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PRELIMINARY CHARACTERIZATION OF A HOMEMADE IONIZATION CHAMBER FOR USE IN COMPUTED TOMOGRAPHY

Ana P. Perini[1], Lucio P. Neves[1], Marcos Xavier[1], Helen J. Khoury[2] and Linda V. E. Caldas[1]
[1]Instituto de Pesquisas Energéticas e Nucleares - Comissão Nacional de Energia Nuclear (IPEN-CNEN/SP), Av. Prof. Lineu Prestes, 2242, 05508-000 - São Paulo, SP, Brazil
[2]Universidade Federal de Pernambuco, Departamento de Energia Nuclear, Av. Prof. Luiz Freire 1000, 50740-540 - Recife, PE, Brazil

In this work an ionization chamber was developed for use in dosimetry of computed tomography (CT) medical equipment. The main difference between this CT ionization chamber and commercial CT ionization chambers is the material that it is made of. In the construction of this chamber only national low-cost materials were utilized. To evaluate the performance of this chamber several pre-operational tests were undertaken, as saturation curve, recombination loss and polarity effect that showed satisfactory results. The response stability (short- and medium-term stability tests) and stabilization time showed also good results, within the international recommendations. Besides the good results, this ionization chamber presents a simple design and it is made using only low-cost materials.

Contact: paulaperini@gmail.com