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
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.

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 TPCH Toxic Packaging Clearing House for Hg, Pb, Cd and Cr
• Screen polymers and plastics for heavy metals
• Test brass plumbing components for lead (Pb)

Screen powdered products for heavy metals

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
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.

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.

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
- Battery or AC operation
- Lightweight and supplied with water tight transport case
Portable XRF Solutions for Consumer Safety

Pre-Installed Calibrations Available

<table>
<thead>
<tr>
<th>Restricted Materials</th>
<th>Applicable Products</th>
<th>Description</th>
<th>Elements (Request Cal Sheet for LODs and Upper Ranges)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1 TITAN / CTX 600/800 and TRACER 5</td>
<td>Calibration for Low Density Plastics (PE/ABS)</td>
<td>Al, Cl, Ca, Ti, V, Cr, Mn, Fe, Ni, Cu, Zn, As, Se, Br, Cd, Sn, Sb, Ba, Hg, Pb</td>
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<tr>
<td>S1 TITAN / CTX 600/800 and TRACER 5</td>
<td>Calibration for High Density Plastics (PVC)</td>
<td>Al, Cl, Ca, Ti, Cr, Fe, Cu, Zn, As, Se, Br, Cd, Sb, Ba, Hg, Pb</td>
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<tr>
<td>S1 TITAN / CTX 600/800 and TRACER 5</td>
<td>Calibration for Mid Density (Soil, Powders, Al, Glass, Ceramics)</td>
<td>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</td>
<td></td>
</tr>
<tr>
<td>S1 TITAN / CTX 600/800 and TRACER 5</td>
<td>Calibration for Alloys</td>
<td>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</td>
<td></td>
</tr>
<tr>
<td>Custom calibration</td>
<td>All products</td>
<td>Customer specified</td>
<td>Customer specified calibration</td>
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<tr>
<td>Customization of standard calibration</td>
<td>All products</td>
<td>Customer specified</td>
<td>Customer specified change in standard calibration</td>
</tr>
</tbody>
</table>

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.

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.

Optional Hardware

- Desktop Stand
- Benchtop Stand

Bruker is continually improving its products and reserves the right to change specifications without notice. © Bruker GJS 06-2019. P/N: 040.0101.03.1

Contact Us

www.bruker.com/hhxrf