The Fricke gel dosimeter proposed in 1984 [1], has been very studied for application in radiotherapy because is capable of measure the spatial distribution of radiation doses [2]. The dosimetry is based in oxidation of ferrous ions (Fe\(^{2+}\)) to ferric ions (Fe\(^{3+}\)) by action of ionizing radiation, proportional to radiation dose [1,3]. In the Fricke gel dosimeter the diffusion of Fe\(^{2+}\) and Fe\(^{3+}\) is limited for the gel matrix present [3]. According to literature [2,4,5], the gel system usually employed is the 300 Bloom gelatin, which is imported and, therefore, of raised cost. Aiming to analyze the viability of use national and low cost gel, in this work were compared some spectrophotometric parameters of Fricke gel dosimeters prepared with 270 Bloom gelatin, commercially available, and 300 Bloom gelatin imported.

The absorption spectrum of dosimetric solutions prepared with 5% of gelatin 270 and 300 Bloom non-irradiated and irradiated with gamma radiation of the \(60^{\text{Co}}\) (range of 1 to 90 Gy), the minimum and maximum detectable doses and the dose-response in the dose range of 1 to 90 Gy were studied.

The results indicate that the 270 Bloom gelatin presents satisfactory response and its use is recommended owing to the low cost and the availability in national market.

Referências: