

XRF Handheld Portable Energy Dispersive X-ray Fluorescence Spectrometer Quotation



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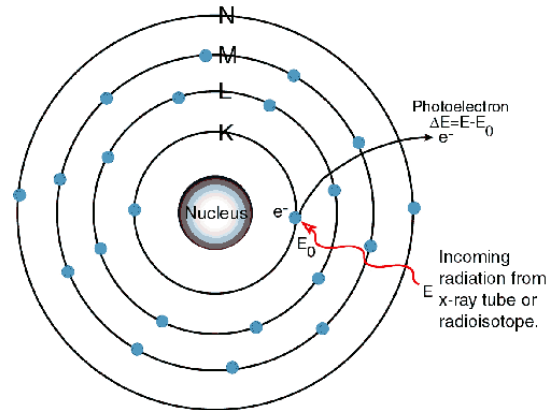
Angstrom Advanced Inc.

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Quote Valid Period: 4 months from issue date

1 Description

X-ray fluorescence (XRF) analysis is the procedure in which the X-rays from a material that has been excited by bombarding with high-energy X-rays or gamma rays are recorded through intensity readings. With new advancements in x-ray detection, XRF analysis is becoming more widely accepted throughout the globe in various industries such as Precious Metals, ROHS and CPSA standard testing, plating thickness analysis and many more.



All of our XRF analyzers are equipped with the latest hardware advancements in the field. With over 50 Patents in the XRF industry alone, Angstrom Advanced has brought some of the most precision equipment to the market like its latest UHRD (Ultra High Resolution Detector) with capabilities of 127eV levels without the presence of Liquid Cooling Needed. That is better by 20 points than liquid nitrogen cooled systems. Software applications such as Precious metals Analysis, FP Full Elements software, Sulfur Analysis in Crude Oils, ROHS Compliance Testing open the field for XRF to various industries. Our models are easy to use and can be operated by both technical and non-technical personnel. The XRF is itself is integrated into one small and portable package. All Models offer spacious sample compartments to accommodate a wide variety of sample sizes.

2 Specifications

Hardware Specifications		
Detector :	Advanced SDD detector	
X-ray Tube :	50KV/200μA -Ag anode window	
High Voltage :	miniature X light tube High Voltage Power Supply	
Weight :	1.6Kg with battery	
Size:	254×280×79mm (L×H×W) .	
Power Supply :	Lithium Ion Batteries (8 Hours Each Testing Time) with Intelligent battery management system	
Maximum Sample Size	Any	
Dimensions :	Longer than 10,000 Hours Testing	
Service Life :	T-shaped radiator	
Cooling :	Collimator- 4.0 or 2.0 diameter,	
Collimator and filter:	automatic switch of 8 filters	
Processor and RAM:	CUP: 1GHz, RAM:1GB , Maximum expanded storage: 32G,	
Detector resolution:	Lowest resolution can be 139eV	
Detection limit:	Ppm levels	
Testing Window:	12mm	
Gas charging system:	Helium charging at pressure system.	
Weight :	Any	
Power Supply :	Longer than 10,000 Hours Testing	
Screen:	TFT-LCD touch screen, resolution	

Data transmission: 640*480.
 Digital multi-channel technology, SPI data transmission, waterproof miniature USB for desktop computer connection.

Functions	All Applicable Software PDA Controlled GPS Location Tracking & Wi-Fi Analytical Range of Elements – Magnesium to Uranium Measurement Time – 5-30 Seconds Precision – ppm-99.9%. Ambient Temperature Operation - -20°C - 50°C Humidity-≤90%.
Safety	Radiation Tested – Double Layer Lead Coating for prevention of X-ray Leakage Self-contained password manager mode. Waterproof, dust-proof and shockproof suitcase CE Certified ISO9001 Certified

AA XRF Radiation Safety

Radiation Safety Guarantee

Low power (4W) X-ray tube, mini collimator reduces radiation quantity effectively;
 X-ray tube radiation protection shield avoids X-ray escape;
 The structure producing radiation is all in equipment interior, you don't need to align or calibrate X ray, then ensure not detect any measurable radiation in equipment operation process;
 X ray indicator light alarms user the radiation production;
 Independent safe circuit and Double Beam interlock tool can protect user safety effectively;

Monitoring Results:

Point No.	Point Description	Testing Results (μSv/h)						Device State
		1	2	3	4	5	Average	
1	5cm above the surface of the device	0.10	0.11	0.12	0.10	0.09	0.10	Turn On
2	5cm the surface left of the device	0.10	0.12	0.10	0.11	0.12	0.11	Turn On
3	5cm the surface right of the device	0.10	0.12	0.10	0.11	0.13	0.11	Turn On
4	5cm below the surface of the device (holding place)	0.12	0.10	0.10	0.11	0.12	0.11	Turn On
5	5cm back the surface of the device	0.09	0.08	0.10	0.12	0.08	0.09	Turn On
6	Operation place	0.10	0.09	0.11	0.08	0.09	0.09	Turn On
7	Public Distance Zone	0.09	0.05	0.07	0.08	0.06	0.07	Turn Off

Note: the testing result doesn't deduct radiation background value.

