

TXRF

S4 T-STAR® 800

The flagship of the Bruker TXRF spectrometer series

Equipped with the latest 100 mm² silicon drift detector the S4 T-STAR® 800 enters the area of ppt detection limits of metals in liquid samples. In addition, this premier model of the Bruker TXRF spectrometer series offers the W-L excitation mode as standard feature. This excitation mode helps to accurately quantify light elements as demonstrated for a typical water standard in Figure 1.

Highlights and benefits

- Most modern TXRF detector technology without disturbing artefact peaks in Mo excitation mode
- Large active detector area delivers highest count rates of your sample and allows shorter measurement times
- Unique W-L excitation provides detection limits for Al and Mg in the sub-ppm range.

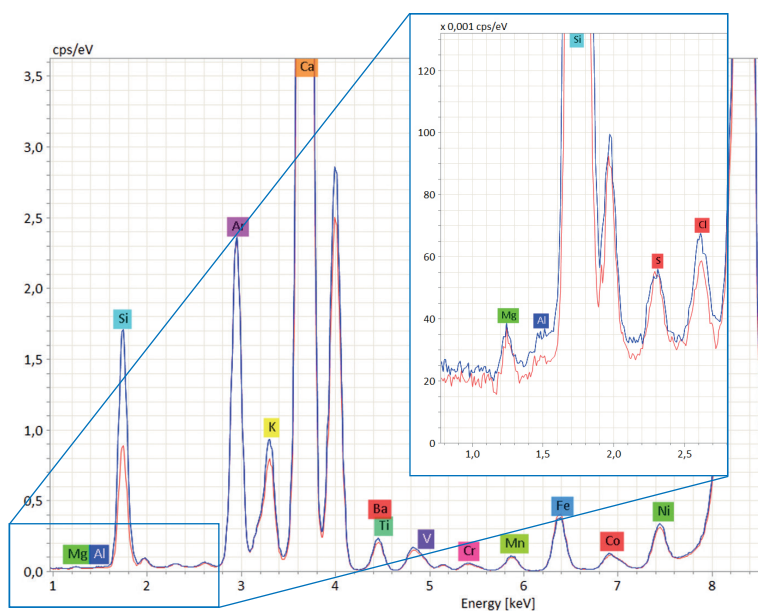


Figure 1

Two spectra of the NIST 1643e water standard measured with W-L excitation

Modern TXRF spectrometry allows the detection of contaminations in the picogram range; however, artefact peaks of the detector will disturb the quantitative analysis of your target elements. In spectra of the S4 T-STAR® 800 with the latest detector technology, disturbing detector artefacts are essentially not visible, even after extraordinary long measurement times (Figure 2). In addition, the detector provides an extremely low background of less than 5 cps/eV of blank quartz carriers demonstrating the outstanding performance for ultra-trace element analysis.

With the introduction of the S4 T-STAR® 800, Bruker's TXRF spectrometer is now available in three different configurations as shown in the table below.

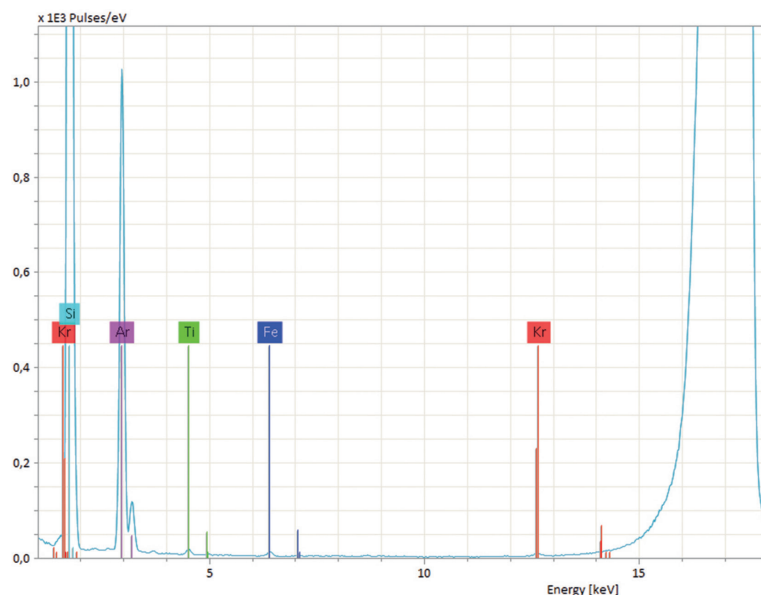


Figure 2

Blank spectra of a quartz disc, measured for 3600 s with Mo-K excitation

System Configuration	S4 T-STAR® 200	S4 T-STAR® 400	S4 T-STAR® 800
Basic System: Benchtop housing, backbone electronics automatic sample changer, max. 10 trays, 90 discs	✓	✓	✓
Excitation: 1 tube system: 1 tube housing, 1 HV generator, monochromator chamber, actuator	✓	–	–
2 tube system: 2 tube housings, 2 HV generator, monochromator chamber, actuator	–	✓	✓
Tube/Monochromator: Air-cooled micro focus X-ray tube, Mo target, 50 W + Multilayer monochromator 17.5 keV, curved	✓	✓	✓
Air-cooled fine focus X-ray tube, W target, 50 W + Multilayer monochromator 35 keV, flat	✓	✓	✓
3rd excitation, W-L, 8.4 keV, Multilayer monochromator curved	–	–	✓
Detector: XFlash® silicon drift detector, liquid nitrogen-free, <149 eV	60 mm ² detector area	60 mm ² detector area	100 mm ² detector area
System control unit/Software: Workstation PC, 24" TFT monitor, international TXRF software package T-ESPRIT	✓	✓	✓

Please contact your local sales manager for more information.

