

Chemical properties and fatty acid composition of oils extracted from gamma irradiated rape and sunflower seeds

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In the present study, rapeseed (*Brassica napus*) and sunflower seeds (*Helianthus annuus* L.) were treated with 2.5, 5, 7.5, and 10 kGy of gamma radiation. Effect of irradiation dose on free fatty acids (FFA), peroxide value (PV), α -tocopherol, sterol, and fatty acid composition of the seed oils were determined. Free fatty acids and peroxide value of the oils extracted from gamma irradiated seeds increased; while α -tocopherol contents decreased. Regarding fatty acid composition, palmitic and stearic acid contents increased as oleic and linoleic fatty acid levels decreased for both the sunflower and canola oils analyzed. Besides, radiation processing positively or negatively affected sterol content and composition of the sunflower and canola oils.

Keywords: Gamma irradiated; fatty acid composition; chemical properties; rapeseed; sunflower

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