

[CBMRI 11] Assessment of ethylene vinyl-acetate copolymer samples exposed to γ -rays via linearity analyses

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Resumo: Materials with the potential to become dosimeters are of interest in radiation physics. In this research, the materials were analyzed and compared in relation to their linearity ranges. Samples of

ethylene vinyl-acetate copolymer (EVA) were irradiated with doses from 10 Gy to 10 kGy using a ^{60}Co Gamma-Cell system 220 and evaluated with the FTIR technique. The linearity analyses were applied through two methodologies, searching for linear regions in their response. The results show that both applied analyses indicate linear regions in defined dose interval. The radiation detectors EVA can be useful for radiation dosimetry in intermediate and high doses.