



SciAps X-550 Enviro/HUD Specifications

Simply the best handheld XRF ever made

- Fastest lead paint tests: Test in 2-6 seconds, and never lose speed over time.
- Highest levels of lead-paint accuracy: No substrate corrections, no inconclusive ranges or tests, even for action levels as low as 0.5 mg/cm².
- Lowest Soil Detection limits: Single-digit ppm detection limits for most RCRA and Priority Pollutant metals.
- Premium X-ray hardware for fast, precise results

The SciAps X-550 Enviro/HUD sets a new performance standard for environmental analyzers. The X-550 Enviro/HUD is the only XRF currently in production that can perform multi-element soils analysis, multi-element RoHS analysis on consumer products, and has published HUD PCS sheets at 0.5, 0.7, and 1.0mg/cm² action levels for lead paint analysis. It features the latest X-ray tube and detector technology to deliver the fastest and most accurate soil and lead paint results. It also eliminates the radioactive isotopes. That means no isotope replacement costs, isotope disposal costs, or regulatory and financial burden for owning and tracking radioactive materials.

The X-550 Enviro/HUD is for operators who want to perform soil testing, RoHS, or other environmental testing for EPA Priority Pollutant and RCRA metals as well as residential or commercial lead paint assessments. This X-ray tube combined with highly optimal internal geometry yields fast, precise results even on the hardest elements to measure with handheld XRF. Low weight, with fast testing means you can use the analyzer all day long while minimizing fatigue and processing more samples than ever before.



The X-550 utilizes a miniaturized X-ray tube, rugged Au x-ray tube (50 kV, 200 uA, 5 W) and high resolution, high count rate silicon drift detector (25 mm² SDD, 135 eV at 5.95 Mn Kalpha line, at > 90% live time, 250k cps) for fast and precise analysis of soil and other non-alloy sample types. With three separate beam settings, Soil mode provides super low detection limits from P to Pb. Analyzer also features protective mesh covering SDD detector. This design virtually eliminates accidental detector punctures.

Soil Environmental App:

Elements Included: Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, As, Se, Sr, Rb, Zr, Mo, Hg, Tl, Pb, Ag, Cd, Sn, Sb, Ba.

Includes the 8 RCRA metals (As, Ba, Cd, Cr, Pb, Hg, Se, Ag) and 12 of the 13 EPA Priority Pollutant Metals (8 RCRA's plus Sb, Cu, Ni, Tl, Zn) [excludes beryllium].

HUD Lead Paint App:

PCS App, for automatic testing fully in compliance with the PCS. In this setup the analyzer automatically terminates testing as soon as the lead level is above or below the Action Level (usually 1.0 mg/cm²) with 95% confidence.

For more information, or to schedule a demonstration:

Eastern Solutions, LLC

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SciAps X-550 Enviro/HUD Specifications

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| Weight | 2.98 lbs. with battery. |
| Dimensions | 8.5" x 9.5" x 2.4" |
| Excitation Source | 5 W X-ray tube 50 kV, 200 uA Au |
| Detector | 20 mm ² silicon drift detector (active area), 140 eV resolution FWHM at 5.95 Mn K-alpha line. |
| Available Apps | Environmental, HUD PCS Lead Paint |
| X-ray Filtering | 6 position filter wheel for beam optimization |
| Environmental Temperature Range | 10° F to 130° F at 25% duty cycle. |
| Analytical Range | Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, As, Se, Sr, Rb, Zr, Mo, Hg, Tl, Pb, Ag, Cd, Sn, Sb, Ba. Includes the 8 RCRA metals and 12 of the 13 EPA Priority Pollutant Metals (excludes beryllium). |
| Processing Electronics and Host Processing | 1.2 GHz quad ARM Cortex A53 64/32-bit; RAM: 2 GB LP-DDR3; Storage: 16 GB eMMC (storage). |
| Pulse Processor | 12 bit with digitization rate of 80 MSPS 8K channel MCA USB 2.0 for high-speed data transfer to host processor. Digital filtering implemented in FPGA for high throughput pulse processing, 20 nS - 24 uS peaking time. |
| Power | On-board rechargeable Li-ion battery, rechargeable inside device or with external charger, AC power, hot-swap capability (60 s max swap time). |
| Display | 2.7-inch color capacitive touchscreen — 400 MHz Qualcomm Adreno 306 2D/3D graphics accelerator. |
| Comms/Data Transfer | Wi-Fi, Bluetooth, USB connectivity to most devices, including SciAps Profile Builder PC software. |
| Calibration | Fundamental parameters. For Geochem and Environmental Soil apps, users may also choose "Compton Normalization" method and/or use empirically derived calibrations. Linear or quadratic lead calibration with absorption and depth corrections. |
| Calibration Check | External 316 stainless check standard for calibration verification and energy scale validation. |
| Grade Library | Standard library contains 500+ grades, no practical size limit. Multiple libraries supported, grades may be added on analyzer or via PC software package (Profile Builder) |
| Security | Password protected usage (user level) and internal settings (admin). |
| Dual Cameras | Internal high-resolution camera for sample viewing, welds, etc. Macrocamera for photo documentation, reading and storing 2D/3D barcodes and QR codes. |
| Regulatory | CE, RoHS, USFDA registered, Canada RED Act. |