



# SPECTROLAB

## The SS6000 “ Gold Mate “ Series

For analyzing all precious metals and other elements from Mg to U



Portable desk top EDXRF analyzers

Responsive, bright, color touch screen display

Uses Silicon Drift or Silicon PIN Detector systems for ultra fast analytical times and optimized precision for trace elements.

One-button operation for fast accurate analysis

### Typical Applications

- Gold Karat assays and identification
- Coating thickness measurements
- Alloy analysis and Alloy PMI
- Hazardous metals Inspection: Including Hg, Cd, Cr, Pb
- Electroplating liquid analysis
- Easy to use .
- Perfect for all types of sample , metal, jewelry and finished product

## Features

Accurate determine all elements present

Determine karat results within 10 seconds.

Quickly determine the cash price for gold and other items

Identify and characterize a wide range of alloys including silver, platinum and others

Identify toxic elements in samples or finished products

Manage quality control of refining and smelting operations

Many options for coating thickness measurement and alloy PMI

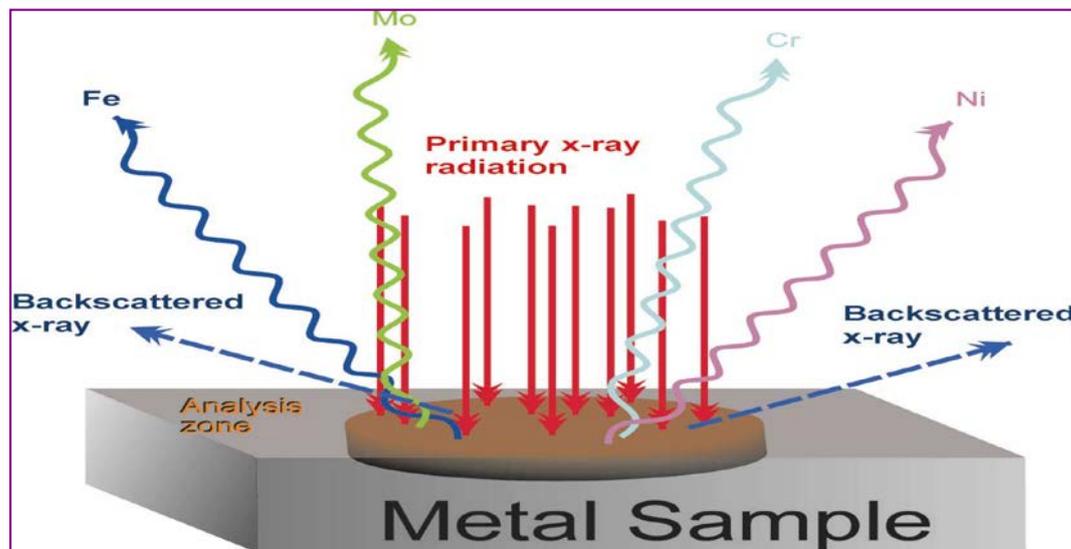
Quickly and easily create analysis certificates

Safe and secure closed-beam system.

Requires minimal training.

A unique compact instrument taking up minimal desk space.

Can be networked for easy access to testing results as they are being generated.

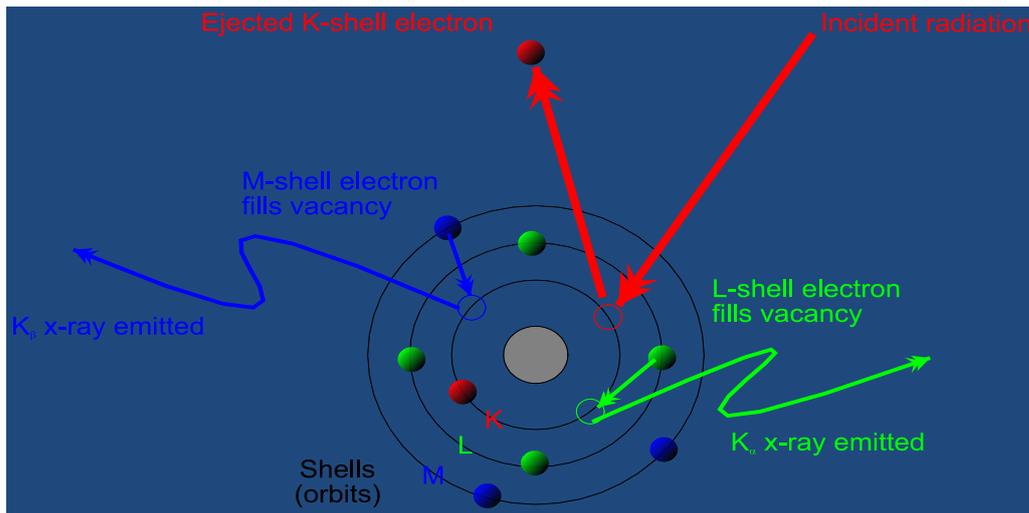


*This is how the Goldmate Xray fluorescence spectrometer works?*

## Overview

### Nondestructive Precious Metals Assay and Karat ID

XRF is a widely used, proven and accepted method of chemical analysis used for the determination of purity and quantity of precious metals or elements in any type of sample including both solids and liquids, films, coatings, powders or gels. XRF analysis is a multi-elemental testing alternative optical emission methods and is also is quicker and less expensive. XRF provides on-the-spot analysis of your Gold, Silver, Platinum, and PGM metals and impurities, ensuring customer confidence and dealer reliability.



*How the Goldmate analyzer makes an X-ray fluorescence photon ( EDXRF )*

### How XRF works

X-rays have a unique ability to ionize or “excite” elements present in materials including oil. When elements such as Sulfur have been ionized by X-rays the electrons quickly return to a relaxed or stable state. In so doing they will emit fluorescent photons whose energy levels are “signatures” of specific elements present. Spectrolab XRF analyzers utilize this phenomenon by imaging ionizing x-rays onto a sample and measure the energy levels of the returning fluorescent x-rays (the elements’ “signature”), The quantity and energy of X-rays measured determines the relative concentration of each individual element present.

The onboard microprocessor then provides a complete elemental analysis of the sample and displays it on to a high brightness screen. All of this is done in just a few seconds, The analyzed results are stored in an Excel test report.

Given the current high value of gold, quantifying its fineness and purity is more critical than ever. Whether you buy or sell gold, manufacture jewelry, fabricate metal, or recycle scrap metal, you always need a fast, highly accurate method to determine karat (gold content) for quality control and pricing.

The Spectrolab 6000 series XRF analyzer is an easy-to-use, cost-effective method to obtain alloy chemistry and karat classification with one nondestructive and nonintrusive test. Additionally exclusive software features help the user to identify gold-plated objects and send alerts to the screen.

### Customized Reporting

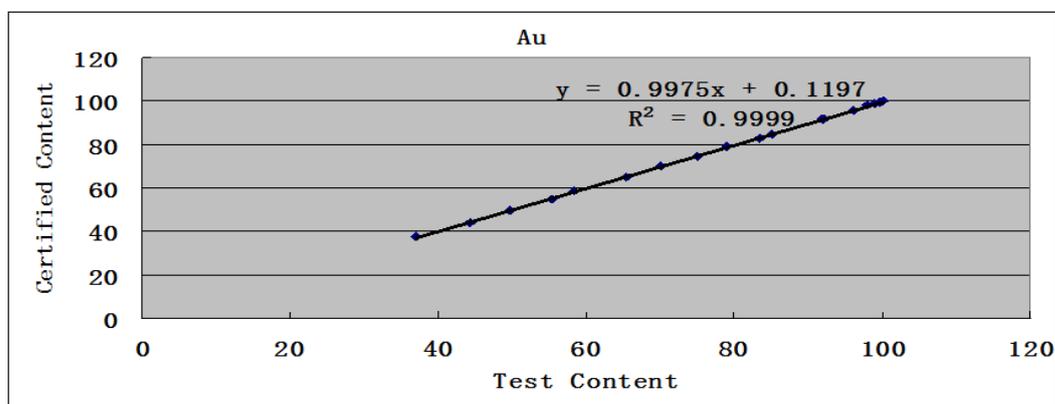
Data can be exported easily to a spreadsheet format, and the integrated memory can be accessed remotely when the SS6000 is networked via its Windows CE operating system. Customized results and reporting certificates including analytical results, an image of the

tested sample, the company logo, and more, can be generated via the optional PC Software with the click of a button.

