

QUANTITATIVE TOTAL IRON ANALYSIS USING XRD-FLUORESCENCE RADIATION INTENSITY

Doğan AYDAL *

ABSTRACT. - Fluorescence radiation is being known as "unwanted incident", while XRD determination, and various methods are in use to solve this secondary radiation. In this study, fluorescence radiation is especially created in order to show the possibility of quantitative analysis with the help of this secondary radiation. Some selected standards, which have different quantity of iron content, were chosen and Cu target was intentionally used during XRD determination, in order to cause fluorescence radiation in different intensity. Finally the positive relation was detected between the total iron content and fluorescence radiation intensity. It takes only 40 seconds to find the quantity of total iron in the analysed sample with the suggested method. In addition, another important result of this study is that the radiation intensity has a direct relation with the total iron content in the sample, regardless of iron combination with other elements.