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Determination of minimum detectable dose and the effect of different filters on TLD 100H main thermoluminescence peak

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Thermoluminescence dosimeters have been an important tool for measuring the ionizing radiation dose in the field of personnel, clinical, environmental and space applications. In this study, minimum detectable dose of newly synthesized Mg,Cu,P doped LiF (TLD 100H) dosimeter for main TL peak have been determined using thermoluminescence method as a preliminary work. Additionally, thermoluminescence glow curves of TLD 100H dosimeters were recorded using different four filters in order to investigate the effect of different filter packs on TL glow peaks. It was observed that TLD 100H dosimeter has two glow peaks at 125^{o}C and 290^{o}C and two shoulders at 180^{o}C and 230^{o}C.

Keywords: Thermoluminescence, TLD-100H, dosimeter, filter packs, minimum detectable dose

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