

There are many types of industrial samples which traditionally have been difficult to accurately quantify using currently available standardless analysis programs. Industrial samples such as used oil, mining materials, and materials containing heavy metals in light element matrices have often posed problems for standardless analysis.

Some of the most significant sources of error include mineralogical and/or chemical differences in samples, sample preparation, infinite thickness and wedge effects, and the quantification of samples containing large amounts of elements not measured by XRF.

The new Omnian, standardless analysis program addresses many of these sources of error and significantly increases the accuracy of the analysis of these types of materials. This new software packages addresses these issues through improved infinite thickness correction and wedge correction, correction for sample preparation effects, and the unmeasured "dark" matrix. We will present data to illustrate the conventional problems with these samples, and how these problems can be overcome by utilizing Omnian's innovative correction strategies.