

Influence of extraction method on antioxidant properties of *Rheum ribes* root extract

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Abstract. *Rheum* species are important medicinal herbs, often used in pharmacological research, due to the presence of anthracene derivatives in the subterranean parts of the plant. In this study, we intended to assess its antioxidant capacity, in correlation with the method of extraction. For this purpose, *Rheum ribes* extraction was realized with four solvents of different polarities (50% methanol, 70% ethanol, 80% acetonitrile, and petroleum ether). We used different extraction techniques, such as orbital shaker, ultrasonic stirrer, microwave, and Soxhlet extraction, and the total phenolic content of the *Rheum ribes* extracts was determined by modified Folin–Ciocalteu method. The reducing power and radical scavenging activity of the extracts were also evaluated. The results shown that the antioxidant activity of the extracts depends on the extraction methods especially through the used solvent and decreases in the order: ethanol > methanol > acetonitrile > petroleum ether.

Keywords: *Rheum ribes*; antioxidant activity; Folin–Ciocalteu assay; DPPH; FRAP.

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