



SciAps X-555 for Geochemistry

The most powerful handheld XRF ever made

- 55 kV operation for superior LODs
- Durable aerospace-grade aluminum frame weighs less than 3 lbs. with battery
- Outstanding thermal dissipation

World's only
pXRF
optimized for rare
earth elements



Now measure lithium in the field!

SciAps One Box adds the power of LIBS to measure light elements not possible with XRF, including Li, C, Be, F, Na.

The latest version of SciAps flagship X-500 series delivers the most advanced X-ray tube technology available, led by a 55 kV X-ray tube. It's the world's only handheld XRF with this capability, making it the superior choice for measuring rare earth elements.



Fast, precise tests

The 55 kV operation, rather than the industry typical 50 kV, delivers superior performance for critical REEs. The 55 kV X-ray tube is essential to measure all of the light REEs: lanthanum, cerium, praseodymium, neodymium, and samarium; plus heavy REEs: europium, gadolinium, and yttrium. Yttrium can be measured by standard XRF analyzers as well, and is a reliable pathfinder for the family of strategic heavy REEs such as dysprosium, thulium and ytterbium.

- Light REEs: La, Ce, Pr, Nd, Sm; and heavy REEs: Eu, Gd, Y
- Transition/pathfinder elements Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, As, Se, Sr, Rb, Zr, Nb, Mo, Te, Ag, Cd, Sn, Sb, Ba
- Heavy metals Ta, W, Au, Hg, Tl, Pb, Bi, U

55 kV
X-ray tube

A new performance standard

Outstanding heat dissipation allows for high throughput that our customers demand, including core analysis or any application requiring high-volume manual testing. Compatible with third-party data visualization packages including IoGAS, Leapfrog. Add benchtop functionality with SciAps Profile Builder PC software — view calibration curves, generate new ones, build highly customized models for your own elements of interest, overlay and compare spectra and more.

Android platform, SciAps Cloud Services

Familiar Android operating system and app-based software assure quality testing by every operator. Global connectivity with on-board camera Wi-Fi and Bluetooth, with GPS capability for full-featured reporting. Easily manage operations from anywhere with SciAps Cloud Services.



SciAps X-555 Specifications

**The most powerful
handheld XRF
ever made**



SciAps Test Station

A compact, robust, portable platform for easy testing of hand samples, small cores, powders or even liquids prepared into bags or XRF cups. Operates as a fully interlocked, closed-beam system.



Optional **X-500 Series Kickstand.** Available in the SciAps web store under accessories.

Weight	2.98 lbs. with battery
Dimensions	7.25" x 10.5" x 4.5"
Excitation Source	5 W X-ray Tube. Max 55 kV, 200 uA. Au anode
Detector	20 mm ² silicon drift detector (active area), 140 eV resolution FWHM at 5.95 Mn K-alpha line
Available Apps	Soils, RoHS/WEEE, REE, Mining. New apps are added regularly, please check with SciAps for updates.
X-ray Filtering	Six position filter wheel
Environmental Temperature Range	10F to 130F at 50% duty cycle
Analytical Range	36 elements standard, specific elements vary by app. Additional elements may be added upon user request.
Processing Electronics and Host Processing	1.2GHz Quad ARM Cortex A53 64/32-bit, RAM 2GB LP-DDR3, Storage: 16 GB eMMC (storage)
Pulse Processor	12 bit with digitization rate of 80 MSPS 8K channel MCA USB 2.0 for highspeed 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	Wifi, Bluetooth, USB connectivity to most devices, including SciAps ProfileBuilder PC software
Calibration	Fundamental parameters. For Geochem and Environmental Soil apps, users may also choose "Compton Normalization" method and/or use empirically derived calibrations.
Calibration Check	External 316 stainless check standard for calibration verification and energy scale validation
Security	Password protected usage (user level) and internal settings (admin)
Regulatory	CE, RoHS, USFDA registered, Canada RED Act

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