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Abstract:

The phenolic profile and the antioxidant activity of Rocha pear, a Portuguese pear cultivar, were determined and compared with the commercially available pear varieties Cornice, Abate, General Leclerc and Passe Crassane. Phenolic composition of the methanolic extracts of these pears was determined by high performance liquid chromatography with diode array detection (HPLC-DAD), while antioxidant activities were evaluated using three complementary test systems: DPPH radical scavenging activity, ferric reducing power capacity and beta-carotene/linoleic acid bleaching assay. When compared to the studied varieties, Rocha pear (peel and flesh) presented the highest content of total phenolics. Among them, chlorogenic, syringic, ferulic and coumaric acids, arbutin and (-)-epicatechin were detected as major components. In addition, among the tested varieties, Rocha pear presented the best antioxidant activities in the DPPH and ferric reducing power assays.

Keywords: *Pyrus communis*; Rocha pear; Antioxidant activity; Phenolic profile; HPLC-DAD