

Title Post-harvest chemical and physical–mechanical properties of some apricot varieties cultivated in Turkey

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Abstract

The physical and chemical characteristics of the six samples of apricot (*Prunus armeniaca* L.) fruits were presented in this study. These properties are necessary for the design of equipments for harvesting, processing, and transportation, separating and packing. Technological properties such as length and diameter of fruit, mass, volume of fruit, geometric mean diameter, sphericity, bulk density, fruit density, porosity, projected area, static and dynamic coefficient of friction were determined at 83.27% (Zerdali), 77.79% (çataloğlu), 82.1% (hacıhaliloğlu), 79.79% (hasanbey), 82.31% (soğancı) and 77.37% (kabaası) moisture content. The values of length, mass, geometric mean diameter and sphericity of six different apricot fruits were established between 29.26 mm and 46.98 mm, 14.35–41.48 g, 28.99–41.15 mm, 0.876–0.991%, respectively. The dry matter, ash, crude protein, crude fiber, pH, acidity, water soluble extract and mineral contents of completely matured fruits were investigated. Crude protein, crude oil, crude fiber, ash, water soluble extract, alcohol soluble extract, dry matter, pH and acidity contents of all fruits were established between 2.8% and 4.29%, 0.55–3.12%, 0.77–2.41%, 2.72–5.34%, 48.3–74.7%, 19.9–25.9%, 16.73–22.63%, 4.16–5.23% and 0.17–0.79 (% malic), respectively. Mineral content of apricot fruits cultivated in Turkey were determined by an Inductively Coupled Plasma Atomic Emission Spectrometer (ICP-AES). All fruits contained high amounts of K (20 791–33 364 ppm), P (1436.49–2643.42 ppm), Ca (843.28–1896.53 ppm), Na (773.95–1129.74 ppm) and Mg (402.82–765.62 ppm). As a result, apricot fruit may be useful for the evaluation of nutritional information. Also, these physical properties attribute for the development of processing equipments.