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Study for Stack Ionization Chamber using Carbon Coated Microfilm

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We have designed the stack ionization chamber for quality assurance of clinical photon beam. The stack chamber was composed of solid phantom inserted several chambers. The chamber as a mini plane parallel chamber was made of carbon coated microfilms. Estimated transmission rate of stack type ionization chambers for radiation beam by using Monte Carlo. The stack type ionization chambers In here the electrical characteristics of the six chambers in the solid phantom were evaluated using 6 MV photon beam. The leakage currents were 0.5 pA, reproducibility was less than 0.5%, linearity was less than 0.5%, and dose rate effect was less than 0.7%. In addition the effect of dose variation due to other chambers was estimated to maximum 0.8% approximately. The designed dosimeter can be used for quality determination in output dosimetry or measurement of percentage depth dose approximately for clinical photon beam..

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