

Tuesday, November 8, 2016 - 15:30 to 17:30
Poster Session: Other Applications - Food (C)

Radiation influence on biocompounds in lycium barbarum

Pâmela G. da Silva¹, Amanda C. R. Koike¹, Severino M. de Alencar², Jorge Mancini Filho³, Flávio T. Rodrigues⁴, Anna Lúcia C. H. Villavicencio¹.

¹Centro da Tecnologia das Radiações - CTR, Instituto de Pesquisas Energéticas e Nucleares - IPEN, São Paulo, Brazil; ²Departamento de Agroindústria Alimentos e Nutrição, Escola Superior de Agricultura Luiz de Queiroz - ESALQ/USP, Piracicaba, Brazil; ³Departamento de Alimento e Nutrição Experimental, Faculdade de Ciências Farmacêuticas - FCF/USP, São Paulo, Brazil; ⁴Departamento de Ciência dos Alimentos e Tecnologia, Instituto Federal de Educação, Ciência e Tecnologia de Goiás - IFG, Goiania, Brazil

Over the last few years, there was a growth on the import level of fruits in Brazil. Lycium barbarum, also known as goji-berry, is a red berry fruit with oval shape found mainly in Tibet with high importing demands. This berry has a high antioxidant potential and it is sold in Brazil on the dried form to guarantee shelf-life extension and to avoid microbiological contamination. The aims of this study was to evaluate the goji-berry's biocompounds by 2,2-diphenyl-1-picrylhydrazyl (DPPH) scavenging activity and oxygen radical absorbance capacity ORAC assays analyzing the hydroalcoholic and the aqueous extracts processed by radiation. Total phenolics were also determined by the Folin-Ciocalteu assay. In addition, the samples were bought at the retail market in the city of São Paulo (Brazil) and irradiated by electron beam accelerator in the doses of 0, 2.5, 5.0, 7.5 e 10.0 kGy. Thus, an increase significantly in the doses of ionizing radiation in this case did not result in the goji-berry's antioxidant activity.

Lycium barbarum; goji-berry; biocompounds; electron beam; food irradiation