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The RX-6000 Sulfur in Oil Analyzer

For the analysis of Sulfur in Oil, metal alloys, minerals and all elements from Mg to U

Spectrolab Model RX-6000 Sulfur in oil and metal alloy Analyzer.
A unique portable desk top EDXRF analyzer
ASTM D4294 – ISO8754 – B7995

Features
Responsive, bright, color touch screen display
Uses latest Silicon detector systems for ultra fast, accurate analytical times
Portable or desk top operation
One-button operation for fast accurate analysis
Accurate determination of Sulfur in oil, metal wear products and in other petrochemicals
Multi element analyzer
Small compact and inexpensive

Identify and characterize a wide range of materials
Quickly and easily create result certificates
Safe and secure closed-beam system that 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.

Nondestructive analysis

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 to optical emission methods and is also quicker and less expensive. XRF provides on-the-spot analysis of trace elements in a variety of samples including the analysis of Sulfur in Oil satisfying the requirements of a number of assay standards including **ASTM D4294 – ISO8754 – B7995**

Spectrolab RX6000S Series Test performance

Blank(Oil)200s		2500ppm(standard)200s	
Measure times	**intensity**	**Measure times**	**Intensity**
1	37.65	1	180.445
2	37.705	2	181.735
3	37.165	3	181.865
4	37.485	4	180.685
5	37.5	5	180.7
6	37.765	6	180.635
7	37.46	7	182.88
Average	37.53	**Average**	181.28
Standard deviateion	0.19	**standard deviation**	0.84
3s	0.56	**3s**	2.51
RSD(%)	0.49%	**RSD(%)**	0.46%
Detection limit of Sulfur in oil=9.8ppm			

These detection limits apply only to this calibration using used oil

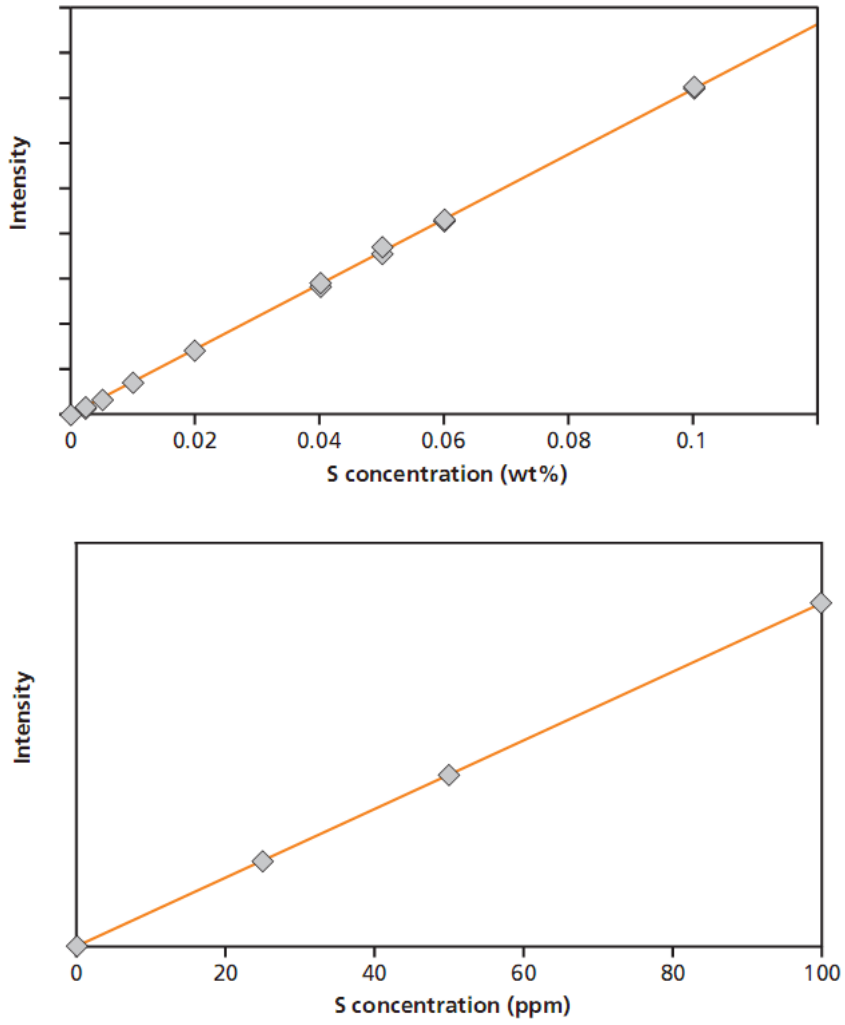
Standard limits of detection for Sulfur in Petroleum are 2.8ppm

Limits of detection for lighter elements can also be improved by using a silicon Drift detector

1. Calibration Instrument parameters

Instrument	RX 6000
Tube Voltage	7Kv
Tube current	6mA
Collimator	8mm
Filter	none
Purge	None
Time	100-300 Secs
Software	Standard calibration

Simple , fast Sulfur in oil Calibration



Calibration range from 0.01%-0.1%

Note the excellent linear relationship between concentration of Sulfur and instrument values

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.

