



TR0700382

**RADIATION SHIELDING PERFORMANCE OF SOME CONCRETE****I. Akkurt<sup>1\*</sup>, H. Akyıldırım<sup>1</sup>, B. Mavi<sup>1</sup>, S. Kılınçarslan<sup>2</sup>, C. Başyigit<sup>2</sup>**<sup>1</sup>Süleyman Demirel Üniversitesi, Fen-Edebiyat Fakültesi Fizik Böl. Isparta, Türkiye.<sup>2</sup>Süleyman Demirel Üniversitesi, Teknik Eğitim Fakültesi Yapı Eğt. Böl. Isparta, Türkiye\*E-mail: *iskender@fef.sdu.edu.tr***ABSTRACT**

The energy consumption is increasing with the increased population of the world and thus new energy sources were discovered such as nuclear energy. Besides using nuclear energy, nuclear techniques are being used in a variety of fields such as medical hospital, industry, agriculture or military issue, the radiation protection becomes one of the important research fields. In radiation protection, the main rules are time, distance and shielding. The most effective radiation shields are materials which have a high density and high atomic number such as lead, tungsten which are expensive. Alternatively the concrete which produced using different aggregate can be used. The effectiveness of radiation shielding is frequently described in terms of the half value layer (HVL) or the tenth value layer (TVL). These are the thicknesses of an absorber that will reduce the radiation to half, and one tenth of its intensity respectively. In this study the radiation protection properties of different types of concrete will be discussed.