# Volatiles management in XRF analysis

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Although the analytical accuracy is better with glass disks than pressed pellets, analysts use mostly pressed pellets in the production process control because the sample composition must be known very quickly. Fusion does not meet their expectations because quantifying the loss on ignition (LOI), which is an extremely important parameter for the matrix correction, is a time-consuming protocol.

Here is an innovative approach to get fast analytical results by fusion in the process control without knowing the LOI. In fact, by using net intensities, it is now possible to calculate the concentration of the volatile compounds ($C_V$) lost during the fusion. In this particular study, the accuracy of Si, Al, Fe, Mg, Ca, Na, K, Ti, Mn, P and Cr is evaluated in iron ore samples. Finally, an optimal fusion process is developed to stabilize volatile element like alkalis.

No more lost of time and errors related to the LOI calculation. No more pressed pellets used in the process control. This method gives accurate and quick results with fusion because the $C_V$ variation from sample to sample is considered.