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Effect of processing on *in vitro* bioaccessibility of phenolics, flavonoids and antioxidant activity of vegetables with/without yoghurt

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Many fruits and vegetables are subjected to different home-processing methods prior to consumption. In Turkey, vegetables are traditionally blanched, roasted or freshly consumed with or without yoghurt. In this study, traditional consumption methods of selected vegetables were studied to explore the alteration of nutritional value. Selected vegetables were carrot, celery, red capia pepper and red beetroot. Total phenolics, anthocyanins, flavonoid contents and antioxidant activity were evaluated via spectroscopic and HPLC methods. In the study, fresh, fresh-cut, blanched, and roasted vegetables were investigated either with or without yogurt addition in terms of their Total Phenolic Contents (TPC), Total Flavonoid Contents (TFC), and Total Antioxidant Capacities (TAC) (determined using CUPRAC and DPPH). In addition, *in vitro* bioaccessibility of all these vegetables with/without yoghurt were performed using a simulated gastrointestinal digestion method. According to the results, total phenolic content of carrot, celery, red capia pepper and red beetroot without yoghurt ranged between 23.2-160.5 and by the effect of yoghurt addition these values changed between 20.2-106.5GAE mg/100 g fresh weights. Furthermore, total antioxidant capacities (determined using CUPRAC method) of the samples without yoghurt were found to be 320.5-2175.0, and by the effect of yoghurt addition, these values ranged between 291.5-1056.9 $\mu\text{mol TEAC}/100\text{ g}$ fresh weights. The different values obtained for the samples with and without yoghurt could be as a result of phenolic-protein interactions or changes in dry matter content. Current study provides valuable insights into the protein-phenolic interactions and how this may change during *in vitro* gastrointestinal digestion of vegetables consumed together with yoghurt.

Biography

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