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QUANTIFICATION OF U^{+4} AND U^{+6} IN URANIUM MINERALS USING LED FLUORIMETRY

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Abstract

Quantification of two important species of uranium (U^{+4} and U^{+6}) in minerals like Uraninite and pitchblende is presented in this paper. Different species of uranium were separated using their differential solubility in hydrofluoric acid (HF). Light Emitting Diode (LED) based Fluorimetry was used for determination of uranium in the separated fractions. The method was validated using certified reference materials and reproducibility of the method was better than 3% RSD.

Keywords: Uranium minerals, U^{+4} and U^{+6} and LED Fluorimetry.