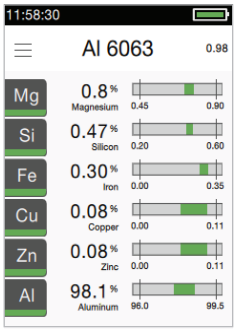
www.RigakuAnalytical.com

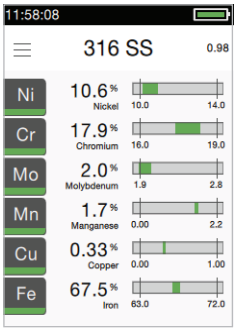
Katana™ offers superior light element identification in metal and alloy applications to ensure profitability and product quality. Katana provides an alternative for more accurate identification of a larger number of alloys, in a truly ruggedized form factor.

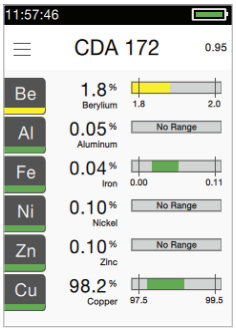
Katana Provides	
Advanced Performance	• Proprietary 1064nm Class 3B laser excitation • Fixed excitation/detection optics to minimize size and maximize ruggedness • Miniature Czerney-Turney spectrometer with CCD detector for optimized performance • Spectral range covering the most relevant alloying elements and spectral features
QuickID™ Software	• Rapid matrix selection, chemical composition and grade ID with no user input required • Quickly add of new alloys to your custom on-board library • Password protected with automatic "sleep mode" for improved safety and battery life • On-board camera for capturing image of samples being analyzed

Sophisticated Ergonomics	• Pistol shaped for optimal one-handed operation: 24.3cm L x 8.4cm W x 25.7cm H (9.55"L x 3.30"W x 10.10"H) and weighing~1.5kg (3.25lbs)
	• IP-54 rated ruggedized housing for maximum durability
	• 3.5" high resolution tiltable screen allows for high visibility in confined spaces and outdoors
	• Choice of user interface:
	  • Smartphone-inspired touchscreen provides fast learning-curve
	  • Large Softkey buttons for one-handed operation while wearing protective gloves
	  • Unique "Quick launch" handle buttons enabling one-handed operation

Accessories	• Docking station for battery charging • Holster for safe keeping when on the move • 2 Li-ion batteries enabling 10+ hours of operation combined • Aluminum alloy verification sample
Additional Services	• On-board System/Calibration verification program. • Replacement front plate/window
Other Specifications	• Certifications: FDA 1040, CE, ISO 9001:2008 Certified Manufacturing facility • External battery charger: 100~240VAC • Operating temperature of 5 to 40°C • Warranty of 12 months







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Rigaku Analytical Devices, Inc.
Boston, MA
Toll Free +1 855.785.1064
Direct +1 781.328.1024
Email info@rigakuanalytical.com
www.RigakuKatana.com

ACCESSORIES

Our transformation of metal analysis continues. Beyond Katana's™ superior identification analytics and ruggedized form factor, Katana adapts to provide convenience for any industrial environment with the following:

Docking Station

Continuously charge the analyzer battery and store in a secure location when not in use

Holster

Safely maneuver around the facility with the ability to easily withdraw for immediate use

Li-ion Batteries

Benefit from 10+ hours of continuous operation

Aluminum Check Sample

Verify the instrument's calibration is accurate

SUPPORT

Katana is backed by a global network of sales and service support partners of Rigaku, offering installation, preventative maintenance and prompt service support. We have been developing both laboratory and field equipment for many years and the combination of our expertise and the quality of our instruments is well known within the scientific instrumentation space. Having built a solid reputation in the analytical world, we are confident that we can firmly establish Rigaku and Katana as the premier solution for handheld metal identification in industrial applications.

Our global customer support team is ready to provide you with assistance, wherever you are.

Rigaku Analytical Devices is leading with innovation to pioneer a portfolio of handheld and portable spectroscopic analyzers for use in the protection of public health and safety, aid in the advancement of scientific and academic study, enable the recycle and reuse of metal alloys, and ensure quality of key metal alloy components in mission critical industries. Our core goal is to be recognized globally for quality, reliability and expertise in all aspects of our business through our commitment to exceed our customer's expectations by providing technologically advanced products.

