EFFECT OF X-RAY TUBE POWER ON INTENSITIES OF Kα X-RAYS OF TRACE ELEMENTS FROM SAMPLES OBTAINED BY USING DIFFERENT SAMPLE PREPARATION METHODS IN WDXRF SPECTROMETER

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In this study, the effect of X-ray tube power of intensities of Kα X-rays of fifteen elements (Rb, Na, Cd, Ru, Cl, Ca, Si, Fe, S, Au, Ni, P, Cu, Cr, Ag) existed in the form of trace is investigated. The samples from potassium bromide (99.9 %) have been prepared by using two different sample preparation techniques; powder on mylar film and pulverization. The fifteen trace elements in these samples have been measured at six different X-ray tube power values by using WDXRF spectrometer. A linear relationship was found between intensity and X-ray tube power, but according to different samples preparation techniques slopes of these regression curves are different. In the trace elements, the intensities of Kα X-rays from powder sample on mylar film convert into the intensities of Kα X-rays from the samples with a correction factor. Therefore, the analysis results from powder sample on mylar film are modified.