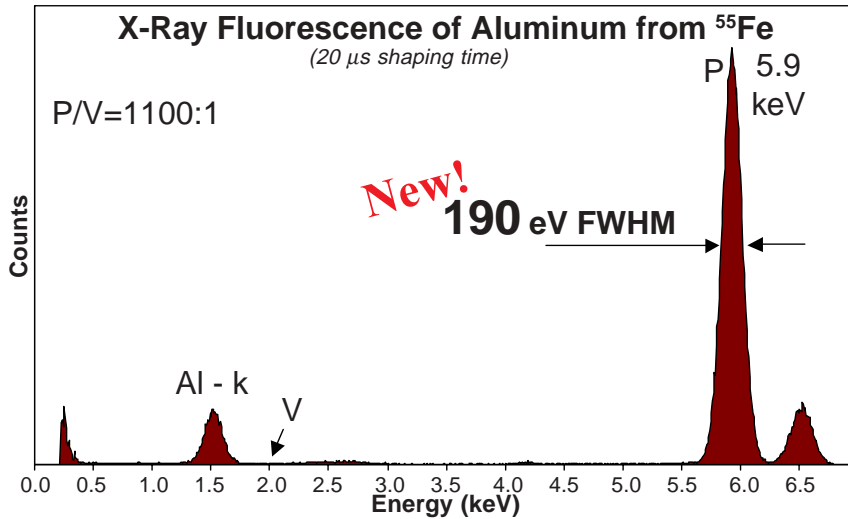


25 mm² x 500 μm X-Ray Detector

XR-100CR

25 mm² x 500 μm X-Ray Detector

Big Area - 25 mm²
Thick Detector - 500 μm



The XR-100CR 25 mm² x 500 μm Si-PIN thermoelectrically cooled detector is the latest addition to Amptek's successful line of X-Ray detectors that have revolutionized the industry.

With a large 25 mm² detection area and the high efficiency of 500 μm thickness, this detector system combines high performance and practical, cost effective solutions to many applications.



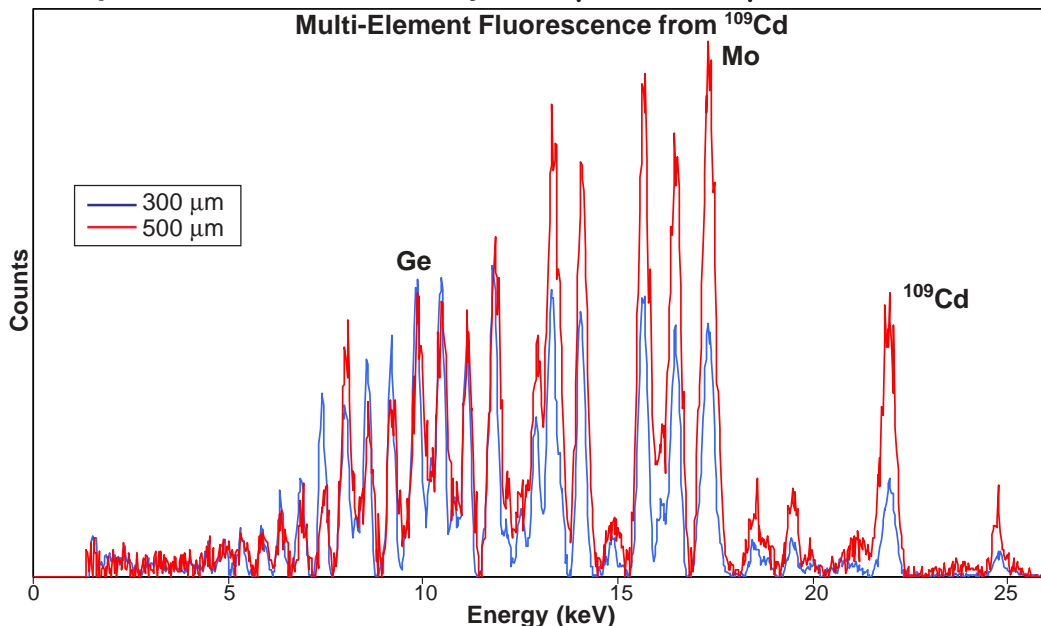
Features

- Large Area – 25 mm²
- High Efficiency – 500 μm thick
- 190 eV FWHM Resolution @ 5.9 keV
- No Liquid Nitrogen
- Internal Silver (Ag) Collimator

