



IRAD eleven

BOOK OF ABSTRACTS

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Dried fruits of *Sorbus torminalis* L. Crantz. as functional food

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Fruits of *Sorbus torminalis* L. Crantz. (Wild service tree) have been traditionally used, fresh or dried, for the production of preserves such as jam, jelly, syrup, compote or tea. Furthermore, these fruits are well known worldwide as a traditional remedy for treating respiratory tract infections, as traditional astringent, diarrheic and antidiabetic agents. As a part of broad research, the aim of this study was to define phenolic profile as well as antioxidant activity of water and methanolic extracts of dried fruits. The presence and content of 44 plant phenolics and quinic acid was determined using LC-MS/MS technique. In order to examine antioxidant potency, few in vitro assays were carried out: DPPH• (diphenylpicrylhydrazyl), HO• (hydroxyl radical), and reducing power (FRAP) assay. In addition, total phenolic and flavonoid contents were determined spectrophotometrically. Among examined compounds, quinic acid (precursor of phenolics) was the most dominant among both samples. Moreover, protocatechuic and ferulic acids were the most abundant amongst phenolics acids. Furthermore, analysis of selected flavonoids showed notable content of amentoflavone as well as quercetin glycosides (quercetin-3-O-glucoside and hyperoside). In applied antioxidant tests, methanolic extract showed the highest antiradical activity. Compared to propyl galate, a well known synthetic antioxidant, both extracts exhibited a potent antioxidant activity. Total phenolic content was significant, especially in methanolic extract, while total phenolic content was low in both extracts. Obtained results indicates a significant antioxidant potential of *S. torminalis* fruits and highly support traditional use of this species in diet, but also points to its use as a functional food.

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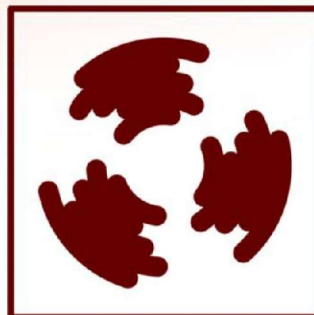
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