

# **Global Cement and Raw Materials Fusion/XRF Analytical Solution**

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Many different types of raw materials are used in the cement industry. To control the quality of the final cement products, it is important to know the composition of those raw materials. Specifications to be respected for cement composition in the cement industry are well known and very strict. The Standard Methods for analysis of cement are: ASTM C 114 and ISO/DIS 29581-2. Sample preparation by fusion combined with XRF analysis has been used for quality control of cement and raw materials for a long time. Generally speaking, many different fusion methods are necessary to prepare the different raw material types because of the different nature or composition of those compounds. This situation makes the laboratory operator's work more complex, and increases the chance of error.

This paper describes a robust method which is also a simple fusion solution for this cement industry problem. One fusion method using a Claisse M4 fluxer is shown to prepare all cements, all process materials, and a very large range of raw materials. Data from this fusion method, combined with a Bruker S4 Explorer XRF Spectrometer, complies with both cement analysis Standard Methods: ASTM C 114 and ISO/DIS 29581-2. The method used, the specifications, and the data showing compliance will be discussed.