HYTOCHEMICALS AND ANTIOXIDANT ACTIVITY OF “NARANJITA” FRUIT (Citrus mitis)

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ABSTRACT

The naranjita (Citrus mitis) is consumed as fresh fruit or homemade preparations, such as, jam and ice creams. Because it has been scarcely studied, the aim of this study was to analyze the phytochemical compounds, and its antioxidant capacity for the different fruit structural parts (pulp, peel and seed). The vitamin C content was 85.59 and 65.06 mg/100g fw in peel and pulp, respectively. Total phenolic contents for peel, seed and pulp were 395.91, 154.73 and 150.51 mg GAE/100g fw, respectively. Total flavonoids in peel, pulp and seed were 183.80, 76.58 and 53.14 mg QE/100 g fw, respectively. Total carotenoids were 15.39 and 5.93 mg BCE/100 g fw in peel and pulp, respectively. The antioxidant activity (AOC) measured by DPPH method for hydrophilic (HPE) and lipophilic extracts (LPE) was, in peel 606.8 and 62.21 µmol TE/100 g fw, respectively, in pulp, 418.03 and 19.73, respectively, and in seed 138.06 and 9.06, respectively. AOC measured by ABTS method for HPE and LPE was, in peel 1039.86 and 105.42, respectively, in pulp 616.17 and 57.26 µmol TE/100 g fw, respectively, and in seed, 235.50 and 44.32, respectively. AOC measured by ORAC method for HPE was 9670, 2260 and 943 µmol TE/100 g fw for peel, pulp and seed, respectively. Peel exhibited higher levels of AOC and higher concentrations of phytochemical than pulp and seed. According to our results, the peel of naranjita fruit possesses important quantities of nutrimental compounds to be taken into account for dietary purposes.