Abstract
Differential photoacoustic cell (DPC) spectroscopy is able to measure the development of several dynamic processes in situ, such as water diffusion through a membrane. This technique was used for studying water permeation in healthy and decalcified Wistar rat bones. Decalcified bones were given electromagnetic stimulation to evaluate cell activity in bone and attempt to detain decalcification. It was possible to determine the viability of applying DPC for indirectly evaluating bone density in situ, as well as the amount of water retained within bone structure.

Keywords
electromagnetism, stimulation, bones, osteoporosis.