Accessories:

Sample cup for liquids and powders

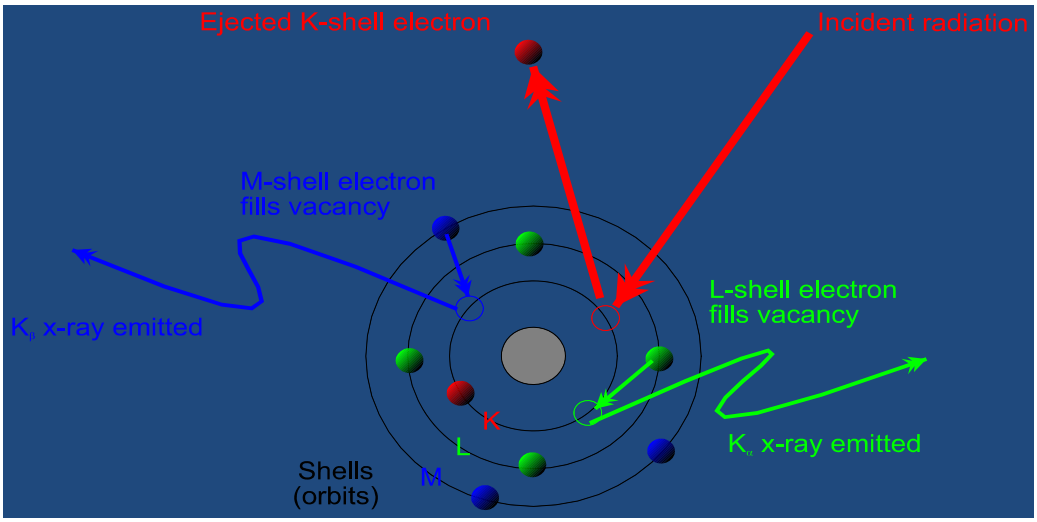
Contamination free Sample cups

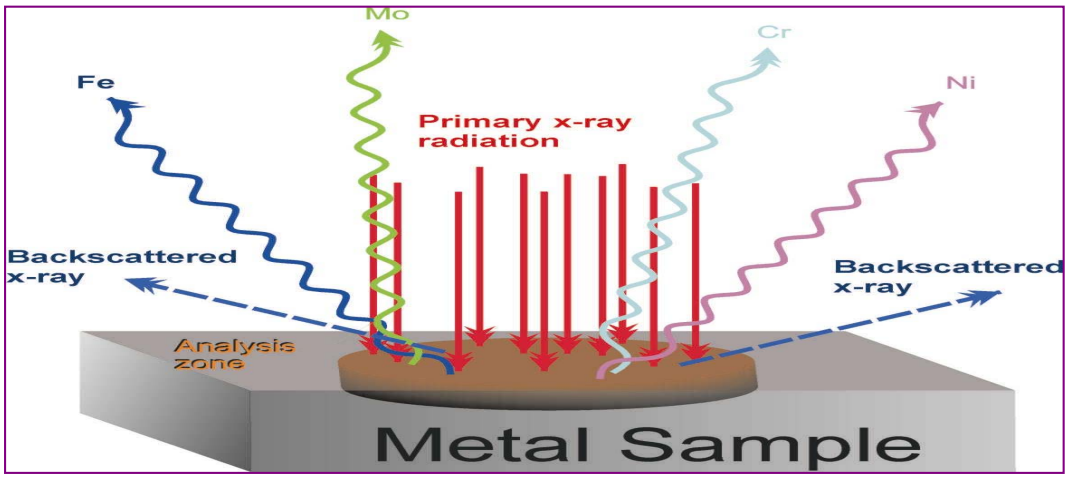
Ring holder

Who needs an RX-6000

The RX-6000 series is recommended for refiners who need the utmost in analytical precision and fast reading times. The RX-6000 series is also recommended for general lab analysis as well as a portable desk top analyzer for use in the field. The RX-6000 series is the latest combined Sulfur in Oil and metal wear products analyzer and the most sensitive instrument available

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 Xrays 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.

Specifications

Spellman High Voltage unit 0-50kV
50 Watts Be window X-ray tube 0-1mA
Silicon Pin detector as standard . Resolution 145 eV at Fe55 Ka
Si Drift detector options
Digital Multichannel analyser
Collimators 1, 3, 8mm plus options
High resolution sample camera included
Includes replacement sample membrane film
Software includes FPP fundamental parameter calibration and
EC Empirical Coefficient algorithms
Programs for Automatic quality analysis, spectrum processing, spectrum comparison,
Intensity correction functions plus standard and standard less calibration modes

Applications

Element range Sulfur to Uranium
Samples Liquids, solids, powders
Test time 100 – 300 secs
Dynamic range for Sulfur in Petroleum
20-1000mg/kg, 0.1%-1%, 1%-5%
Detection limit for Sulfur in petroleum: 2.8mg/kg
Limits of detection (LOD) Sulfur 2.8ppm
Range Sulfur 2.8ppm to 100%

Included

Sample cup for powder and liquid sample.
Test membrane
USB cable and Data cable
Calibration standard: Silver

Documents Enclosed：

Operation Manual
List of the Parts
Inspection Report
CE certificate

The analysis of Sulfur in Oil and metal wear products has never been easier

Spectrolab Xray analyzers

Hand Held XRF

Portable XRF

Wavelength Dispersive XRF

Energy Dispersive XRF

Dedicated Gold and Jewelry analyzers

Visit our growing web site @

www.spectrolab.co.uk

Spectrolab Science

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