



Volume 4, No 1, p. 41 – 50 (2016)

## Computer simulation of radiation dose absorption in biological specimens

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**Abstract.** The radiation in biological tissues is considered. It is studied how the kind of a biological tissue determined by its chemical composition and physical characteristics, as well as the beam parameters, affect the radiation depth-dose distribution. Numerical results are obtained using the application using the software package Geant4. The results of our simulations may be used for better understanding of processes that play a crucial role in hadron therapy. The efficiency of hadron therapy is based on the Bragg peak phenomenon and more precise localization of the biological effect of a therapeutic beam.

**Keywords:** dose-depth distribution, radiation therapy, hadron therapy, Bragg peak, Monte-Carlo simulation

**MSC numbers:** 65C05, 92C50

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