

Which Alloy Analyzer is Right for Your Operation?

Laser Based



X-Ray Based



SciAps is proudly represented in Australia and New Zealand by AXT Pty. Ltd.
1/3 Vuko Pl., Warriewood
NSW 2102 Australia
T. +61 (0)2 9450 1359 F. +61 (0)2 9450 1365
W. www.axt.com.au E. info@axt.com.au



LIBS

Laser-based alloy sorting ... works on all types of alloys. Best performance on Al, Mg alloys and red metals. Measures Li, Be, B, C and X-ray can't. **No radiation hassles. No badges. No inspections.**

Dual-burn Technology: The Z analyzes with air-burn and argon purge – choose the approach that best suits your needs. **Argon purge delivers 10x** or more precision improvement compared to air burn.

No Sample Grinding: Z's 50 Hz "burst cleaning" burns away surface materials, yielding accurate results on clean or dirty material. Eliminate operator guesswork about grinding and how much. **Z's patented cleaning approach is the best of any laser unit.**

Keep your proprietary data proprietary: ProfileBuilder desktop/tablet software lets users modify and create new calibrations or grades. Ideal for proprietary alloy producers. **Safety:** The Z's patent-pending sample sensor allows you to operate the Z under Class 1 conditions. **Smallest, lightest, fastest** high-performance LIBS unit. **Android-based** for easy upgrades and defying obsolescence, onboard camera, WiFi and GPS.

Why dual-burn technology? Ask any spark OES user. Argon purge delivers 10x or better precision than air burn. You can identify more alloy grades that have tighter specs, with argon. And argon is essential for obtaining good chemistry on ferrous and high temp alloys. For many basic alloy sorting and ID applications, air burn is good enough especially with the Z's most powerful laser. Why give up the flexibility of both options in one analyzer? The Z is the only LIBS unit that offers both.



Z – The Premier Handheld Laser Technology

No Grinding!



X-ray

X-ray based alloy sorting ... works on all types of alloys. Ultra small, lightest weight, fastest X-ray analyzer. **Best technology for stainless and high temps.** Better than laser for stainless and high temp turnings, **Totally shielded detector to avoid punctures.**

Why the X? The users of X-ray demanded a new generation of X-ray analyzer. From user's input and our decades of experience with XRF, we delivered what they wanted: First and foremost exceptional ergonomics. This meant minimal weight, a small, well-balanced analyzer, and exceptional speed to minimize test time and maximize productivity. Weighing **barely 3 lbs**, it offers blinding speed, and can be used all day long without fatigue.

A vibrant display. We also added a large, easily viewed display in all lighting conditions. The X leverages the latest 5" Smartphone display technology

The latest x-ray tube and detector technology: The X delivers exceptional count rates, high resolution (135 eV FWHM), and nearly 100% live time, guaranteeing the fastest, most precise chemistry and grade.

Aluminum alloys?

The X is the fastest XRF available for dual beam Al alloy measurements. While not nearly as fast or accurate as laser, it's still the best X-ray

Tired of dead detectors? The X features the industry's only dual shield detector technology. A unique impenetrable high speed steel shutter only opens during testing, combined with a carbon fiber protection grid mounted on the SDD.

Android, App Driven Platform: The X, like the Z, is as easy to use as a Smartphone. The Android-based OS means your software will never be obsolete. And connectivity to printers, other computers via Wifi or Bluetooth is assured.



X – The Premier Handheld X-ray Technology

X&Z run on the same

software platform, operating system (Android App based) and have the same UI, battery, charger and other accessories. Any operator is easily trained for both analyzers. Why is this important? • If you have unexpectedly high demand for high temps, you can use the Z and the X for those crunch times, • If you have a Z, and your x-ray gun of another brand breaks, you can still test your stainless and high-temps with the Z."



SciAps

Product Selection Guide

Which Alloy Analyzer is Right for You?

At SciAps, we want you to have the best possible technology for your alloy testing. This is why we manufacture state-of-the-art laser and X-ray metal analyzers. This guide shows many common alloy analysis applications, and which technology is better.

Laser-based alloy sorting... works on all types of alloys.



- Fast (1-2 sec), precise sorting of many common aluminum alloys that differ mainly by magnesium content. Examples include 1100/6061/6063, 3003/3005/3105, 2014/2024, and cast 356/357.
- Fast (2-3 sec) precise sorting of cast aluminum alloys, also without grinding to avoid silicon smearing. Examples include 319/356/380.
- Required to analyze for new elements in aluminum alloys including lithium, beryllium and boron.
- Faster sorting/analysis of aluminum and silicon bronzes due to fast Al, Si measurements from Laser.
- You are required to measure beryllium (Be) in copper alloys.
- You want to eliminate X-ray radiation devices to reduce regulatory burdens, eliminate the state inspections and radiation badges.
- *X-ray maintenance costs have been a big problem for you, and you want to really cut repair/maintenance costs on your handheld analyzers.
- You want to measure the Al, Si, B, Li, Be or Mg content in stainless, high temp or specialty alloys, or Al, Si and Mg with improved speed and accuracy in these alloys.

X-ray based alloy sorting... works on all types of alloys.



- You are primarily sorting high temp alloys and/or stainless. This is the strength of X-ray.
- You handle a lot of turnings, or mixed turnings, that are primarily stainless or high-temp alloys. Here high-temps refer to nickel, cobalt, titanium and nickel/cobalt super-alloys.
- You are content with sorting aluminum alloys into mixed low coppers (MLC's), and high copper or high copper/zinc (2000's, 7000's), and you want the best possible speed/precision for high-temps and stainless.
- Like the above application, you are content with slower tests (15 s) on aluminum and silicon bronzes/brasses, and you want the best possible speed/precision on high temps and stainless.
- You process a lot of specialty alloys like molybdenum, tungsten based alloys, and speed & precision is essential for these.

A few key points to remember

The SciAps Z analyzes all metal types, whereas the other laser units are focused on aluminum alloys. The SciAps X and Z run on the same software platform, operating system (Android App-based) and have the same UI. Any operator can easily use either technology. The X and Z use the same batteries and charger, so your accessories are always compatible with either technology! Why is this important? • If you have unexpectedly high demand for high temps, you can use the Z and the X for those crunch times, • If you have a Z, and your x-ray gun of another brand breaks, you can still test your stainless and high-temps with the Z.

* A word about x-ray detectors.

If detector replacement costs are driving you away from X-ray, at least take a good look at the SciAps X. The X features a dual shield technology. First there's a high-speed steel shutter. When the analyzer isn't analyzing, the detector is protected by an impenetrable shield. When you shove the analyzer into a barrel of turnings, the shutter remains closed, and the detector protected from those sharp metal pieces. If you're replacing the polymer dirt barrier, the shutter protects the detector from stray finger pokes. What about during testing? The detector is also protected by a carbon fiber mesh, to prevent stray metal pieces from breaking the detector window (unlike laser, X-ray can't measure carbon).



sciaps.com
sales@sciaps.com
+1 339.927.9455