

Portable XRF Solutions for Consumer Safety & Security



- Fast, non-destructive screening for real-time decision making
- Test toys, clothing, ceramics, paint, plastics, metals, electronics, car parts and more for Pb, Hg, Cr, Cd and Br
- Minimizes cost and time of lab analysis
- USB, Bluetooth & Wi-Fi connectivity
- Interactive touchscreen operation
- Battery or AC powered
- Light weight and ready to go



● Consumer Safety

Fast, non-destructive screening of consumer products for heavy metals is essential to our wellbeing. Toys, trinkets, clothing and decorative objects aren't the only products to be tested. Personal care products including nutraceuticals and cosmeceuticals also need to be safe. And, electronics, appliances and automobile components need to be screened prior to repair, reuse or recycling.

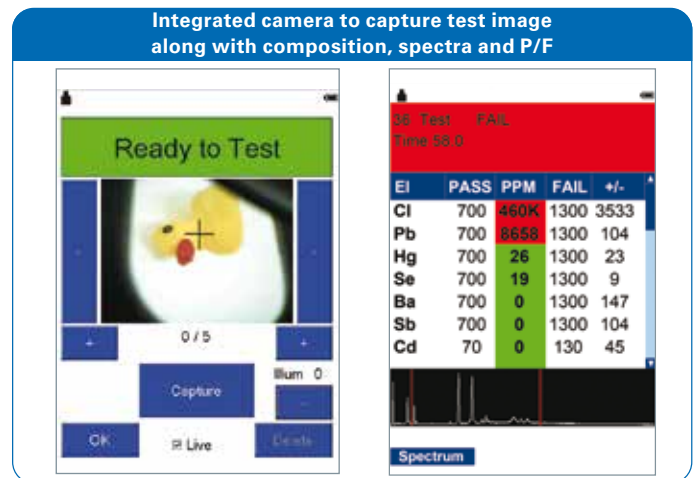
X-ray fluorescence (XRF) spectrometry is a fast, nondestructive screening tool to check for restricted metals such as lead (Pb), mercury (Hg), chromium (Cr), cadmium (Cd) and bromine (Br).

Portable XRF (pXRF) is particularly convenient for safety and quality screening of large volumes of materials and for on-site testing. It can be used anywhere it's needed - on a factory floor, at the shipping or loading dock, in stockrooms, on a store's counter and even at remote border security inspection stations.



Food, Fertilizer & Tobacco Screening:

- Perform quality analysis at critical control (QACC) points of raw materials and finished products as well as during processing
- Perform hazardous analysis at critical control (HACC) points for adulterant contamination
- Analyze food content for heavy metals in milk products



Screen Consumer Products for Safety:

- Quickly and nondestructively screen products for restricted materials such as Pb, Hg, Cr, Cd and Br at levels as low as parts-per-million
- Comply with RoHS Directive and CPSIA/HR4040 for detection of heavy metals in toys and consumer products
- Comply with ASTM F963 Standard Consumer Safety Toy Specification for As, Sb, Pb, Cd, Ba, Cr, Hg and Se
- Comply with Proposition 65 Safe Drinking Water and Toxic Enforcement Act for Pb, Cd, Cr or As
- Comply with TPCB Toxic Packaging Clearing House for Hg, Pb, Cd and Cr
- Screen polymers and plastics for heavy metals
- Test brass plumbing components for lead (Pb)



- **Portable XRF Elemental Analyzers:** *Simultaneously measure elements from sodium (Na) to uranium (U) at concentrations as low as parts-per-million to high percentage levels (depending on the element). Objects of any form – liquid, solid, powder, filter, wipe, chip – can be analyzed wherever they are located.*

Bruker's two handheld XRF spectrometers, the TRACER 5 and the S1 TITAN

are for qualitative and semi-quantitative elemental analysis. They also perform quantitative analysis when utilizing calibrations with like-sample standard reference materials such as heavy metals and other dangerous elements. Results can be given as Pass/Fail/Inconclusive with provided threshold values. They can be configured in desk or bench top stands for laboratory like analysis with a PC.

