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Desktop XRF for Coke Petroleum



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Analytical Technologies Limited

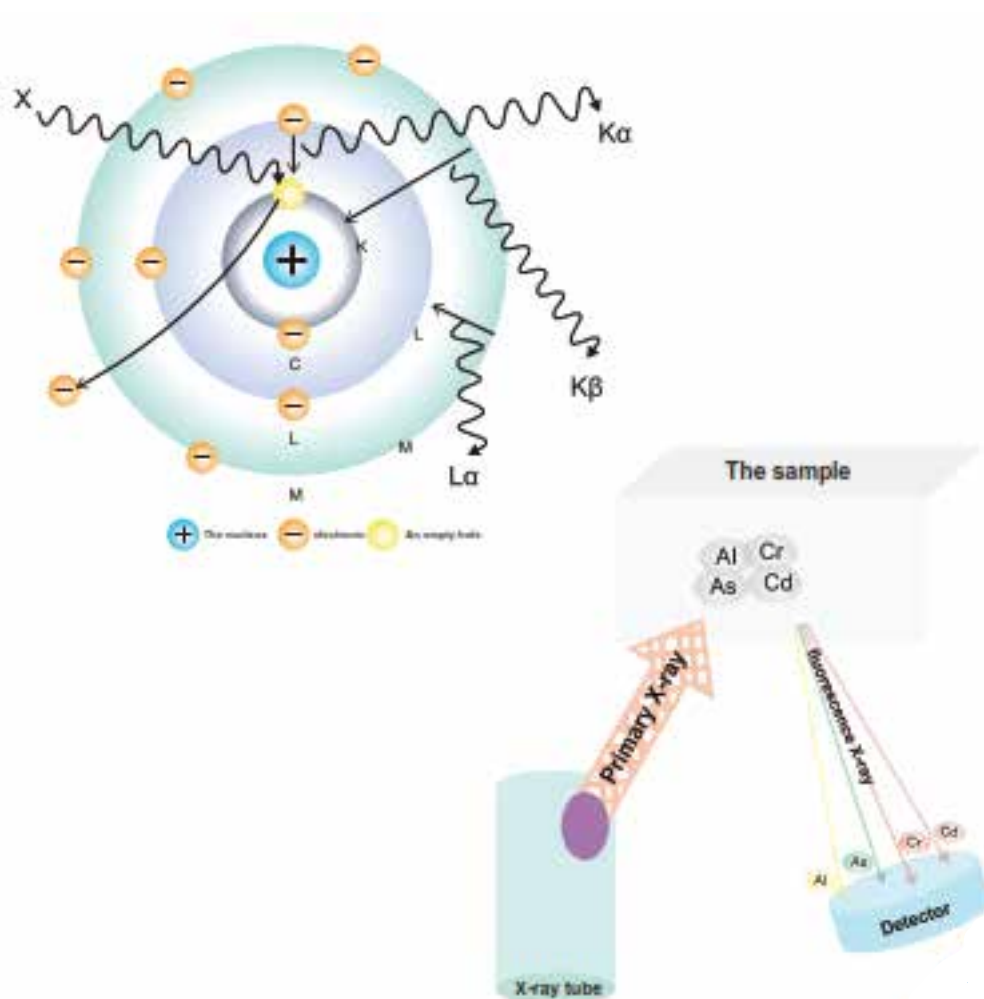
An ISO 9001 Certified Company

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Benchtop XRF analyzer adopts advanced industrial design and concept, very exquisite and beautiful. The instrument has a smaller size and a larger sample chamber, saving space and bringing higher sample compatibility. Samples in different forms (solid, liquid, gas, film, etc.) or in different shapes (block, sheet, wire) can be accurately analyzed. It is an ideal tool for a variety of industries such as petroleum, plating, precious metals, cement, minerals, metallic materials and plastics.

Performance Advantage:

The sample is bombarded with X-ray, and X-ray fluorescence is produced after the sample is excited. The X-ray usually knocks out the inner electrons of the K and L layers of the element atomic layer, and the resulting holes are filled by high energy outer electrons. The higher energy electrons added to the lower energy orbitals radiate the excess energy in X-ray fluorescence. These radiating lines contain the signatures of various elements, like fingerprints, and are independent of the chemical valence states of atoms. The intensity of the radiation is proportional to the concentration of the element in the sample.



High-performance hardware configuration:

High flexibility

Automatic switching of various collimators and filters :

5mm, 3mm, 1mm, 0.5mm four kinds of collimator, collimator and filter can be automatically switched by the software, save time and effort, through the appropriate collimator and filter or filter can improve the detection accuracy and sensitivity.

