

Common Target Materials

Material	At. #	K α 1 (Å)	K α 2 (Å)	Char Min (keV)	Opt kV	Advantages (Disadvantages)
Cr	24	2.290	2.294	5.98	40	High resolution for large d-spacings, particularly organics (High attenuation in air)
Fe	26	1.936	1.940	7.10	40	Most useful for Fe-rich materials where Fe fluorescence is a problem (Strongly fluoresces Cr in specimens)
Co	27	1.789	1.793	7.71	40	Useful for Fe-rich materials where Fe fluorescence is a problem
Cu	29	1.541	1.544	8.86	45	Best overall for most inorganic materials (Fluoresces Fe and Co K α and these elements in specimens can be problematic)
Mo	42	0.709	0.714	20.00	80	Short wavelength good for small unit cells, particularly metal alloys (Poor resolution of large d-spacings; optimal kV exceeds capabilities of most HV power)