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Study of high transmittance ionisation chambers

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With the development of radiotherapy, the need for high doses became strong. However, existing ion chambers are either more absorbent of X-rays in terms of material or are non-sealed, that subject to environmental influences and have a short lifecycle. Now we designed a new ion chamber, which have high dose pass-rate, sealed and long lifecycle under radiation environments. The dose pass-rate improves a lot than the latest one, keeps ultra high vacuum as very low leakage rate and 10 years lifecycle. Another important point is this kind of ion chamber have very simple assembly process and low cost. After our beam test, it performed very well with various test environments as Reproducibility of the dose response, Proportionality of the dose response, Stability of the dose response and so on.

Footnotes

Funding Agency

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Yes

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