

ABSTRACT

This study aims to evaluate the output value of absolute dose on a Linear Accelerator (linac) using electron energies, following the TRS-398 protocol. The evaluation was performed at five electron energies: 6 MeV, 8 MeV, 10 MeV, 12 MeV, and 15 MeV, using a plan-parallel detector (IBA PPC40) and a water phantom as the measurement medium. Measurements were carried out to ensure that the output dose values align with the predetermined baseline, thereby ensuring the quality and safety of radiation therapy. The results showed that the absolute dose values ranged from 0.985 cGy/MU to 1.008 cGy/MU with deviations still within the $\pm 3\%$ tolerance limits in accordance with TRS-398 and BAPETEN standards. These findings confirm that the linac system is operating optimally and is suitable for clinical radiotherapy procedures.

Keywords : absolute dose, linac, TRS-398, electron energy, radiotherapy