mPulse™

**Grade and Trade: The first handheld LIBS analyser
for ultra fast scrap sorting and alloy identification**

Sort alloys
in seconds

Point   Click   Result!

Rapid / Rugged / Reliable

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The Business of Science®

NEED FOR SPEED

Maximise profits with the **m**Pulse

Grade and sort metal alloys in just 1 second

Point **Click** **Result!**

Oxford Instruments' **m**Pulse is the first handheld LIBS (laser induced breakdown spectroscopy) analyser optimised for the rapid sorting of metal alloys.
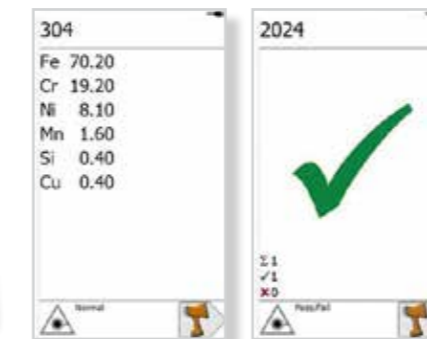
The need for speed

The **m**Pulse enables the user to:

- Identify a wide variety of metal alloys (Aluminium, Copper, Steel, Titanium, Nickel etc) at the press of the trigger
- Measure light elements (eg Be in copper, Al, Si, etc) and heavier elements in only 1 second
- Test large or small samples such as shavings, turnings, granules, cables etc. The laser scans the sample surface and will 'bounce' repeatedly across small samples to optimise the measurement

Rugged

The analysis head is protected by a strong sapphire window recessed in the analyser's nose, safeguarding against the need for costly repairs and preventing contamination of the optics.

Ease of use

- Simple 'point and shoot' analysis. Simply place the **m**Pulse nose against the sample and press the trigger to measure
- Intuitive icon driven user interface
- Large touch screen (4.3") that can be used with gloves on
- Great results visibility, even in direct sunlight
- Grade name, composition, or Pass /Fail results after only 1 second

304		2024
Fe 70.20		
Cr 19.20		✓
Ni 8.10		
Mn 1.60		
Si 0.40		
Cu 0.40		

Battery operated for true handheld use

- Lightweight rechargeable battery pack
- Batteries take only seconds to swap, minimising any interruption to your work
- Up to 250 tests on a single charge

Flexible results storage and transfer

- Results are saved automatically on the mini-USB memory stick provided with the **m**Pulse
- Averaging function for multiple tests across a sample surface

Hassle free: no X-rays

Based on LIBS technique, the **m**Pulse is free from the regulatory constraints usually associated with x-ray analysers

GOT A SECOND

mPulse - the first handheld LIBS analyser

Grade and sort metal alloys in just one second

How does LIBS work?

A diode focuses laser pulses through the **m**Pulse's nose aperture and generates a high temperature micro-plasma on the surface of the analysed alloy sample.

Microscopic particles of the alloy are extracted from the surface into the plasma where they are atomised and energised.

After this excitation, light that is characteristic of the elemental composition of the metal is emitted and analysed within the spectrometer (optics).

The laser is very powerful but is focused on a point on the sample and causes virtually no sample heating around the test area.

Why use an **m**Pulse?

Speed – 1 second test: sort large quantities of material, and turn your scrap into cash fast

Ease of use – minimum user training required

Virtually non-destructive – the very small burn mark on the sample can be wiped with a finger or cloth

Less stringent regulatory requirements than XRF: much easier to integrate into the work routine

Rugged – Optics are protected by a sapphire window to prevent contamination and damage

Light – 1.8kg with battery and balanced for maximum productivity throughout the day

visit **www.oxford-instruments.com/sorted** for more information or email: **industrial@oxinst.com**

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