

## Press Release

### EDXRF ANALYSIS OF PRECIOUS METALS IN RECYCLED AUTOMOTIVE CATALYTIC CONVERTERS

**Austin, TX – December 14, 2011.** Applied Rigaku Technologies, Inc. today has announced an efficient and economical new method for the direct analysis of precious metals content of recovered catalytic converter cores.

The new method is detailed in application note #1095 and demonstrates the use of the Rigaku NEX CG benchtop EDXRF analyzer in the determination of precious metals in catalyst material. A typical catalytic converter contains a ceramic core coated with a layer containing a combination of platinum group metals (Pt, Pd, Rh). These converters are often recycled. Analysis of precious metals content of recovered catalytic converter cores is critical to assessing value of these elements within the automotive recycling stream.

In this application, a calibration method was built using the Rigaku RPF-SQX Fundamental Parameters template, an advanced FP program that automatically deciphers overlapping elemental peaks and models the sample matrix using fundamental XRF equations. This allows for a measurement of elemental concentrations without the need for known assayed calibration standards. A Matching Library, using three assayed samples, was employed in conjunction with the RPF-SQX to enhance the accuracy of the results.

Rigaku's unique RPF-SQX Fundamental Parameters software offers quick, direct analysis, of powdered catalytic converter cores, without the need for a large suite of calibration standards. The Rigaku NEX CG, with its high performance Cartesian geometry and advanced yet user-friendly software, therefore provides a convenient 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=1095> 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.

For further information, contact:

Scott Fess  
Product Manager  
Applied Rigaku Technologies, Inc.  
tel: +1. 512-225-1796  
info@RigakuEDXRF.com