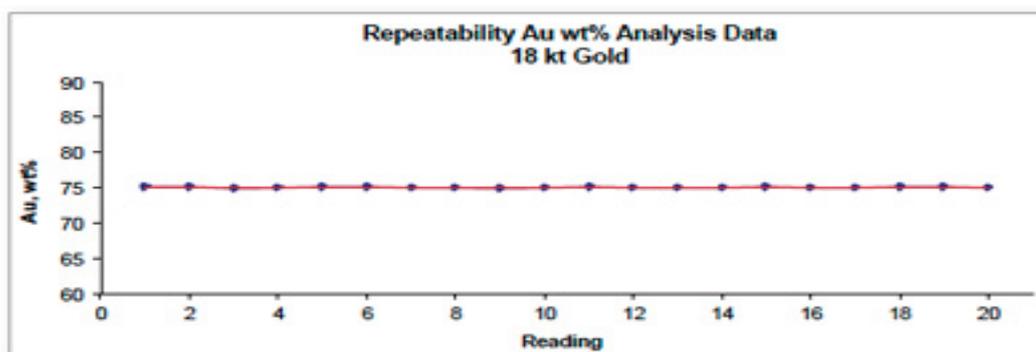
Test Report													
Sample Name	Gold Piece												
Test Time(s)	30(s)												
Test Date	2014/1/1 17:01												
<b>Gold</b>	<b>75.005(%)</b>					<b>Karat</b>			<b>18 Karat</b>				
Element	Au	Ag	Ni	Cu	Zn	Ru	Rh	Pd	Cd	In	Sn	W	Re
Content	75.005	14.860	2.04	4.010	4.000	0	0	0	0	0	0	0	0
	Os	Ir	Pb	Fe	Co	Ti	Cr	Ge	Mn				
	0	0	0	0	0	0	0	0	0				
Spectrum Photo													

Spectrolab 6000S “Gold Mate “ Series Test performance

Showing accuracy for Au in certified Gold alloy standards



Repeatability Plot: Twenty repeat readings on an 18k certified gold alloy standard



## Configuration and specification options

Products	SS-6000D	SS-6000S	SS-6000E
Model	<i>Easy</i>	<i>Standard</i>	<i>Premium</i>
Dealer Price	<b>\$7500</b>	<b>\$15500</b>	<b>\$18400</b>
Detector	Proportional Cntr	Si-Pin detector	SDD detector
Description	D serial with external computer. E serial with integrated touch-screen industrial computer inside the machine.		
Content Range	20ppm-99.99%	2ppm-99.99%	1ppm-99.99%
Element Range	Ti-U	S-U	S-U
Calibrations	1.Gold: + Ni, Cu, Zn, Ag, Au	1.Gold:+ more than 20 metals 2.Alloy analysis and PMI 3.Coating thickness measurement	1.Gold: + more than 20 metals 2.Alloy analysis and PMI 3.Coating thickness measurement
Calibration Mode	Empirical calibrations	Standardless FP+ Empirical calibrations	Standard less FP+ Empirical calibrations
X-ray Tube power	50 watts	50 watts	50 watts
Resolution	900ev	165ev	135ev
Test time	60s	60s	30s
Max CPS	50.000	50.000	100.000
Collimator	1.5mm	3mm 1mm	1mm 0.5mm(Micro spot)
Precision	<0.05%	<0.05%	<0.02%

### Accessories:

Sample cup for liquid and powders

Ring holder



## Who needs an SS-6000 “Gold Mate “

The SS6000E series is recommended for refiners who need the utmost in analytical precision and fast reading times. The 6000S series is recommended for general karat and trading applications. The series 6000D is recommended for high purity gold analysis with fewer metal impurities inside the sample.

Hand Held XRF

Portable XRF

Wavelength Dispersive XRF

Energy Dispersive XRF

Process control XRF

Our partners in Xray technologies Anaspec, HTek, Ametek, Varian



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