

Bioaccessibility of rutin, caffeic acid and rosmarinic acid: Influence of the *in vitro* gastrointestinal digestion models

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Abstract

The bioaccessibility and antioxidant activity of rutin, caffeic acid and rosmarinic acid were evaluated using three *in vitro* gastrointestinal digestion models: filtration, centrifugation and dialysis. At intestinal level, a significant degradation of all compounds was observed when results were expressed on concentration basis (mg/mg lyophilised sample), mainly due to the dilution effect that occurs during digestion. However, when results were expressed as absolute amounts (total mg in the digested fraction), this degradation was much lower, or even absent in the case of rutin. Moreover, bioaccessibility (in terms of total mg) was higher in filtration and centrifugation than in the dialysis method. A significant reduction of antioxidant activity was observed after intestinal digestion of the three standards, regardless of the method used. In conclusion, the methodology and units used to report results are two critical parameters to take into account in bioaccessibility studies.