Optically Stimulated Luminescence (OSL) Properties of Oltu Stone

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Oltu stone, sometimes called also "Erzurum stone", is especially mined in the villages northeast of Oltu town. This work focuses on the Optically Stimulated Luminescence (OSL) response of Oltu stone from Erzurum previously characterized by means of X-ray diffraction (XRD) and X-ray fluorescence (XRF) techniques. So, we investigated dosimetric properties of Oltu stone as an accidental dosimetry. For this purpose, dose-response, reproducibility and fading of the OSL signals were analyzed. As a result of these studies, it is possible to conclude that Oltu stone show promising features to be used as an environmental dosimeter with regard to a suitable OSL signal, range of linearity, repeatability in response.

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