X-ray Fluorescence Analyzer | ATX3650

Feature

- Excellent performance, high speed, good precision and high efficiency
- Short test analysis time (simultaneous and accurate analysis of dozens of elements from 11 sodium (Na) to 92 uranium (U) within 1-120 seconds)
- The self-developed SES signal processing system (digital multi-channel) is used to effectively improve the peak-to-background ratio and make the measurement more accurate.
- Optimize the integrated heat dissipation design, so that the heat dissipation performance of the whole machine is greatly improved, and the operation safety of the X-ray source is ensured
- Multiple radiation protection design, radiation protection level belongs to the highest level of similar products
- Choose a vacuum system, optimize the test environment, and improve the analysis accuracy of light elements such as magnesium, aluminum, silicon, phosphorus and sulfur
- The unique movement temperature monitoring technology ensures the safe and reliable operation of the radiation source, effectively prolongs its service life and reduces the cost of use

Application

- Non-ferrous metals
- Black metal
- Beneficiation and smelting
- Geological industry

Description

The ATX3650 is an X-ray fluorescence analyzer that uses X-ray fluorescence spectroscopy. With the continuous promotion of X-ray fluorescence spectrometry analysis technology, the use of X-ray fluorescence spectrometer analysis and detection has become the main means of quality control in many industries.

ATX3650 X-ray fluorescence analyzer is a high-end analytical instrument specially customized for non-ferrous metals, ferrous metals, beneficiation and smelting, and geological industries. This product is elegant and beautiful in appearance, sturdy and durable, and has multiple safety protection modes. Equipped with a collimating filter system, the software can automatically switch to meet various test applications. At the same time, we use self-developed SES signal processing system, multi-dimensional cooling system, radiation safety system, vacuum system and other technologies to ensure the safety, stability and accuracy of products.

ATX3650 software integrates various analysis methods such as empirical coefficient method, theoretical alpha coefficient method, linear fitting, quadratic curve, intensity correction, content correction, etc., to fully guarantee the accuracy of test data.

1. Parameter

ATX3650	
Element range	From Sodium (Na) to Uranium (U)
Detection	Powders, solids, liquids
Concentration Range	ppm-99.99% (different elements, different analysis ranges)
Elemental analysis	Dozens of elements from sodium (Na) to uranium (U) can be measured at one time
Optimal Resolution	129eV±5eV
Optimal Accuracy	RSD≤0.1% (national standard sample)
Analysis Time	Adjustable single test time
Cooled	Electrically cooled without any consumables
Large sample chamber size	400mm x 340mm x 80mm
Vacuum sample chamber size	Ø100mm×h75mm
Detector	Amptek Silicon Drift SDD Probe
X-ray tube	Maximum power 50W, tube voltage 5-50KV, tube current 0-1000uA; long life X-ray tube
High voltage power supply	Maximum power 50 W, voltage 0-50 KV, current 0-1000uA. 8 hours stability≤0.05%
Signal processor	Adapt to high resolution and high count rate, self-adjusting magnification, maximum number of channels: 4096
Working power supply	AC 220V ±5V、50Hz
Work environment	Room temperature 15~30°C, relative humidity ≤80% (non-condensing)
Dimension	700mmx510 mmx336mm
Weight	≤56KG (Including battery)

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2. Product application：

The ATX3650 X-ray fluorescence analyzer can analyze the following samples and elements (oxides):

Sample Category	Element Category
Sinter/pellet	TFe, Si, Ca, Mg, Al, Mn, Ti, P, S, K, V, etc.
Blast slag/converter slag	TFe, Si, Ca, Mg, Al, Mn, Ti, P, S, K, V, etc.
Refining slag	Al, Ca, Si, Mg, Fe, Ti, etc.
Pre-melt slag	Ca, Mg, Al, Si, Fe, P, S, etc.
Calcium aluminate	Si, Al, Fe, Ca, Mg, etc.
Calcium ferritate	Fe, Al, Ca, Si, S, P, etc.
Manganese-rich slag	Mn, Fe, P, S, Si, Al, Ca and other elements
Iron concentrate/iron ore	TFe, Si, Ca, Mg, Al, Mn, Ti, P, S, K, V, etc.
Hematite/Magnetite	TFe, K, Na, S, P, Al, Si, Mg, Ca, Mn, Zn, Cu, Ti, etc
Lead-zinc ore	Pb, Zn, Ag, Cu, Sn, Fe, S, Cd, Mo, As, etc
Manganese ore	Mn, Si, P, S, Al, Ti, K, Zn, Ca, Mg, etc
Titanium ore	Ti, Mn, Fe, Si, P, S, Al, K, Zn, Ca, V, Cu, Mg, etc
Copper mine	Mn, Fe, S, Cu, Pb, As, Au, Cd, Zn, Ag, Mg, etc
Chromite	Fe, P, S, Al, Cr, Ca, Mg, Si, etc
Refractory	High-silicate clay, Si, Al, Fe, Ca, Mg, K, Na, S, P, etc High-aluminum bauxite Al, Fe, Ti, Na, K, Mn, Ca, Mg, Si, P, etc Mg, Ca, Si, Al, Fe, etc
Corundum	White corundum Al, Na, Si, Ca, Fe, etc Brown corundum Al, Si, Ti, Fe, etc Black corundum Al, Si, Ti, Fe, etc Chromium corundum Al, Na, Cr, Fe, etc Zirconium corundum Zr, Si, Al, Na, Fe, Ti, Ca, Mg, K, etc
Cement raw material /clinker	Si, Al, Fe, Ca, Mg, K, Na, S, Cl-, etc
Limestone	S, P, Al, Si, Fe, Ti, Mn, Sr, Ca, Mg, etc
Dolomite	S, P, Al, Si, K, Na, Fe, Ti, Mn, Sr, Ca, Mg, etc
Wollastonite	Si, Ca, Fe, Al, Ti, Mg, etc
Serpentine	Mg, Si, K, Na, Ca, Fe, Ti, Mn, Al, S, P, etc
Mullite	Al, Si, Fe, Ti, Ca, Mg, K, Na, etc
Magnesium aluminum spinel	Al, Mg, Ca, Si, Na, Fe, etc
Fluorite	Ca, P, S, Si, Al, Fe, Mg, Ti, Mn, K, Na, etc
Coal gangue	Si, Al, Fe, Ca, Mg, Ti, P, V, and, etc
Quartz sand	Zr, Si, Fe, P, S, Al, Ti, etc
Rutile	Ti, S, P, Fe, Nb, Ta, Cr, Sn, etc

