



## Ultra-low sulfur analyzer delivers performance with Rigaku durability

### Proven design and analytical functionality

Designed for ultra-low level sulfur analysis of diesel, petrol (gasoline) and other fuels, the Rigaku Micro-Z ULS wavelength dispersive X-ray fluorescence (WDXRF) instrument features a novel design that measures both the sulfur peak and the background intensity. The ability to measure and correct for changes in background intensity delivers a better net peak intensity measurement, resulting in superior calibrations and enhanced real world precision. Rigaku Micro-Z ULS complies with ASTM 2622-10, ISO 20884 and JIS K2541-7 methods.

### Confident measurements for demanding standards

The US Environmental Protection Agency (EPA) proposed Tier 3 standards for gasoline sulfur content for light-duty and medium-duty passenger vehicles. With a proposed start in 2017, the Tier 3 program is also harmonized with the California Air Resources Board (CARB) Low Emission Vehicle (LEV III) program, enabling automakers to sell the same vehicles in all 50 US states. EPA is proposing that federal gasoline contain no more than 10 parts per million (ppm) of sulfur on an annual average basis by January 1, 2017, down from the current 30 ppm standard. In addition, EPA is proposing to either maintain the current 80 ppm refinery gate and 95 ppm downstream caps, or lower them to 50 and 65 ppm respectively.

The proposed Tier 3 gasoline sulfur standards are similar to levels currently in place in California, Europe, Japan, South Korea, and several other countries. A 15 ppm sulfur specification, known as Ultra Low Sulfur Diesel

(ULSD), was phased in for highway diesel fuel in the US beginning in 2006.

### Superior optics for reliable performance

The Rigaku Micro-Z ULS is the ideal solution for sulfur analysis of petroleum-based fuels, with a lower limit of



detection (LLD) of 0.3 ppm sulfur. Employing robust fixed optics in a vacuum environment, and featuring a specially designed doubly curved RX-9 analyzing crystal, the Micro-Z ULS delivers consistent high sensitivity measurements.

[Click here for more information on the Rigaku Micro-Z ULS](#)