5th Portuguese Young Chemists Meeting

(5th PYCheM)

&

1st European Young Chemists Meeting

(1st EYCheM)

Centro Cultural Vila Flor

Guimarães, Portugal

26th – 29th of April

ICVS/3B's

Câmara Municipal de Guimarães

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General Programme

	26 April	27 April	28 April	29 April
9:00-13:20	Registration and Workshop of Open Science and European Open Access Policies in H2020	Organic Chemistry and Medicinal Chemistry	Inorganic, Physical, Analytical and Electrochemistry	Materials Chemistry and Nanomaterials and Surface Chemistry
13:30	Opening Ceremony	Lunch	Lunch	Lunch
14:00 - 18:00	Green Chemistry + Chemistry of Natural Products	Biochemistry and Medicinal Chemistry	CHEM2NATURE Symposium: Chemical strategies for modification of natural origin materials Assembleia GQJ (17h)	Materials Chemistry and Nanomaterials and Surface Chemistry
18:00		Walking Tour		Closing Ceremony
19:00	Welcome Cocktail		Gala Dinner	
21:30	Get-together night			

P15. Effects of gamma and electron beam irradiation in the antioxidant potential of methanolic extracts and infusions of *Arenaria Montana* L.

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Irradiation is a methodology qualified for dry ingredients preservation or decontamination and can be performed using various radiation sources and energy levels in accordance with the objectives to be achieved [1]. Electron beam irradiation is used mainly for food products with low density, while gamma irradiation is mainly used for large volumes [2]. *Arenaria Montana* L. has a high antioxidant potential and richness in bioactive phytochemicals. It is used in Portuguese traditional medicine, acting therapeutically as an anti-inflammatory and diuretic plant [3]. The aim of this work was to evaluate the effects of gamma and electron beam irradiation at different doses (1 and 10 kGy) in the antioxidant activity of *A. montana*. Free radicals scavenging activity, reducing power and lipid peroxidation inhibition properties of its methanolic extracts and infusions were evaluated. Through a global analysis, it was concluded that the antioxidant activity proved to be higher in methanolic extracts in comparison with the infusions, where it decreased with increasing irradiation dose regardless of the technology used (gamma or electron beam). For methanolic extracts, electron beam resulted in increased antioxidant activity while gamma irradiation caused a decrease in these extracts. Thus, the antioxidant potential is variable depending not only on the type of radiation and the dose applied, but also on the solvent used in the preparation of the extracts (methanol or water).

References

[1] Alothman, M.; Bhat, R.; Karim, A.A., Trends in Food Science & Technology 2009, 20, 201-212.
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[3] Carvalho, A.M. and Morales, R., in M. Pardo de Santayana, A. Pieroni, and R. Puri (eds.), Ethnobotany in the New Europe: People. 2nd edition, Berghahn Books, Oxford, UK, 2013, 147-171

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