Garnet	Ca, Mg, Fe, Mn, Al, Cr, etc
Pig iron	Elements of Si, Mn, P, S, Ti, Cr, V, etc
High manganese pig iron	Fe, Mn, P, S, Si, Cr, etc
Ferrosilicon alloys	Al, Si, Ca, Na, Mg, P, S, Fe, Cr, Mn, Cu, Ba, etc
Silicon manganese alloy	Mn, P, S, Si, etc
Silicon zirconium alloy	Si, Ca, Al, Ba, ZR, Mn, etc
Silicon aluminum barium calcium	Si, Al, Ba, Ca, etc
Barium silicon calcium / calcium silicon / barium silicon	Si, Ba, Ca, Ba, Fe, etc
Ferro-nickel	Ni, Mn, Si, Cu, Co, Cr, V, S, P, etc
Ferrovanadium	V, Mn, Si, P, S, etc
Ferrochrome	Cr, Si, P, S, V, Fe, Mn, Ti, etc
Ferromanganese	Mn, Si, P, S, Cr, Ni, V, Fe, etc
Ferrobium	Nb, Al, Si, S, P, etc
Smelter lead	Pb, Sb, Sn, Bi, Fe, Si, Ca, S, etc
Electrolytic manganese	Elements of Mn, S, P, etc
Tin slag	Sn, Fe, Si, Ca, etc
Vanadium slag	V, Mn, Cr, Ti, Ca, Si, etc
Glass	Si, Al, Fe, Ca, Mg, K, Na, etc
Fly ash (thermal power plants)	Si, Al, Fe, Ca, Ti, Mg, K, Na, S, Mn, etc
Nodularizer (rare earth magnesium silicon alloy)	Mg, RE, Si, Ca, Al, etc
Inoculant	Si, Ba, Ca, Al, etc
Creeping agent	Mg, Re, Ca, Si, Al, etc
Covering agent	Ca, Si, Mg, Al, Fe, etc
Tube mold powder	Si, Ca, Al, Ba, ZR, Mn, etc
Slag remover	Ca, Si, Al, etc
Sintered flux	Si, Ti, Ca, Mg,, Al, Mn, S, P, etc
Brazing powder	Ti, Zr, Ni, Cu, Ag, Zn, Sn, Si, Mn, Ni, Cr, P, etc
Alumina	Si, Fe, Ca, Mg, etc
Industrial silicon	Al, Ca, Fe, Ti, Mn, Ni, etc
SCR denitrification catalyst	Ca, Na, K, As, W, V, etc
Soil heavy metals	Pb, As, Cd, Hg, Cu, Ni, Zn, Cr, etc

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3. Packing List

NO	Goods	Number	Optional
1	Digital multichannel SDD detector	1	Standard
2	X-ray source	1	Standard
3	High voltage power supply	1	Standard
4	SNR Electronic wiring system	1	Standard
5	Optical path enhancement system	1	Standard
6	8 collimators + 5 filters	1	Standard
7	Digital multichannel analyzer	1	Standard
8	Evacuation systems	1	Standard
9	Brand inkjet printers	1	Standard
10	Branded computers	1	Standard
11	X fluorescence full-element analysis software	1	Standard
12	Sample cup, fuse	1	Standard
13	Spectroscopic regulated power supply (optional)	1	Optional
14	Spectroscopic special grinder (optional)	1	Optional
15	Spectroscopic special melting machine (optional)	1	Optional
16	Spectroscopic special mill (optional)	1	Optional
17	Melted platinum crucible (optional)	1	Optional
18	Spectrometer special tablet press (optional)	1	Optional