Applications

- X-Ray Fluorescence
- OEM and Process Control
- Research and Teaching
- Nuclear Medicine
- Environmental and Nuclear Plant Monitoring

Amptek XR-100CR Efficiency: 300 μm vs. 500 μm Si-PIN Detector

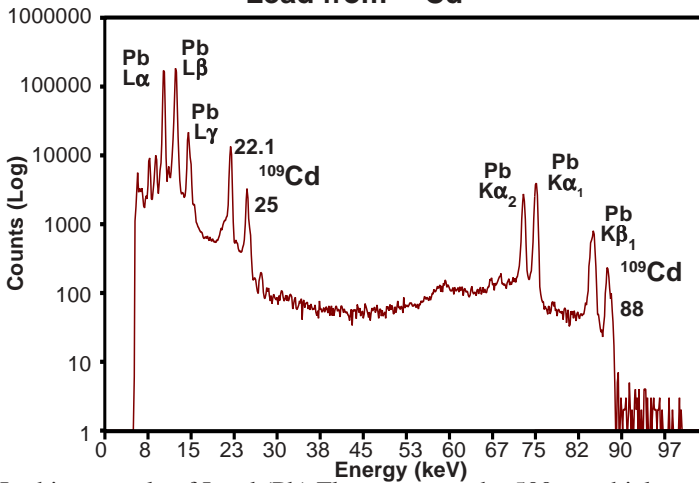


Comparison of the standard XR-100CR 7 mm² / 300 μm detector to the new 25 mm² / 500 μm detector. The spectra show the increased efficiency of the 500 μm detector at the higher elements.

*All spectra taken with Amptek MCA8000A Multichannel Analyzer
For full system specifications, please see XR-100CR*

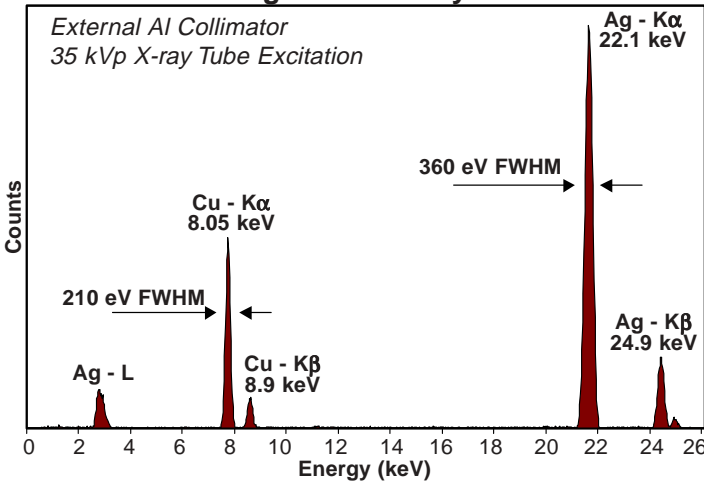
XR-100CR 25 mm² x 500 μm Typical Applications

X-Ray Fluorescence of Lead from ¹⁰⁹Cd



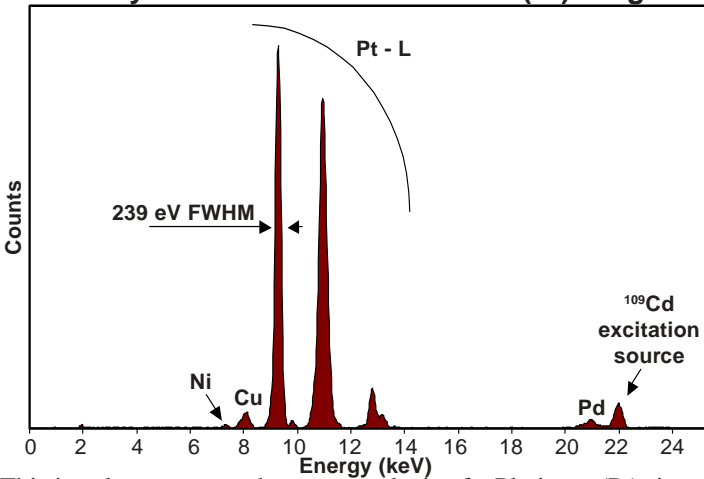
In this example of Lead (Pb) Fluorescence, the 500 μm thick detector enables detection of both the K and L lines.

