

Press Release

RIGAKU Publishes New Method for EDXRF Analysis of Precious Metals in Recycled Automotive Catalytic Converters

Austin, TX – June 6, 2013. Applied Rigaku Technologies, Inc. today has announced an effective new method for the direct analysis of precious metals content of recovered catalytic converter cores. Rigaku Application Note #1254 describes the determination of platinum (Pt), rhodium (Rh) and palladium (Pd) in catalyst material and demonstrates the performance of the [Rigaku NEX QC+ benchtop EDXRF analyzer](#).

A typical catalytic converter contains a ceramic core coated with a layer containing a combination of platinum group metals (Pt, Pd, Rh). Such converters are often recycled in order to reclaim the precious metals. During this process, the entire honeycomb core is usually removed and ground into fine powder. Once in powder form, the precious metal catalysts can be extracted, or the powder can be sold to a refiner.

For this application, samples were ground and measured as fine, dry, homogeneous powder. Measurements were carried out in the new NEX QC+ high resolution benchtop EDXRF analyzer. The NEX QC+ spectrometer employs next generation silicon detector technology and is engineered for rapid qualitative and quantitative elemental analysis. It is designed to offer benefits to the catalysts recycling industry including the abilities to screen for Pt, Pd and Rh levels, ensure optimum processing during recycling, and predict revenue flow.

The optional Fundamental Parameters (FP) package available on the NEX QC+, which estimates concentration using the fundamental equations governing X-ray interactions, can be used for this application. Results shown in the report were obtained using the factory-installed starter Matching Library for general purpose screening of mixed catalytic converter materials that comes with the NEX QC+ package for automotive catalysts.

Determination of the precious metals content of recovered catalytic converter cores is critical to accessing the valuations needed in this specialized business within the automotive recycling stream. Results found in the report show that the NEX QC+ EDXRF analyzer provides an easy-to-use and valuable tool for the catalytic converter recycling industry.

A copy of this report may be requested at:

<http://www.rigakuedxrf.com/edxrf/app-notes.html?id=1254> 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, 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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