

CTX Quick Check App



Sulfur in Aviation Fuel

Cleaner fuels could help minimize climate impact from aviation emissions. Jet fuel S levels range from 10 to 3000ppm, with average levels at 400 - 800ppm. However, lowering S in fuel may cause a reduction in lubricity which can affect aircraft engine and fuel system performance. Consequently, maintaining the optimum S level is critical.

X-ray Fluorescence (XRF) analysis is a reproducible and accurate screening method of sulfur in fuel oil for compliance with worldwide pollution regulations. Portable XRF can be used at fuel processing system development centers, aviation tank farms, tank trucks, or at pumps near the hangar. XRF is non-destructive; therefore, tested samples can be retained as needed.

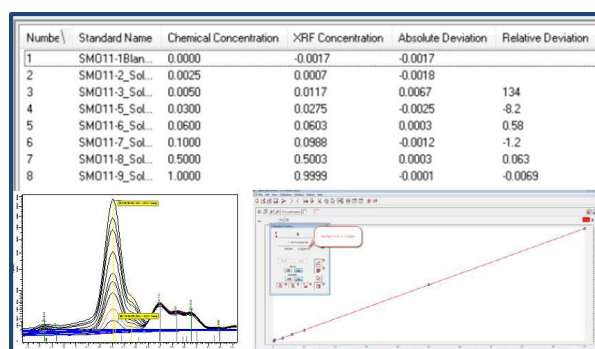
Bruker's Portable CTX™



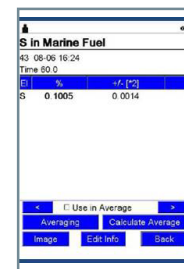
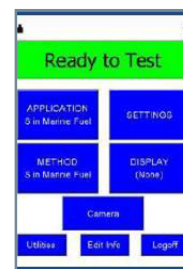
- Small, lightweight battery operated portable XRF analyzer
- 7.1 kg (15.6 lbs) with battery
- 13.5 cm x 25 cm x 35 cm WxDxH (5.3 in x 9.8 in x 13.8 in)
- Operating temperature: -10° C to +40° C (+14° F to 104° F)
- Splash / dust proof (IP-54) stainless steel housing for use in rugged conditions
- Sample chamber: 12 cm x 13.5 cm x 8.5 cm WxDxH (4.7 in x 5.3 in x 3.3 in)

Portable XRF for Fast QA/QC of Sulfur in Fuel

Sulfur levels in fuel are determined with a calibration built using similar reference materials and correlating their sulfur peak signals with their known concentrations. The calibration is then installed on Bruker's portable XRF analyzer. The sulfur peak signals from unknown samples are then used to determine their sulfur concentrations.



The high performance and contrast daylight visible LCD 3.7 inch touchscreen display is for system control and view of easy-to-read, and understandable results. These can be viewed as spectra, concentration or as pass/fail with preset thresholds.



Bruker's Portable CTX Quick Check PLUS

Do you need to do a Quick Check of more than S in fuel, such as wear metals (Al, Ti, Cr, Fe, Ni, Cu, Pb, Sn, Ag) in oil? The CTX can be customized to meet your specific needs.

- Ready-to-go factory standard or custom calibrations
- Optional EasyCal Software to create your own calibrations
- Measure powders, liquids, solids or sludge
- Capable of measuring elements from Mg to U in ambient air
- Print results with optional Bluetooth™ portable printer

Bruker Portable XRF Elemental Analyzers: *Simultaneously measure elements from sodium (Na) to uranium (U) at concentrations as low as parts-per-million to high percentage levels (depending on the element). Objects of any form – liquid, solid, cores, powder, shavings, chips – can be analyzed wherever they are located.*

Bruker's portable Counter Top XRF, the CTX™, is for qualitative and semi-quantitative elemental analysis. It also performs quantitative analysis when utilizing calibrations with like-sample standard reference materials. Results can be given as spectra, composition, or Pass/Fail/Inconclusive for single or multi-elemental analysis of elements from Mg to U. The convenient form factor of the CTX is ideal for samples presented in containers such as powders, soils and liquids; small samples; and those which require extended measurements of more than a few seconds.



CTX™ Portable XRF analyzer
Mg (12) to U (92)

Bruker's portable XRF features

- Rh X-ray tube with high performance SDD detector
- 5 filter wheel (plus manual slot for TRACER 5)
- SharpBeam geometry for high performance, speed and sensitivity
- Touchscreen operation
- Internal camera (optional for CTX and TITAN)
- Wireless communication
- Battery or AC operation
- Lightweight and supplied with water tight transport case

Bruker's two handheld XRF spectrometers, the TRACER 5™ and the S1 TITAN™, are for qualitative and semi-quantitative elemental analysis. They also perform quantitative analysis when utilizing calibrations with like-sample standard reference materials. Results can be given as spectra, composition, or Pass/Fail/Inconclusive for single or multi-elemental analysis of elements from Na to U. A desk or bench top stand with a PC can be used for samples presented in containers such as powders, soils and liquids; small samples; and those which require extended measurements of more than a few seconds.



S1 TITAN Handheld XRF analyzer
Mg (12) to U (92)



TRACER 5 Handheld XRF analyzer
Na (11) to U (92)

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