

TRANSMISSION COMPARISON FOR TWO DIFFERENT ELECTRON BLOCK MATERIALS

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Abstract – The purpose of this work is to compare electron beam transmission, under two different block materials. The first one, cerrobend, consists of 10% cadmium and the second one is cadmium free. Percentage depth doses for open and block fields for all electron energies are measured. Measurements were performed with a plan-parallel ionization chamber over a range of depth from water surface to a depth of 160mm. The fields were defined using a 15x15 electron applicator mounted on linear accelerator. Depth dose curves beyond two alloys are matched and compared. Regarding the results, the percentage depth doses behind blocks correspond very well. The difference between the two alloy curves does not exceed 0.12%. The conclusion of the article is that a coincidence in transmission is acceptable.