Press Release

Rigaku Publishes New Application Note for Analysis of ULSD per ISO 13032

Austin, TX— June 19, 2013. Applied Rigaku Technologies, Inc. is pleased to publish a new application report that details the measurement of sulfur in ultra-low sulfur diesel (ULSD) using the new Rigaku NEX QC+ high resolution benchtop EDXRF analyzer. The analysis detailed in Rigaku Application Note 1272 complies with standard test method ISO 13032. This International Standard specifies an energy dispersive X-ray fluorescence (EDXRF) test method for the determination of sulfur content in automotive gasoline.

Regulations around the world have limited the amount of sulfur in various fuels oils, with particular attention to diesel fuel. For many years, road diesel has been limited to a maximum sulfur concentration between 10-15 ppm, depending on the region. These limits have now been expanded to all diesel fuels, including those used in large and off-road diesel engines.

The new application note covers sample preparation, method calibration and repeatability, and demonstrates that low concentration sulfur in petroleum-based fuel can be routinely analyzed with excellent accuracy, sensitivity and repeatability using a benchtop EDXRF spectrometer.

For this application, an empirical calibration was built using a suite of 6 certified diesel calibration standards. Instrument precision was determined by ten repeat analyses of a sample in a static position using a 300 sec analysis time. Measurements were carried out using the NEX QC+ high resolution EDXRF spectrometer.

The results shown in the report demonstrate the excellent performance of the Rigaku NEX QC+ EDXRF analyzer for the measurement of ULSD, in compliance with standard test method ISO 13032. The versatility of the NEX QC+ also makes it an ideal tool for the measurement of many other elements and oil matrices, such as lube oils, wear metals in oils, used oil and waste oil, as well as for other elemental analysis needs throughout the petroleum industry.

A copy of this report may be requested at: http://www.rigakuedxrf.com/edxrf/app-notes.html?id=1272_AppNote

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 1,100 people globally and its products are in use in more than 70 countries – supporting research, development, and production control 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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