Performance Advantage

- 1. Small, light and easy to carry*
- 2. High-speed processing chip, advanced algorithm and high-responsive software, resulting in even faster analysis.*
- 3. High-performance X-ray Tube, Ultra-high Resolution Detector combined with Digital Multi-channel Processing Technology, yielding super-high detection resolution.*
- 4. Indicator lights flash on both sides for safety purposes during measurement, i.e., the built-in double beam technology will automatically sense whether there is a sample at the measurement window.*
- 5. Industrial resistive touch screen, superior to capacitor screen in back-light and clearer against sunlight in the field. At the same time, people don't need to take off gloves when they are operating machine in some particular environment.*
- 6. AA Handheld XRF utilizes anti-slip, abrasion resistance and streamlined design, which is light and easy to carry. It also integrates the new high speed digital multi-channel technology, the new library grade base identification system and the super-FP algorithm. These features allow it to measure elements faster, with higher accuracy and greater repeatability.*
- 7. Intelligent battery management exerts a real-time monitoring of the residual capacity of battery and backup battery through MSBUS bus.*
- 8. Automatic switch to standby mode when not used and recovery after the machine is picked up, which saves power and extends working time; moreover, AA Handheld XRF has a gravity sensing system which shuts down instrument automatically when it accidentally falls down, another safety consideration; AA Handheld XRF will also give out alarm when ambient temperature or humidity exceeds the scope of application.*
- 9. AA Handheld XRF adjusts air pressure factor automatically based on altitude it has detected. This function increases excitation effect of light elements by 40% and that of rare earth elements by 30%.*
- 10. AA Handheld XRF is supportive to battery hot plug; hence battery can be replaced without powering off the machine.*
- 11. On AA Handheld XRF, users can customize the reports by adding their company logos, addresses, test results, spectrum and others (such as product description, origin of products and batch number) .*
- 12. AA Handheld XRF is built with double beam technology which can automatically sense whether there is a sample at the measurement window. This is also a safety and protection feature. The brightness of the display of AA Handheld XRF is automatically regulated according to environment brightness.*
- 13. AA Handheld XRF can be configured and maintained in a remote way via Internet.*
- 14. AA Handheld XRF can build a three dimensional element content distribution graph allowing for a fast estimate of mineral reserves or the extent of geological disaster with the built-in GPS for latitude and longitude reading combined with a 3rd party GIS analysis software.*

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15. AA Handheld XRF's new algorithm optimizes the spectral resolution, so lower detection limits can be achieved, which are comparable with even large-scale lab instruments.

16. AA Handheld XRF Ultra-short optical™ path design can significantly improve light element excitation effects, without the fall/fill condition.

17. AA Handheld XRF has a built-in environmental sensing system covering conditions such as temperature, dust humidity and others.

- High-performance X-ray Tube, Ultra-high Resolution Detector combined with Digital Multi-channel Processing Technology, yielding super-high detection resolution.

Testing Example

Real test Values of 310 Samples					
Reading	Mode	Cr%	Mn%	Mo%	Ni%
No1	ALLOYS	16.56	1.22	2.03	10.18
No2	ALLOYS	16.66	1.29	2.01	10.15
No3	ALLOYS	16.61	1.20	2.05	10.05
No4	ALLOYS	16.62	1.19	2.00	10.03
No5	ALLOYS	16.68	1.18	2.05	10.15
No6	ALLOYS	16.67	1.22	1.99	10.10
No7	ALLOYS	16.62	1.25	2.04	10.16
No8	ALLOYS	16.5	1.16	2.03	10.20
No9	ALLOYS	16.7	1.19	2.01	10.17
No1	ALLOYS	16.63	1.20	2.03	10.08
Standard value		16.68	1.22	2.03	10.11

3 Quotation

Our prices are quoted in US Dollars.

Our prices do not include any taxes (VAT), duty or other costs liable on importation into the country of the customer.

Item	Description	QTY	Unit Price	Total Cost
1	XRF Handheld Spectrometer <ul style="list-style-type: none"> AA 900 Handheld Mineral Analyzer Standard Si-Pin Detector with a range of detectable elements of Potassium to Uranium (K-U) 	1	\$28,350.00	\$28,350.00
2	Software One software included, other software can be added for additional cost: <ul style="list-style-type: none"> AA 800 Alloy Analyzer Software Analyzer Software AA 800R RoHS Analyzer Software AA 900 Mineral Analyzer Software 	1	\$5,000.00	\$5,000.00
3	PDA <ul style="list-style-type: none"> The Android 4.2 operating system/ The ARM architecture Cortex-A8 1 GHZ/80MHZ ADC digital pulse processor/RAM 1GB/4096 MCA channel , 32GB memory; 300,000 spectral data and spectrum can be stored. 	1	Included	Included
4	Accessories (Standard)	1	Included	Included
Optional Items				
5	Detector Upgrade- SDD Detector <ul style="list-style-type: none"> Extends range of detectable elements to Magnesium to Uranium (Mg-U) 	1	\$4,725.00	\$4,725.00
Total				
Notes: N/A				

Terms & Conditions

a) Time of Delivery

4-6 weeks after receive advantage payment

b) Ex Works

Stoughton, MA

c) Payment Term

T/T advance

d) Period of Warranty

Angstrom Advanced warrants all equipment to be free from defects in material or workmanship under normal use and service for a period of Twelve (12) months from the date of delivery. All repair covered by this warranty must be done at Angstrom's Headquarters in Stoughton, MA USA unless Angstrom specifically directs that this service be performed at another location. Any defect corrected within Twelve (12) months and found to be within this scope of the warranty will be repaired by Angstrom and all charges for labor and material will be borne by Angstrom. If it is determined that either no fault exists from Angstrom or the damages repaired was caused by negligence of the customer or its employees, then the customer agrees to pay all charges associated with each such repair.

Any tampering, misuse or negligence in handling or use of equipment renders the warranty void. Further, the warranty is void if, at any time, the customer attempts to make any internal changes to any of the components of the equipment; if at any time the power supplied to any part of the equipment exceeds the rated tolerance; if any external device attached by the customer creates conditions exceeding the tolerance of the equipment; or if any time the serial number plate is removed or defaced.

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