Rigaku Analytical Devices, Inc.
Boston, MA
Toll Free +1 855.785.1064
Direct +1 781.328.1024
E-mail info@rigakuanalytical.com
www.RigakuKatana.com

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Katana™

Laser Precise, Rigaku Strong, Cutting-Edge Analysis

RELIABILITY PRECISION ACCURACY

Katana™

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OVERVIEW

Integrating proprietary **B**reakthrough **L**aser **A**blation & **D**etection **E**ngine (BLADE) technology, Katana's unique features and advantages include:

- **Smallest & Lightest Handheld LIBS**
  Sort All of Your Common Alloys with Ease
- **QuickID™ Software**
  Identify More in Less Time
- **10+ hour Battery Life**
  Avoid Unscheduled Downtime
- **Durable, Tested Design**
  Built for Your Environment
- **GPS Tracking**
  Protect Your Investment

APPLICATIONS

Scrap Metal Recycling

Scrap metal recycling has become one of the most financially valuable segments in the metal production process around the globe. Depending on the alloy grade, materials and parts leftover from manufacturing can be found in scrap yards that will be sorted and later sold to smelters. These metal parts can have huge monetary worth and has led to a significant increase in the demand for better identification methods to sort metal more accurately.

Metal Fabrication

Verification of alloy grades, including aluminum alloys, is imperative during any type of metal fabrication. Fabrication and machine shops prepare and assemble various raw materials using different processes. On-the-spot analysis during the manufacturing process is critical, as even the smallest component could have detrimental effects if the incorrect metal type is used.

Positive Material Identification (PMI)

Petrochemical, petroleum and power plants have put more stringent positive material identification (PMI) programs in place, to avoid disastrous, even tragic accidents. To ensure safety, it is absolutely imperative that before any metal component is used in the construction of an industrial plant, that the alloy composition is established. Further, verifying metal alloy composition is also crucial for metal alloy already installed with a plant.

1 

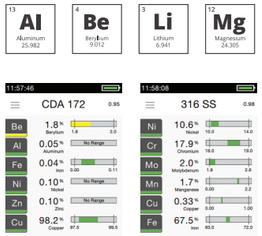
Laser "On" Indicator
Know when the instrument is operating

2 

Tilt Screen
For easy viewing in any lighting, in any position

3 

QuickID™ Software
Easily customize your results layout and eliminate guesswork



4 

Safety Window
Thick safety window keeps dust, scrap and dirt out while allowing sample images and easy data tracking in

5 

Macro Camera (optional)
Sample imaging for data tracking

6 

Large Button Navigation
Use while wearing work gloves

7 

USB / Power Ports
Power and transfer data simultaneously (wireless also an option)

8 

Trigger / Quick Launch Buttons
Ergonomic and intuitive trigger / navigation buttons at your fingers

9 

Contoured Handle
Comfortably handle your Katana all day, every day

10 

Unique Kick Stand
For optimum viewing and grabbing position

11 

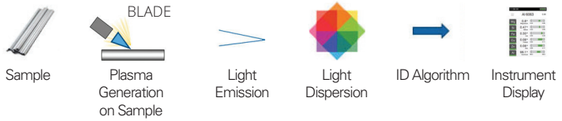
Rechargeable Li-ion Battery & Sealed Compartment
Easy to open and close battery compartment for quickly swapping your battery

BLADE TECHNOLOGY

Katana utilizes cutting-edge **B**reakthrough **L**aser **A**blation & **D**etection **E**ngine (BLADE™) technology in the most advanced handheld platform ever designed. In seconds, Katana's powerful and highly focused laser engine ablates a small amount of your sample, creating a plasma. By analyzing that plasma, Katana measures the chemical composition and with its best-in-class identification algorithm, determines the grade ID of your sample. The collection of this plasma on the same axis (patent-pending) allows Katana to have the smallest footprint versus other similar devices. Katana's intuitive user interface is designed for maximum convenience and productivity. After powering on and logging in, Katana is immediately ready for analysis without any additional settings.

Handheld LIBS Benefits:

- **FAST** testing times
- **SUPERIOR** light element capabilities – especially Al and Mg alloys
- **NO** radiation licensing
- **LITTLE TO NO** sample preparation



KATANA ADVANTAGES
over XRF

	KATANA LIBS	XRF
Analysis of any alloy in < 3 seconds	●	
Identification of beryllium coppers	●	
Superior Mg in Al alloy performance	●	
Ruggedized package with no susceptible sensitive components (vacuum sealed x-ray tubes, x-ray detectors)	●	
No regulatory headaches or annual licensing fees	●	