

Press release

Database updates for in situ analysis of Wolframite, Tantalite and Cassiterite

AppliTek's portable XRF analyzer updated for mining applications

Nazareth, Belgium, December 1st 2010 – ED-XRF elemental analysis is a well-known and well-established technique used for various applications in mining business. Historically, portable XRF techniques were considered as suitable only for screening purposes. Nowadays the advances both in technology and in data processing permit to use it as a stand-alone technique for qualitative and quantitative analysis of minerals and ores. The non-destructive nature of the analysis allows to have the same sample or object sent to a laboratory for validation.

For AppliTek, the challenge was there to push the boundaries by bridging features of several existing designs, from portable (pistol type) ones to laboratory units. The **EXAMINER**[®] is a versatile analytical ED-XRF platform optimized for several application fields, a.o. mining, metals & alloys, paints. An autonomy of no less than 15 hours allows for ongoing measurements or screening without having to change or charge batteries. The outstanding hardware flexibility of the tube-based ED-XRF analyzer allows a transformation in a matter of seconds into a true portable, handheld analyzer.

With a considerable experience in analyzing complex ore matrices and custom-specific modeling services, AppliTek was able to finetune its ED-XRF analyzer for use in mining specific application fields such as efficiency of exploration and enrichment, up to ore grade assessment. The **EXAMINER**[®] can either employ standardless FP algorithms, site-specific standards or factory calibrations, with the possibility to identify multiple elements in a suite ranging from Aluminium to Uranium. Precise measurements with low LOD can be conducted on key minerals such as Tantalite, Wolframite and Cassiterite.

With the recent database updates, the analyzer was benchmarked against a portable XRF analyzer from competing brand X. Several different elements were analyzed with a concentration in a range from a few ppm to about 80 % in a wide variety of mining samples. In a next step, the analysis results were compared against the certified values. The data sets obtained with the **EXAMINER**[®] showed an excellent correlation with the expected values, while those obtained with brand X reported significant deviations for several elements. Briefly, the results demonstrated that AppliTek can provide users an attractive analytical tool for a highly demanding market as the mining industry, with a large deal of attention on user-friendliness, hardware flexibility and proprietary analysis software.

About AppliTek

Since 1985 AppliTek is a specialist manufacturer of on-line (continuous) monitoring systems in several industries, having an enviable reputation in turnkey analyzer projects. The Spectroscopy Division concentrates its activities on assessing application feasibility and developing calibration models. Existing technologies such as XRF, NIR, Raman and FTIR are put to the test, while new analyzer systems are being designed for new applications. Visit www.applitek.com for more information.