



BRIMSTONE™ TENDER X-RAY SPECTROMETER

The BRIMSTONE™ is a powerful, desktop-sized tender x-ray spectrometer. Using an innovative fully-dispersive geometry, this patent-pending instrument quickly records synchrotron-quality x-ray emission (high-resolution XRF). The BRIMSTONE™ excels in tender x-ray applications such as sulfur and phosphorus speciation studies. The BRIMSTONE-GBX™ integrates this spectrometer with a research-grade controlled-gas glovebox, enabling measurements of air-sensitive samples and syntheses.

PRODUCT SPECIFICATIONS

Energy range	2-5 keV
Energy resolution	Typically 0.5 – 1.5 eV
Bragg angle range	Standard operations 50 – 80 degrees.
Effective Flux	10 ¹¹ /s – 10 ¹³ /s for 5 x 5 mm ² samples
X-ray tube	50- or 100- W XRF-style, air-cooled tube with choice of anode materials. 25 kV maximum accelerating potential.
X-ray analyzer	Cylindrically-bent crystal analyzers (CBCAs) with 10-20-cm radius of curvature.
Detector	Designed to work with the small pixel-size of the <i>easyXAFS</i> kromo-TX1™ x-ray camera.
Sample turret	Available with a motorized, multi-sample turret for programmable studies comparing several samples with reference standards.
Sample environment	Immediate sample environment is either vacuum or 1 bar He. Can be adapted for in-situ cells.
Software	Python-based platform.
Required utilities	Runs off standard wall voltage, or can be battery powered for field work.
Timeline	Delivery 15 weeks ARO.

