

X-Ray Energy Reference



H Hydrogen 1																		He Helium 2					
Li Lithium 3	Be Beryllium 4																	B Boron 5	C Carbon 6	N Nitrogen 7	O Oxygen 8	F Fluorine 9	Ne Neon 10
Na Sodium 11	Mg Magnesium 12																	Al Aluminum 13	Si Silicon 14	P Phosphorus 15	S Sulfur 16	Cl Chlorine 17	Ar Argon 18
K Potassium 19	Ca Calcium 20	Sc Scandium 21	Ti Titanium 22	V Vanadium 23	Cr Chromium 24	Mn Manganese 25	Fe Iron 26	Co Cobalt 27	Ni Nickel 28	Cu Copper 29	Zn Zinc 30	Ga Gallium 31	Ge Germanium 32	As Arsenic 33	Se Selenium 34	Br Bromine 35	Kr Krypton 36						
Rb Rubidium 37	Sr Strontium 38	Y Yttrium 39	Zr Zirconium 40	Nb Niobium 41	Mo Molybdenum 42	Tc Technetium 43	Ru Ruthenium 44	Rh Rhodium 45	Pd Palladium 46	Ag Silver 47	Cd Cadmium 48	In Indium 49	Sn Tin 50	Sb Antimony 51	Te Tellurium 52	I Iodine 53	Xe Xenon 54						
Cs Cesium 55	Ba Barium 56			Hf Hafnium 72	Ta Tantalum 73	W Tungsten 74	Re Rhenium 75	Os Osmium 76	Ir Iridium 77	Pt Platinum 78	Au Gold 79	Hg Mercury 80	Tl Thallium 81	Pb Lead 82	Bi Bismuth 83	Po Polonium 84	At Astatine 85	Rn Radon 86					
Fr Francium 87	Ra Radium 88	57-71																					
		La Lanthanum 57	Ce Cerium 58	Pr Praseodymium 59	Nd Neodymium 60	Pm Promethium 61	Sm Samarium 62	Eu Europium 63	Gd Gadolinium 64	Tb Terbium 65	Dy Dysprosium 66	Ho Holmium 67	Er Erbium 68	Tm Thulium 69	Yb Ytterbium 70	Lu Lutetium 71							
		89-103																					
		Ac Actinium 89	Th Thorium 90	Pa Protactinium 91	U Uranium 92	Np Neptunium 93	Pu Plutonium 94	Am Americium 95	Cm Curium 96	Bk Berkelium 97	Cf Californium 98	Es Einsteinium 99	Fm Fermium 100	Md Mendelevium 101	No Nobelium 102	Lr Lawrencium 103							

K _{α1}	K _{α2}
Ag	
L _{α1}	L _{α2}

Key to Energy Values



Requires Silicon Drift Detector (SDD) for metal alloys

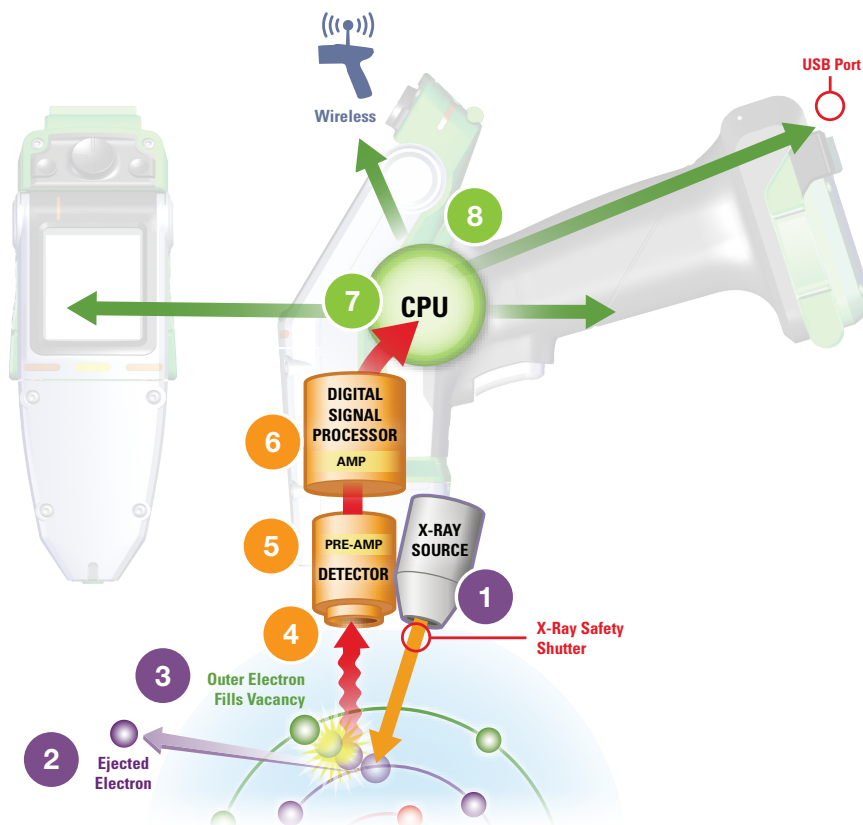


Requires Silicon Drift Detector (SDD) for mining & minerals mode






Thermo Scientific™ Niton™ Handheld XRF Analyzers

How does XRF work?

- 1 X-rays are produced by the analyzer and pointed at a sample surface.
- 2 The energy causes inner-shell electrons to be ejected.
- 3 Outer-shell electrons fill the vacancies left by the ejected electrons and fluorescent x-rays are emitted.
- 4 The fluorescent x-rays enter the detector and send electronic pulses to the preamp.
- 5 The preamp amplifies the signals and sends them to the Digital Signal Processor (DSP).
- 6 The DSP collects and digitizes the x-ray events and sends the spectral data to the main CPU for processing.
- 7 The CPU analyzes the spectral data to produce detailed composition analysis.
- 8 Composition data and other grade or value identification are displayed and stored in memory for later recall or download to an external PC.



The right analyzer for your application

-  Metals
-  Precious Metals
-  Mining
-  Soils
-  Consumer Goods

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