S1 TITAN Handheld XRF analyzer (Mg to U)



TRACER 5 Handheld XRF analyzer (Na to U)



Bruker's portable Counter Top XRF

is configured for measuring elements from magnesium to uranium in liquids, samples which require preparation, and those best analyzed in a sample cup. The convenient form factor of the CTX is ideal for powders, creams, liquids, fertilizers, plants and other materials of consumer safety concern.

CTX Portable XRF analyzer (Mg to U)



Bruker's portable XRF features

- Rh X-ray tube with high performance SDD detector
- 5 filter wheel (plus manual slot for TRACER 5)
- SharpBeam geometry for high performance, speed and sensitivity
- Small or large spot collimation options
- Interactive Touchscreen operation
- Internal camera (optional for CTX and TITAN)
- Wireless communication (S1 TITAN and TRACER 5 only)
- Battery or AC operation
- Lightweight and supplied with water tight transport case

Portable XRF Solutions for Consumer Safety



Pre-Installed Calibrations Available	Applicable Products	Description	Elements <i>(Request Cal Sheet for LODs and Upper Ranges)</i>
Restricted Materials	S1 TITAN / CTX 600/800 and TRACER 5	Calibration for Low Density Plastics (PE/ABS)	Al, Cl, Ca, Ti, V, Cr, Mn, Fe, Ni, Cu, Zn, As, Se, Br, Cd, Sn, Sb, Ba, Hg, Pb
	S1 TITAN / CTX 600/800 and TRACER 5	Calibration for High Density Plastics (PVC)	Al, Cl, Ca, Ti, Cr, Fe, Cu, Zn, As, Se, Br, Cd, Sb, Ba, Hg, Pb
	S1 TITAN / CTX 600/800 and TRACER 5	Calibration for Mid Density (Soil, Powders, Al, Glass, Ceramics)	Al, Si, Cl, Ca, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, As, Se, Br, Sr, Zr, Nb, Mo, Pd, Ag, Cd, Sn, Sb, Ba, Hf, Ta, W, Pt, Au, Hg, Pb, Bi
	S1 TITAN / CTX 600/800 and TRACER 5	Calibration for Alloys	Al, Si, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, As, Se, Br, Zr, Nb, Mo, Rh, Pd, Ag, Cd, Sn, Sb, Ta, W, Pt, Au, Hg, Pb, Bi
Restricted Metals	S1 TITAN / CTX 300	Calibration for Al, Cu and Sn Solder Regulated Metals	Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, As, Se, Zr, Nb, Mo, Ru, Rh, Pd, Ag, Cd, In, Sn, Sb, Hf, Ta, W, Re, Ir, Pt, Au, Hg, Pb, Bi
Custom calibration	All products	Customer specified	Customer specified calibration
Customization of standard calibration	All products	Customer specified	Customer specified change in standard calibration

Bruker Toolbox Report Generator

- Images, spectra, sample identification, and results are stored in a single protected file for easy storage and access
- Results are available in both protected and unprotected file formats
- The unprotected file format can be imported directly into Excel or other database programs
- Data may be stored in internal memory or a USB flash drive
- Two different PC report generation packages exist - a simple preformatted report and a flexible, user customizable report generator



Optional Hardware



Desktop Stand



Benchtop Stand

Related equipment



M1 MISTRAL™ Tabletop Micro-XRF from Bruker. Although not portable, the MISTRAL is equipped with a high brilliance micro-focus X-ray tube, which is capable of producing a high excitation intensity, even if the smallest available collimator is used to produce a spot size of a mere 100µm. Measurement locations can be pinpointed exactly, using the combination of video microscope and the optional motorized X-Y-Z stage. The M1 MISTRAL is equipped with a large active area silicon drift detector (SDD) for superior speed and energy resolution. The design of the detection and signal processing system warrants maximum efficiency and fast analysis speed. It can detect trace elements in light matrices according to RoHS requirements allowing direct control of hazardous element concentrations in electric and electronic devices.

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