High sensitivity

High-power and efficient X-ray tubes combined with high-performance Si-PIN /SDD detectors provide extremely low detection thresholds for a full range of light to heavy elements.

High precision

Compared with traditional detectors, high-performance SDD detectors have a higher count rate of X-ray fluorescence per unit time, high-precision analysis results can also be obtained in a shorter time.

The resolution is also better, with less influence of electropherogram overlap between elements. The results are more reliable

High-definition

The 5- megapixel industrial-grade HD camera can confirm the condition of the test area in real time without opening the cover to improve the detection efficiency. Meanwhile, it can automatically take photos of the test samples for the generation of test reports.

No liquid nitrogen required

A variety of safety protection devices: high voltage safety lock (automatic interlock), software open cover, leakage protection switch and all metal closed chassis, fundamentally ensure the personal safety of operators, to avoid accidental operation caused by radiation injury.

Highly Intelligent Software:

One-key intelligent operation

One-key automatic test, automatic photo saving of test samples, automatic pop-up of test report, automatic screening and saving of supplier information.

Accurate and reliable quantitative method

It is high-intelligence XRF analysis software integrates analysis methods of calibration curve method and fundamental parameter method (FP method), the accuracy of test data is fully guaranteed

Extensive database

The instrument is equipped with a standard sample database, effectively solving the detection error caused by the matrix effect.

Concise and intuitive

It can accurately describe the analysis spectrum, and has the function of spectrum comparison, quickly track possible changes in material composition and reduce risk.

Customize function

In terms of basic testing, we can provide a variety of customized Settings. The test conditions can be changed according to the detection needs, and the threshold can also be changed according to the screening needs, to achieve personalized screening of different materials and elements.

Multi-Form Data Output

Analysis data reports can be created in PDF format or Excel format. When exporting data in Excel format, the data can be checked and edited in detail in the form.

Simple and intuitive

X-ray tube automatic aging



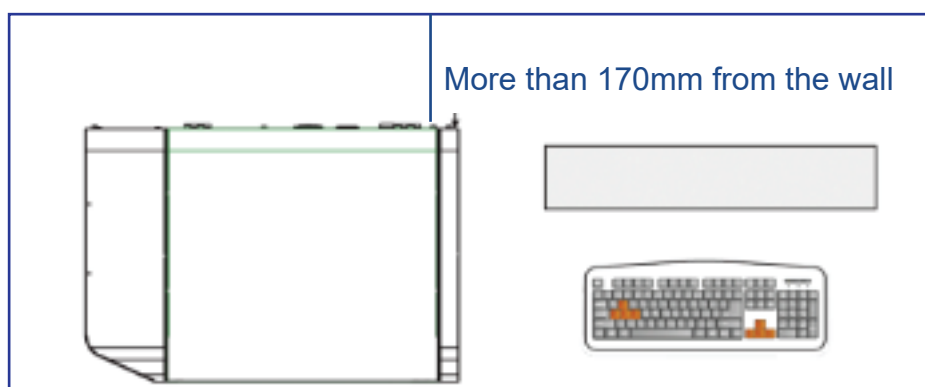
easy to customize

easy to manage

Technical Specification:

Main Specifications	Test Object : solid, liquid, powder
	Test Range : Na-U(optional)
	Equipment weight : 64kg
	Beryllium window area : 25mm ²
Detector	Esolution ratio : ≤125ev
	Cooling way : Peltier cooling
	Type : SDD detector
	Beryllium window area : 25mm ²
Sample room	Measurement situation :
	Atmosphere, Vacuum, Helium
	Sampler : Automatic filling
X - ray generating department	High power side window X-ray tube
	Voltage : 5-50KV
	Current : 0-1000μA
	Cooling way : Air cooling
	Target materials : W/Ag/Rh(optional)
Data Processing Parts	PC processor (CPU) : i3-7100 equivalent frequency or higher
	Memory (RAM) : DDR4 4G RAM or more
	HDD Capacity (ROM) : 1TB HDD, 256GB SSD or more
	OS : windows 10
Environment settings	Recommended Working Temperature : 10°C-35°C
	Relative Humidity : 40~70% (no condensation)
	Power : 220VAC
	Rated Power : 100W

Setting example:

