

ABSTRACT

Radiotherapy is one of the most commonly used cancer treatment methods, one of which is the Linear Accelerator (LINAC) which has photon beams and electron beams. Each energy has different penetration characteristics so it can be selected according to the location and depth of the tumor. 6 MV energy is one of the most frequently used because it is widely used in clinical examinations so it is necessary to check to maintain the stability of the device. Evaluation of the stability of the beam energy can be done by measuring the radiation dose at several depths in the water using a phantom. Research discussing the depths of 5 cm and 10 cm is still rare, in fact, in TRS-398 it states that the stability of the radiation beam output is not only seen from depths of 10 cm and 20 cm, but can also be seen at variations in depths of 5 cm and 10 cm. Based on this study, the dose output value is still stable. At a depth of 5 cm, the value is 9.86382 cGy, a deviation of 1.3618% and at a depth of 10 cm, the value is 9.85439 cGy, a deviation of 1.4561%. These results indicate that the values at both depths are still within the safe limit of 2%. The dose ratio for both depths is 0.999, or 0.0943%. This value is still considered stable at different depths.

Keywords: *Absoluted Dose, Photon, TRS 398, LINAC.*