

Massbox

by EXUM



Massbox provides the data you need to drive business decisions without a full lab's worth of equipment

For more information about **Massbox** please call 720-615-1768, or email info@exuminstruments.com

EXUM is simplifying chemical characterization.

Understanding a material's chemical composition is critical to predicting its performance. Despite its importance, measuring a solid material's chemical components is expensive, difficult, and time consuming. Exum's innovative Massbox can take any solid material and measure the full periodic table of its constituents in minutes. Plus, its intuitive operations and compact package bring high performance outside the traditional laboratory environment.

		EASE OF USE	LIGHT ELEMENTS	METALLIC ELEMENTS	SENSITIVITY	SPEED	CHEMICAL MAPPING	QUANTITATIVE
MASSBOX™		●	●	●	●	●	●	●
Laser Ablation + ICP-MS*				●	●		●	●
ALTERNATIVE METHODS	ICP-MS* liquid intro			●	●			●
	Inert Gas Fusion/Combustion	●	●			●		●
	XRF	●		●		●		●
	SEM-EDX	●	●	●		●	●	

*Inductively Coupled Plasma Mass Spectrometers(ICP-MS) require liquid sample introduction unless combined with Laser Ablation

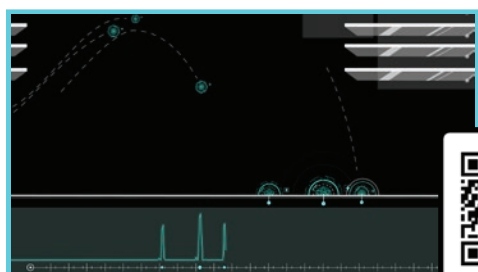
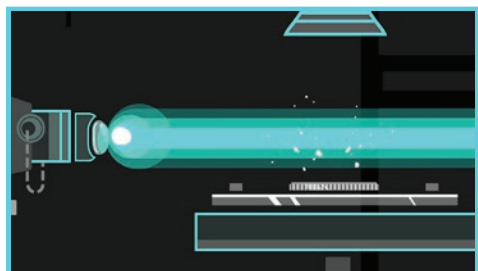
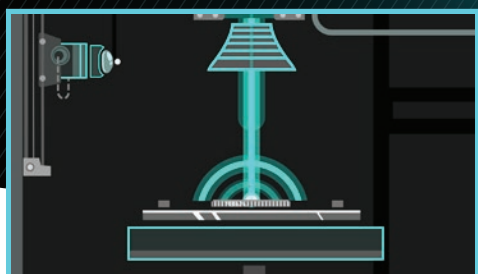
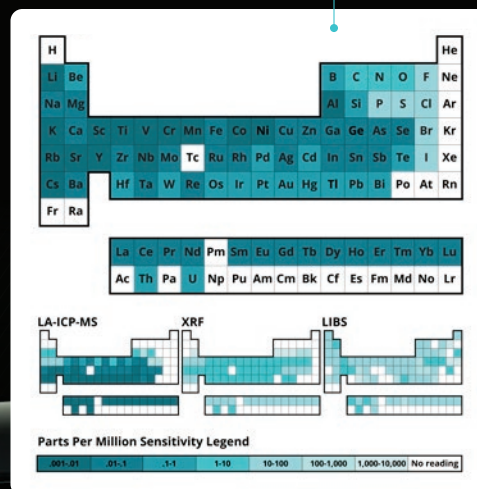
EXUM invites you to meet **Massbox**™

The **Massbox** is the first commercial instrument to use Laser Ablation Laser Ionization Time of Flight Mass Spectrometry (LALI-TOF-MS). It combines Exum's patented LALI technology with industry-leading TOF mass analyzer for rapid, high-sensitivity chemical characterization. Until now, no single instrument offers:

- + Trace-level detection for nearly the entire periodic table (lithium to uranium), including nonmetals
- + Chemical mapping up to an 83-mm by 83-mm area with 5–200-micron resolution
- + Depth profiling of less than 100 nm per laser shot
- + High vacuum environment after the sample is loaded

Massbox enables users to:

- + Rapidly test up to 16 solid samples (or pressed powders) in a single session
- + Inspect coatings, plating, surface treatments, and corrosion
- + Verify feedstock material quality (virgin and recycled)
- + Accelerate new material development
- + Analyze failures for chemical non-conformity
- + Reverse engineer unknown materials
- + Investigate impurities and identify counterfeits
- + Reveal elemental distributions spatially, and in-depth



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Let's explore how **Massbox** can bring value to your organization.

Massbox combines the innovative laser ablation laser ionization technique with industry leading time of flight mass spectrometry into one intuitive instrument. Please scan this code to view our explainer video.