



Getting to the Top in the Petrochemical Industry

T. van der Maten, Product Manager XRF, PANalytical B.V., The Netherlands, Tel: +31 (0)546 534 372

Exceeding the norm with dedicated petrochemical industry solutions requires not only operational excellence, but also compliance with challenging industry norms and regulations. Recognizing the importance of X-ray fluorescence (XRF) for quality control and characterization, PANalytical's dedicated analytical X-ray solutions and expertise contribute significant value, ensuring you can rise above the competition, whatever your analytical needs. In this article, we present an overview of the integrated instruments, standards and industry support you can rely on from PANalytical.

Surpassing standards with Axios and Axios^{MAX}-Petro

XRF spectrometry is a key technology used extensively for critical elemental analysis of petroleum products - not just in quality control to conform to standards, but also in compliance with environmental regulations - analysing sulfur content for example.

UMTS enabling fast, dedicated remote diagnostics and support, like SMS services.

Oil-Trace

Offering improved accuracy by universal calibrations, Oil-Trace takes XRF analysis of fuels and oils to the next level by accounting for a wide variation in sample

MiniPal 4 Sulfur energy-dispersive XRF (EDXRF) spectrometer offers full-function, non-destructive XRF analysis in a cost-effective and operator friendly package. Benefiting from a dedicated silver anode tube for improved detection limits and strong algorithms focused on accuracy and precision, the MiniPal 4 Sulfur delivers outstanding performance and stability. Simple to install and requiring no water, compressed air or liquid nitrogen, this efficient package also includes on-site training and calibration set up.

Tailored support and expert calibration solutions



When it comes to support, PANalytical believes in solutions tailored to suit the customer, not just the product. EXPERTISE is a made-to-measure support service that gives access to PANalytical's extensive knowledge and understanding in the development of optimised, customer specific analytical methodologies. In addition, PANalytical has developed calibration sets in partnership with industry leaders, VHG Labs. They deliver optimal performance with PANalytical instrumentation and offer a cost-effective approach. Packaged for secure shipment and storage, calibration sets include sulfur in bio-diesel or crude oil, lead in gasoline, wear metal and lube oil and tailored sets if needed. Moreover generic and dedicated Performance Testing Programs can be offered with immediate response via our dedicated Performance Testing Program web pages.

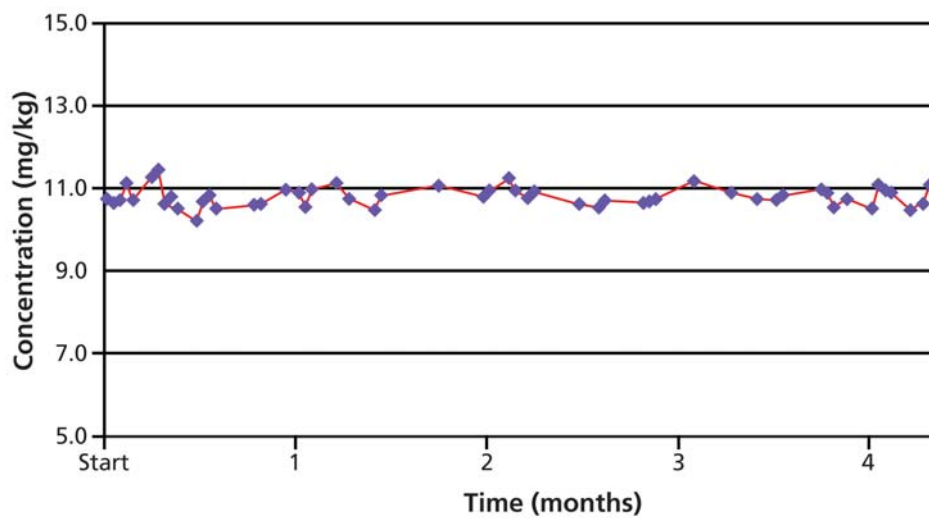


Figure 1: Repeatability measurement of sulfur in NIST diesel SRM 2723a for over 120 days

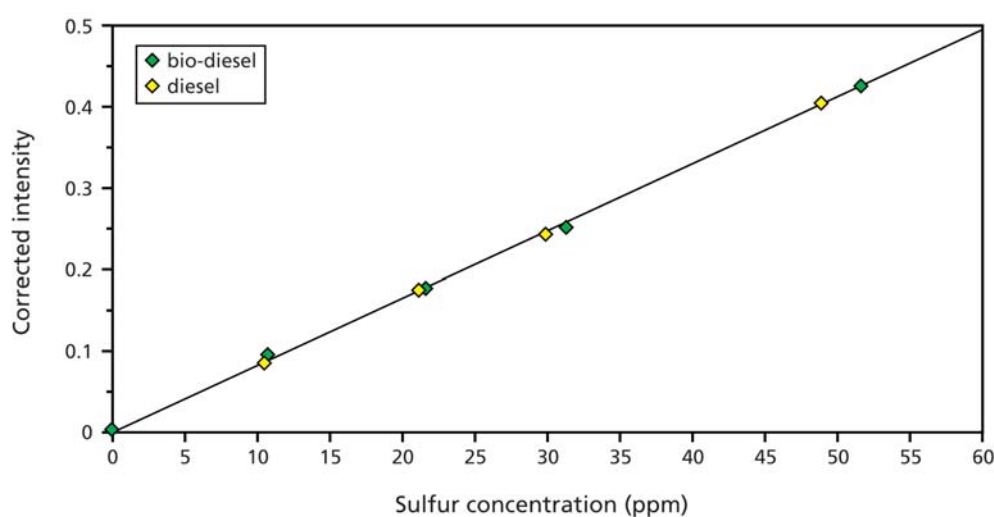


Figure 2: Single Oil-Trace calibration line for sulfur in diesel and bio-diesel

For the analysis of sulfur in petroleum products the dedicated Axios^{MAX}-Petro XRF spectrometer easily fulfills the requirements of international standards, like ASTM D2622-10 and ISO 20884:04. Moreover, repeated measurements on NIST diesel SRM 2723a demonstrate excellent long-term accuracy and stability over 120 days.

Sharing the same platform as Axios^{MAX}-Petro, the lower power (1 kW) Axios spectrometer is also proven to give excellent accuracy and precision. It is particularly suited to applications with lower sample throughput. Both systems of the Axios range, incorporate also the latest in user support, namely, PANassist remote assistance. Pre-installed software enables connection via LAN, DSL or

composition. Users require fewer standards to calibrate for a comprehensive range of elements in a wide variety of sample types and weights. Additionally, Oil-Trace incorporates PANalytical's proven implementation of the fundamental parameter (FP) algorithm and corrects for fluorescence volume geometry (FVG) effects, providing superior accuracy for light matrix samples such as fuels, oils and oil derivatives.

Outstanding performance and stability in a benchtop unit

For customers requiring a compact solution, PANalytical's



In conclusion

Like you, PANalytical is dedicated to petrochemical analysis; accuracy and repeatability of results and outstanding support are key aspects of every PANalytical solution. Let us help you to take your analytical performance to the top.