X-Ray Fluorescence of Ag and Cu Alloy



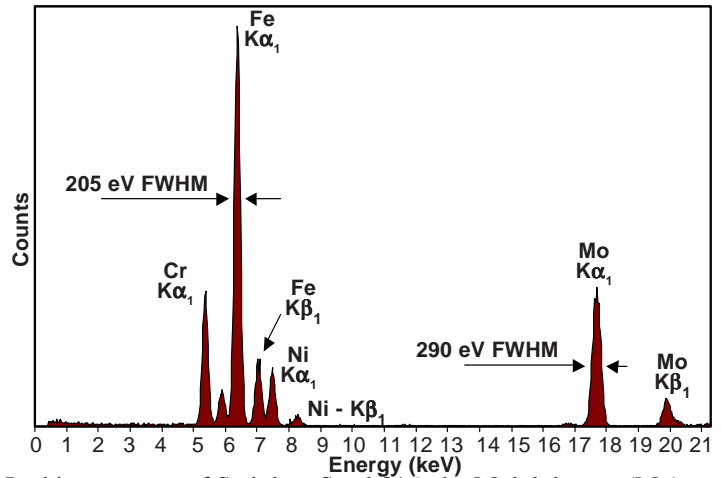
This spectrum of Silver (Ag) and Copper (Cu) was taken with an external Al collimator and a 35 kVp X-ray tube

X-Ray Fluorescence of Platinum (Pt) Ring



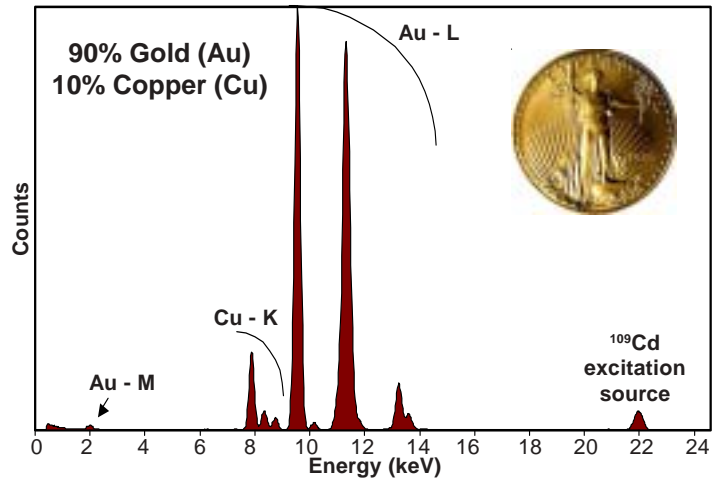
This jewelry spectrum shows an analysis of a Platinum (Pt) ring containing Copper (Cu), traces of Nickel (Ni) and Palladium (Pd).

X-Ray Fluorescence of Stainless Steel 316 from ¹⁰⁹Cd



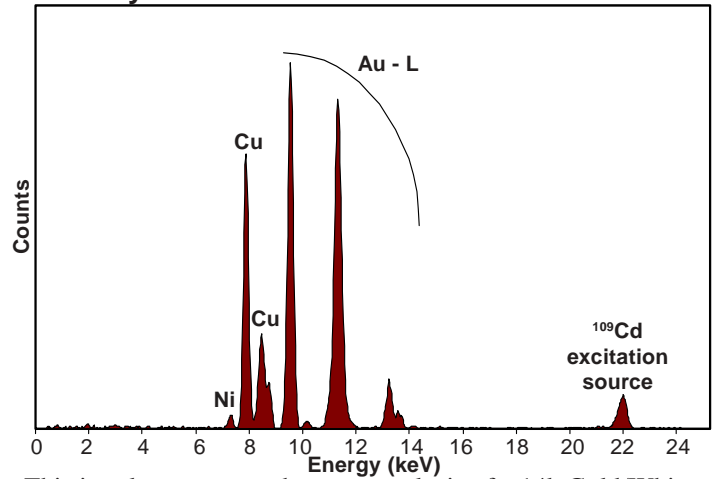
In this spectrum of Stainless Steel 316, the Molybdenum (Mo) peak is prominently shown due to the high efficiency of the detector.

X-Ray Fluorescence Analysis of St. Gaudens Gold Coin



This XRF analysis of a Saint Gaudens US \$20 gold coin shows 90% Gold (Au) and 10% Copper (Cu).

X-Ray Fluorescence of Gold Chain from ¹⁰⁹Cd



This jewelry spectrum shows an analysis of a 14k Gold/White Gold (Au) chain containing Copper (Cu) and Nickel (Ni).

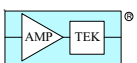
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