Press Release

Rigaku NEX CG EDXRF: Analysis of Rocks using the Fundamental Parameters Method

Austin, TX – February 10, 2011. Applied Rigaku Technologies, Inc. today announced a new method for the elemental analysis of rocks. Rigaku Application Note # 1034 shows the analysis of three rock samples certified for gold content, with uncertified reference values for the other elements, using Rigaku RPF-SQX Fundamental Parameters (FP). Rigaku RPF-SQX is an advanced program that automatically deconvolutes spectral peaks and models the sample matrix using fundamental XRF equations. Performance is shown for both hydraulically pressed pellets and loose powders.

Elemental analysis is important in the analysis of rocks and ores, from screening at the quarry site or mine, throughout the processing stages to final analysis. Monitoring of major and minor elements is significant during processing, to ensure proper extraction and process control. Trace elemental analysis, especially of precious metals, is also critical to ensure optimization of the value of the processing.

Along the entire processing line, a fast and simple technique, without the need for large suites of assayed calibration standards to match each matrix type, is required. To meet industry challenges, Rigaku offers the NEX CG EDXRF elemental analyzer. The NEX CG, using indirect excitation and polarization, offers the non-technical operator a powerful and simple tool for the measurement of elements in rocks and ores, while retaining the power and versatility for the XRF expert involved in rock and ore analysis.

Resulting data indicate optimum measurement performance using FP is achieved analyzing samples in pressed pellet form. This sample preparation method minimizes mineralogical effects due to grain size inconsistencies and inhomogeneity of oxide distributions and enables improved measurement of the light elements, thereby proving to be deal for process quality control and quality assurance.

The Rigaku NEX CG EDXRF analyzer, with indirect excitation and polarization, is shown to be an exceptional tool for the screening and quantification of major, minor and trace elements in rocks. Use of the Rigaku RPF-SQX Fundamental Parameters program likewise yields excellent performance and is ideally suited for application throughout quarrying and processing of rocks, from initial screening and throughout the processing line.

A copy of this report may be requested at:
http://www.rigakuedxrf.com/edxrf/app-notes.html?id=1034_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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