

Contribution of the biological healthy potential of hydrophilic co-extracted compounds other than betalains and phenolics of green extracts from *Opuntia* spp. fruits

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The *Opuntia* spp. prickly pears are fruits, which provide a great source of betalains (mainly, betacyanins) and phenolic compounds (phenolic acids and flavonoids) that could play an important role in health-promotion. In this work, the contribution of coextracted hydrophilic compounds, such as carbohydrates and vitamin C, to biological activities (antioxidant, antiglycemic and anti-inflammatory) in green extracts from different tissues (whole fruits, peel and pulp) of *Opuntia ficus-indica* (var. *Colorada* and *Blanca*) and *Opuntia stricta* var. *Dillenii* fruits. The *Opuntia* fruit green extracts were obtained by ultrasound-assisted extraction (UAE) using green solvents such as ethanol and water. The *Opuntia* green extracts obtained by this process were rich in betalains and phenolic compounds but also they contained significant amounts of carbohydrates and other compounds such as ascorbic acid that also contribute to the observed biological activities (antioxidant, antiinflammatory and antihyperglucemic). In this work, the cleaning-up of the *Opuntia* green extracts with silica C18-RP chromatography, and the analysis of their chemical composition and biological activities of the obtained fractions was evaluated. In addition, the correlation between these assayed biological activities with the chemical composition (mainly betalains, phenolic compounds, carbohydrates and vitamin C) of each obtained clean-up chromatographic fractions were studied.

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