Last year, Claisse presented a paper which portrayed a simplified version of the ISO 9615-1 standard method for iron ores. The fusion method was optimized using a Claisse® M4™ Fluxer for the preparation of the iron ore finished products and exploration samples. The results of the XRF application based on pure oxide standards were also presented.

This year, we are presenting the results of a unique XRF calibration application based on Certified Reference Materials (CRMs) for iron ores and iron ores exploration materials. The universal sample preparation fusion method for iron ores and exploration samples developed during the first phase of this project was used to select and evaluate a set of CRMs. Selected throughout the world, the chosen set of CRMs allows a wide coverage for all the elements of interest of the iron ore industry, excluding tin oxide. A comparative study between the results of the prevailing calibration based on pure oxide calibration standards and the CRMs calibration will also be presented and later discussed.

Furthermore, all the data collected using the advanced methodologies implemented in combination with a Bruker S4 Explorer Wavelength Dispersive X-Ray Fluorescence Spectrometer (WDXRF), will be compared to the analytical requirements of ISO 9516-1. All deviations from the prevailing standard method parameters (calibration, standards, flux, fluxer, etc.) will also be pointed out and discussed.