

Alloy Testing Advantages

- Rapid nondestructive testing. 1-2secs for rapid detection. 10secs for precise detection.
- Professional alloy analysis software.
- Multiple alloy analysis modes, including "quantitative analysis (ppm)", "qualitative analysis" etc. Built-in multi-calibration methods calibrate deviation caused by different geometric states
- Unique adjustable fundamental parameter technology provides more analytical modes
- Dynamic information-match function displays testing results, sample numbers, and matching information on the interface simultaneously.

Technology specification

Measuring range	Mg to U
Processor and RAM	CUP-667MHz RAM-256M Maximum expanded storage: 32G Standard configuration: 2G, for storage of large amounts of data
Analytical range	ppm~99.99%
Testing time	3-30 seconds
GPS, WiFi	Built-in GPS & WiFi system
Battery	Chargeable lithium battery, with capacity of 7800mAh, continuously providing 8 working hours ; Equip with wide voltage (110V-220V) general adapter
Testing object	Solid, liquid , powder
Detector	25mm' ,SD
Detector resolution	Minimum resolution: 130eV
Excitation source	Target Ag High voltage: 5-40kv Tube current: 1-100 μ A
Collimator and filter	Collimator kinds: 2 (4.0 mm and 2.0mm diameter) Filter types: 6 Automatic switch: YES
Video system	CMOS HD camera
Screen	Semi-transmission & semi-reflection LCD touch screen, resolution 640*480
Detection limit	Detection limit: ppm level
Safety	Self-contained password manager mode
Testing window	\varnothing 12mm
Gas charging system	Optional Helium charging system
Operational environment	Humidity < 90% Temperature: -20 $^{\circ}$ ~+50 $^{\circ}$ C
Size	234*306*82mm(L*H*W)
Weight	Net weight:1.6kg Battery : 0.3kg

Rapid | Accurate | Non-destructive

Genius 5000 XRF

Handheld Alloy & Stainless Steel Analyzer





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Performance Advantage

Perfect performance

Small power integral end-window miniature X-ray tube, large dimensional beryllium window Silicon Drift Detector (SDD, the best detector in the world), and miniature digital signal multi-channel processor, greatly reduce the testing time and testing deviation, and improve the testing precision, requiring similar performance as the desktop.

Small & light body, easy for carry

Small body. Easy to carry. Convenient for wild work. Can operate on-site and in-situ analysis at anytime or anywhere.

Rapid & nondestructive detection

1-2secs for rapid detection. More than 10secs for precise detection, whose results are similar to the results gotten in lab. No destruction to samples.

Detection of light elements

Helium-charging system (optional) greatly expands measurable range (analyze elements from Mg), satisfying the requirements of customers for light elements detection.

Direct testing

It can directly analyze on the surface of the analytes, without needing of preparing samples.

HD camera for convenient observation

Observation of testing position at any time.

Professional software for easy operation

It is equipped with professional alloy analysis software. Combining FP with EC software, it is easy for operation and acquiring wider application fields.

Faster data transmission

Built-in system, HD touch screen (resolution 640*480), digital multi-channel technology, and SPI data transmission technology, effectively accelerate the data transmission and improve counting ability.

Multiple safety protection, caring for health

Automatically shut-down of X-ray light tube within 2 seconds with no sample in testing; the radiation level is far lower than the international safety standard; compliment away test safety cover.

Simple deviation calibration

Built-in intensity calibration method ensures simple deviation calibration caused by different geometry shapes and inhomogeneous structure density.



Application Field

Genius 5000 XRF is widely used for various kinds of alloy analysis. The analytical precision is 2 to 3 times more precise than common alloy analyzer. And testing samples include solid, debris, or any other tangible alloy objects.

It can accurately analyze all kinds of high & low alloy steel, stainless steel, tool steel, chromium/ molybdenum steel, nickel alloy, cobalt alloy, nickel/cobalt heat resistant alloy, titanium alloy, copper alloy, bronze, zinc alloy, tungsten alloy etc. Through determination of other alloy elements, it also can identify the light alloys such as Al, Mg and can be used for reliable identification and confirmation of material. It can be applied for incoming material determination in iron and steel smelting, boiler and other high-temperature and high-pressure industries, to ensure the quality of the material. It also can be used for alloy content analysis in shipbuilding, aerospace and other high-tech industries, to ensure the quality and safety of the product. It can be applied in power plant and other national economy and people's livelihood industries for components determination and safety of the devices.

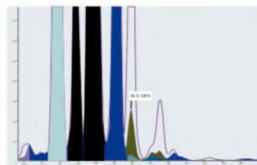
Core Application Field

Iron and steel / Recovery of scrap metals / Machinery manufacture and process / Boiler pressure vessel

Analytical precision

Measurement Precision of Main Elements in Stainless Steel (304) Testing for 10 seconds

	Cr	Mn	Ni	Cu	Mo
Average value	18.232	0.926	8.072	1.236	0.288
Standard deviation	0.072	0.055	0.086	0.043	0.008
Relative standard deviation(%)	0.395	5.936	1.067	3.506	2.693



Amplified Figure of Ni Content as 0.108% in Stainless Steel

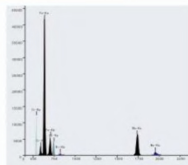


Figure of Stainless Steel (316) Sample

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