

New Application Report from Rigaku Examines Use of EDXRF for Industrial Forensics

A new application report published by Applied Rigaku Technologies, Inc. presents a method for the investigation of unknown sample materials by Energy Dispersive X-ray Fluorescence for industrial forensics analyses

August 11, 2020, Austin, TX – Applied Rigaku Technologies, Inc. ([ART](#)) has published an application report describing the use of *Energy Dispersive X-ray Fluorescence* ([EDXRF](#)) for industrial forensics in the investigation of unknown sample materials. Rigaku EDXRF Application Note #2000, available on the company's website, includes information about sample preparation, material characterization and spectral analysis.

Industrial forensics employs an analytical response to potential problems encountered at different stages in the industrial manufacturing process, examining each step in the product life cycle to identify, prevent and resolve manufacturing issues.

In industrial forensics, X-ray fluorescence ([XRF](#)) is an analysis tool used for non-destructive analysis to identify and eliminate manufacturing issues or contamination during production and distribution. Analysis using XRF gives the operator a way to determine elemental composition of foreign material in failure analysis and root cause identification to optimize quality control and testing procedures.



Rigaku NEX DE VS Variable Spot Energy Dispersive X-ray Fluorescence Spectrometer

The analysis described in the report was carried out using the [Rigaku NEX DE VS](#) direct excitation variable spot EDXRF spectrometer, The Rigaku NEX DE VS analyzer is equipped with a high-resolution camera combined with automated collimators allowing for precise positioning of a sample for the analysis of 1 mm, 3 mm, and 10 mm spot sizes. The system features powerful yet easily operated software for the investigation and identification of foreign material.

Fundamental Parameter methodology with small spot measurement capability is shown to enable the analysis of irregularly shaped samples and provide valuable tools in the investigation and identification of foreign materials of unknown composition.

A copy of this report may be at
www.rigakuedxrf.com/app-notes.php?id=2000 [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 general-purpose analytical instrumentation and the life sciences. With hundreds of major innovations to their credit, Rigaku companies are world leaders in X-ray spectrometry, diffraction, and optics, as well as small molecule and protein crystallography and semiconductor metrology. Today, Rigaku employs over 1,400 people in the manufacturing and support of its analytical equipment, which is used in more than 90 countries around the world supporting research, development, and quality assurance activities. Throughout the world, Rigaku continuously promotes partnerships, dialog, and innovation within the global scientific and industrial communities.

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