

Press Release

Rigaku Publishes New Application Report for Measurement of Chromium Conversion Coating

Austin, TX— October 4, 2016. [Applied Rigaku Technologies, Inc.](#) has published a new application note describing the measurement of chromium (Cr) conversion coating on aluminum (Al) by energy dispersive X-ray fluorescence (EDXRF).

Rigaku EDXRF Application Note #1606 details a method for the analysis of chromium conversion coating, and demonstrates the performance of the [Rigaku NEX QC+](#) high-resolution benchtop EDXRF analyzer during the production of coated product. Information regarding sample preparation, calibration and repeatability is included.

Aluminum is often coated with a protective conversion coating to provide resistance to oxidation and corrosion of the base metal. Chromium is commonly used for such coatings, and the use of chromated aluminum covers a wide range of applications. Conversion coating also helps in the retention of paint for the final finished product.

The new application report presents a method that employs EDXRF spectrometry, which is shown to be an affordable means of optimizing quality while minimizing costs and reducing waste.

For the analysis, a test coupon was placed flat in the analysis chamber with the coated side facing the X-ray beam. An empirical calibration was built using a set of standards assayed by a careful weigh-strip-weigh process. The bare, uncoated aluminum sample was measured to generate a background correction. The low and high calibration standards were each measured in static position for ten repeat analyses to demonstrate precision.

The results shown in the report demonstrate that the Rigaku NEX QC+ high-resolution EDXRF analyzer provides excellent sensitivity and performance for the measurement of chromium conversion coatings on aluminum.

A copy of this report may be requested at:
http://www.rigakuedxrf.com/edxrf/app-notes.html?id=1606_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 1,400 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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The Rigaku NEX QC+ high-resolution benchtop EDXRF analyzer