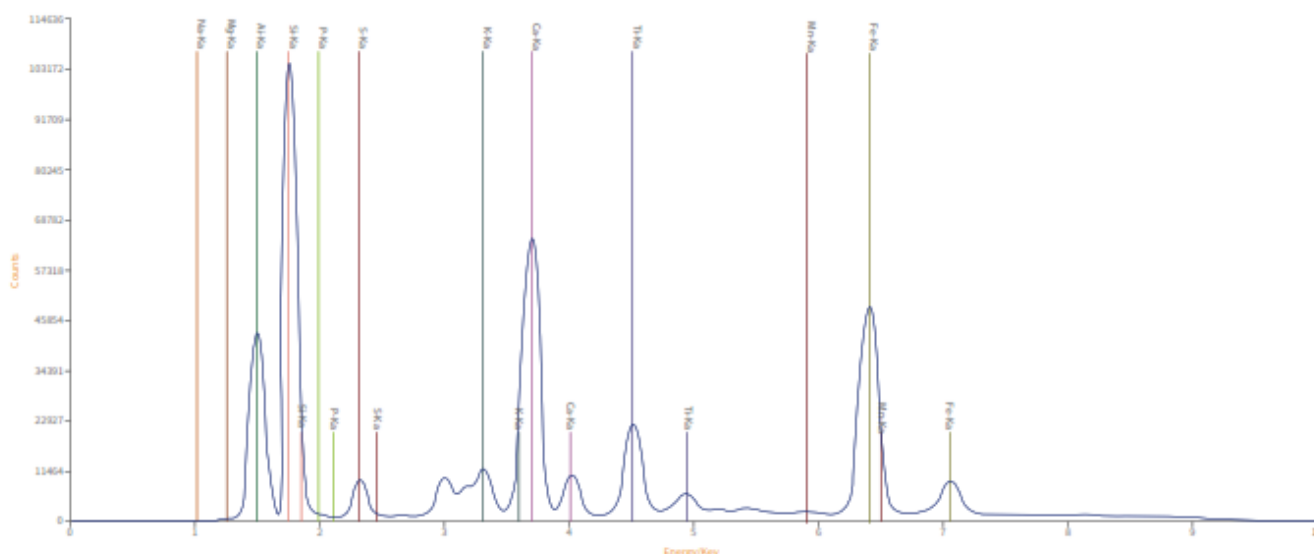


Test instance:

Coal ash analysis is a classic application of ScopeX, The following table shows the test results of coal ash sample. The data shows excellent reproducibility and stability of ScopeX.

Sample	Method	Na ₂ O	MgO	Al ₂ O ₃	SiO ₂	P ₂ O ₅	SO ₃	K ₂ O	CaO	Fe ₂ O ₃
6-1	Coal ash	0.353	0.691	32.606	49.193	0.127	1.246	0.836	5.975	4.838
6-2	Coal ash	0.407	0.659	32.666	49.117	0.127	1.238	0.846	5.932	4.820
6-3	Coal ash	0.361	0.725	32.611	49.152	0.148	1.261	0.847	5.953	4.840
6-4	Coal ash	0.366	0.650	32.687	49.115	0.132	1.247	0.843	5.932	4.835
6-5	Coal ash	0.313	0.666	32.601	49.122	0.153	1.244	0.828	5.973	4.844
6-6	Coal ash	0.341	0.681	32.644	49.163	0.139	1.245	0.824	5.986	4.841
6-7	Coal ash	0.358	0.714	32.660	49.162	0.138	1.254	0.846	5.953	4.843
6-8	Coal ash	0.365	0.725	32.634	49.134	0.127	1.262	0.835	5.942	4.839
6-9	Coal ash	0.282	0.692	32.604	49.241	0.124	1.248	0.839	6.006	4.850
6-10	Coal ash	0.350	0.711	32.635	49.159	0.130	1.249	0.846	5.975	4.831
Mean		0.350	0.691	32.635	49.156	0.135	1.249	0.839	5.963	4.838
SD		0.033	0.027	0.030	0.039	0.010	0.008	0.008	0.024	0.008
RSD		9.533	3.938	0.091	0.079	7.278	0.604	0.972	0.408	0.169
Min		0.282	0.650	32.601	49.115	0.124	1.238	0.824	5.932	4.820
Max		0.407	0.725	32.687	49.241	0.153	1.262	0.847	6.006	4.850
VP		0.125	0.075	0.086	0.126	0.029	0.024	0.023	0.074	0.030

Spectrum of coal ash sample:



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HPLC Servicing :HPLC Servicing : We have team of service engineers who can attend to any make of HPLC promptly @the most affordable cost.

Trainings :We also take up preventive Maintenance to reduce downtime of HPLC's Trainings.

AMC's/CMC :AMC's/CMC :We offer user training both in-House and at customer sites on HPLC principles, operations, trouble-shooting.

Validations :Validations :We have protocols for carrying out periodic Validations as per GLP/GMP/USFDA norms.

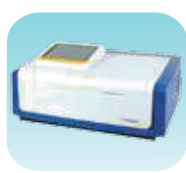
Instruments :Instruments :We offer instruments/Renting Services Modules like pumps,detector etc. on Rent.



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system

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