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EFFECTS OF GAMMA RADIATION ON PHENOLIC COMPOSITION OF MEDICINAL PLANTS: ALOYSIA CITRODORA L. AND MENTHA X PIPERITA L. INFUSIONS

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Irradiation is a food processing technique supported by several globally recognized organizations (FAO, WHO, IAEA), being suitable for several food matrices, prolonging not only the shelf life of the food, but also providing microbiological decontamination. This work aimed to evaluate the effects of gamma radiation on the phenolic composition of *Aloysia citrodora* L. and *Mentha x piperita* L. infusions. Gamma radiation treatment was performed in a ^{60}Co chamber, applying doses between 1 and 10 kGy and the results were compared with the control sample (non-irradiated, 0 kGy). The phenolic profile was determined and identified by HPLC-DAD-ESI/MS. Radiation treatment (at a dose of 10 kGy) caused statistically significant effects on the phenolic profile in both infusions, evidencing an increase in most of detected compounds, namely the majority ones. The same irradiation dose also induced an increase on the content of total phenolic acids and total phenolic compounds [1]. The results of this study can contribute to a wider knowledge of the effects of gamma irradiation on relevant bioactive compounds of several aromatic and medicinal plants, being recommended its application in these matrices.

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