

Applied Rigaku Technologies Presents Latest EDXRF Solutions for Petroleum and Petrochem at the 2019 Gulf Coast Conference

EDXRF technology from Rigaku featured at the 2019 Gulf Coast Conference enables rapid elemental analysis of chlorine, lead, sulfur and metals in crude, oils, gasoline, fuels, lubricants and waste materials

Austin, TX – October 14, 2019. Applied Rigaku Technologies, Inc. ([ART](#)) will be presenting its line of energy dispersive X-ray fluorescence ([EDXRF](#)) analytical instrumentation at the 2019 Gulf Coast Conference ([GCC](#)) taking place at the Moody Gardens Convention Center in Galveston, TX, Tuesday, October 15, 2019 to Wednesday, October 16, 2019. The conference highlights chemical analysis technology associated with petrochemical, refining, and environmental sectors. EDXRF is employed for rapid non-destructive elemental analysis of chlorine, lead, sulfur and metals in crude, oils, gasoline, fuels, lubricants and waste materials.

Among the elemental analysis tools on display will be the [Rigaku NEX DE](#) premium high-performance benchtop direct excitation EDXRF elemental analyzer and the [Rigaku NEX QC+](#) high-resolution benchtop EDXRF spectrometer.

The NEX DE analyzer was developed for heavy industrial applications and engineered to maximize flexibility and ease of use. It is equipped with a 60 kV, 12 W X-ray tube to deliver significant gains in elemental peak resolution and counting statistics, resulting in superior calibrations and precision for the most challenging measurements.

The system operates on the latest [Rigaku QuantEZ](#) analytical software, specifically designed for the Rigaku family of benchtop EDXRF analyzers. Running on the Microsoft Windows operating system, on a laptop or benchtop personal computer (PC), the software offers all the functions required for calibration and routine operation.



Rigaku NEX DE - Energy Dispersive X-ray Fluorescence Spectrometer

The NEX DE analyzer complies with ASTM D8252-19, *Standard Test Method Vanadium and Nickel in Crude and Residual Oil by X-ray Spectrometry*. Vanadium and nickel, along with sulfur, occur naturally in crude oil, and their concentrations vary depending on the geographical region of the oil deposits. High metal content can foul the refining process during cracking, and so low metal crude is desirable. The NEX DE spectrometer, engineered to achieve exceptional performance in monitoring sulfur and metals in crude and other heavy hydrocarbon oils, offers as a simpler, faster alternative to ICP to meet NYMEX/CME requirements, which set maximum levels of nickel and vanadium for light sweet crude oils futures contracts.

The NEX QC+ spectrometer is a compact elemental analyzer that delivers rapid quantitative determination of sodium (^{23}Na) to uranium (^{238}U) in solids, liquids, powders and alloys. Specifically designed for routine quality control applications, the system features an intuitive “icon-driven” touch screen interface and built-in printer for easy operation and convenience. The 50 kV X-ray tube and Peltier cooled silicon drift detector (SDD) deliver outstanding repeatability and long-term reproducibility with excellent element peak resolution.



Rigaku NEX QC+ Energy Dispersive X-ray Fluorescence Spectrometer

Also part of the NEX QC series from Rigaku is the [NEX QC MFA](#) - Marine Fuel Sulfur Analyzer. The new Rigaku NEX QC MFA is optimized for marine fuel analysis applications. Its high voltage capability (50 kV), along with multiple automated X-ray tube filters, enables analysis of sulfur, nickel, vanadium, iron and zinc in a wide variety of marine fuels, with low limits-of-detection (LOD).

Other X-ray analytical instrumentation available from Rigaku include the [Rigaku NEX CG](#) advanced Cartesian geometry EDXRF spectrometer. The NEX CG spectrometer, using 90° Cartesian Geometry polarization monochromatic EDXRF, enables analysis of organic chloride in crude in compliance with ASTM D4929 Part C – *Standard Test Method for Determination of Organic Chloride Content in Crude Oil by X-ray fluorescence spectrometry - using monochromatic energy dispersive x-ray fluorescence (MEDXRF)*. Chlorides in crude contribute to corrosion in piping at refineries during cracking as well as mid-stream in pipelines. The NEX CG analyzer also complies with various other ASTM methods and EPA requirements for critical measurements in the petroleum industry, enabling its use as an all-in-one analyzer for measuring sulfur and ultra-low sulfur, metals in crude and residual oil, and lube oils.

For real time process control needs, ART also offers the [Rigaku NEX XT](#) process sulfur in oil analyzer and the [Rigaku NEX OL](#) process multi-element analyzer.

The Gulf Coast Conference promotes education and the advancement of knowledge of chemical analysis technology associated with the petrochemical, refining, and environmental sectors.

More information about EDXRF / XRF analytical solutions from Applied Rigaku Technologies, Inc. for the petroleum and petrochemical industries is available at *booth #102* and at www.rigakuedxrf.com/petroleum.

About Rigaku

Since its inception in Japan in 1951, Rigaku has been at the forefront of analytical and industrial instrumentation technology. Rigaku and its subsidiaries form a global group focused on life sciences and general purpose analytical instrumentation. With hundreds of major innovations to its credit, Rigaku and its subsidiary companies are world leaders in the fields of small molecule and protein crystallography, X-ray spectrometry and diffraction, X-ray optics, as well as semiconductor metrology. Rigaku employs over 1,400 people in the manufacture and support of its analytical equipment. Its products are in use in more than 90 countries – supporting research, development, and quality assurance activities. Throughout the world, Rigaku continuously promotes partnerships, dialog, and innovation within the global scientific and industrial community.

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