

SPECTRO **xSORT** XHH04

Handheld ED-XRF Spectrometer



Coatings and Layers
on Metals and Alloys

SPECTRO xSORT

The innovative handheld metal analyzer

Metals and alloys are coated for various reasons. In addition to decorative coatings, there are primarily technical reasons for surface treatments, such as corrosion protection and to achieve improved surface properties.

The SPECTRO xSORT handheld XRF analyzer is a powerful tool for the determination of coatings, in addition to the typical metal and alloy analysis. Its detector technology, based on SDD, enables high signal throughput at high resolution, resulting in unique analytical flexibility and considerably accelerated signal processing. The excitation of the fluorescence radiation in the sample by an X-ray tube has been optimized so that short measurement times with a high sample throughput are possible. Various filters that are already stored as optimal standard parameters in combination with a collimator aperture of 5 mm are used for layer applications. A 3 mm spot is also offered as a standard feature on the SPECTRO xSORT.

With the 5 mm spot size, smaller inhomogeneities can be averaged. With the SPECTRO xSORT it is possible to analyze and identify various layer systems within seconds. The light elements Al, Mg, Si, P and S are also measured.

Optional overview camera — capture images or barcodes / QR codes

Optional GPS for location & documentation

Optional target video camera — test spot images

Shutter for internal component protection (detector and tube). Serves as sample for SPECTRO's unique iCAL (Intelligent Calibration Logic) standardization - for continuous system monitoring and correction so that all installed methods are always ready for use.

High-resolution, high-sensitivity silicon drift detector (SDD)

Connections: WiFi, Bluetooth to network with phone, tablet, PC, notebook, printer

X-ray safety gasket — prevent backscatter radiation from light element matrix samples

Lightweight: 2.97 lb / 1.35 kg (3.52 lb / 1.6 kg with battery)

Long-lasting quick-change battery — up to 300 measurements per hour, for up to 5 hours with 2-second readings (or 90 per hour with 10-second readings)

microSD card slot, USB-C port

Charging port / power supply

Easy-reading 5-inch, high-definition touch display

Extra control buttons for gloved operation



Surface treatment

Important processes for the surface treatment of metals are passivation, phosphating and chromating.

Phosphating and chromating are processes in which the metal surface is treated with a phosphate solution or chromic acid solution and a corresponding phosphate or chromate layer is formed.

Chromate coatings are especially effective against corrosion on galvanized steel and aluminum. In galvanic coatings, metals are applied to the metal surface of a component through an electrolytic process, such as zinc or nickel on steel. A nickel-coated surface results in improved wear resistance.

Common layer systems

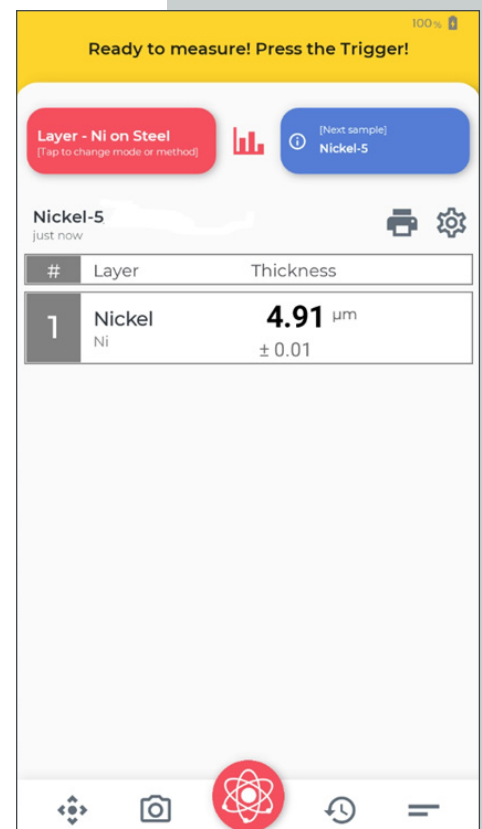
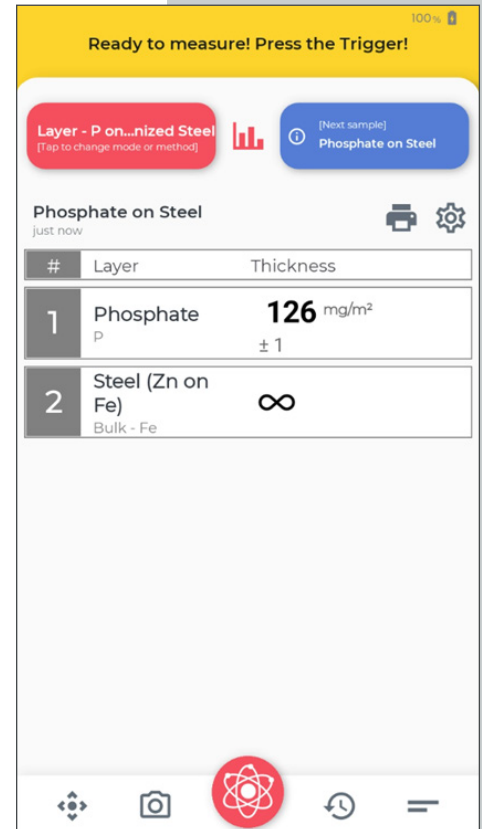
Common layer systems that can be determined with the SPECTRO xSORT include

- Zinc on steel (galvanized)
- Nickel on steel
- Phosphating
- Chromating
- Gold or silver plating
- Rhodium-plated white gold
- Titanium or titanium-zirconium coatings
- and many more

Results processing

The analysis screen provides the operator with all the necessary information at a glance. The analysis results are saved and can be displayed and processed again at a later time.

The powerful XRF Analyzer Mobile operating software and the responsive "Industrial Android" modules offer touch operation, high security, fast access and Windows PC compatibility.



SPECTRO xSORT

grab one and go



Docking Station and Sample Chamber

An optional docking station enables fast, easy instrument insertion for stationary operation when small parts need to be tested. Another smaller option is the attachable sample chamber – to be used on the go as a mini-lab. Besides a PC or notebook, operators can use an Android phone or tablet, to control the unit — wirelessly or via USB.

Powerful Software

SPECTRO xSORT combines powerful XRF Analyzer Pro Mobile analytical operating software with fast-reaction Industrial Android modules (for touch operation, hardened security, quick access to all functions, and Windows PC compatibility). Standard features include spectra viewer and a customizable display of elements.

When mounted in the docking station, it can be connected to the even more powerful XRF Analyzer Pro 4 software.

Excellent Support

AMECARE Performance Services maximize uptime for products and services from SPECTRO Analytical and associated companies. The program is staffed by hundreds of experienced service engineers in 50 countries. They provide high-value, customized support for optimum performance plus the longest possible equipment life. Ask about proactive performance maintenance, performance upgrades, applications solutions, consultation, targeted training, and ongoing support.



Complete Line

The innovative handheld solution SPECTRO xSORT joins SPECTRO's portable SPECTROSCOUT and benchtop ED-XRF flagship SPECTRO XEPOS in the fields of coating analysis. As the operation software XRF Analyzer Pro uses the same structure in all the XRF instruments from SPECTRO, operators benefit from a fast learning curve when using an additional analyzer from this product family. Whatever the product, SPECTRO's 40-plus years of experience in elemental analysis — along with its unparalleled technical innovation and excellence — ensure the best results in the business.

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