Abstract

Several physical and nutritional properties of jujube fruits (Zizyphus jujuba Mill.) grown in Turkey were investigated. These properties are necessary for the design of equipments for harvesting, processing, transportation, sorting, separating and packing. The average fruit length, width, thickness, the geometric mean diameter, sphericity index, fruit mass, thousand of fruit mass and volume of fruit of jujube fruits were determined as 17.75 mm, 14.81 mm, 14.19 mm, 15.43 mm, 87.56%, 1.26 g, 1139 g and 1.99 cm$^3$, respectively. The bulk density, fruit density and porosity were 380 kg/m$^3$, 639 kg m$^{-3}$ and 39.35%, respectively. The static friction coefficient on galvanized iron sheet, iron sheet, thin plate, wood and rubber were 0.369, 0.528, 0.633, 0.475 and 0.844, the dynamic friction coefficient on the same surfaces were 0.317, 0.475, 0.581, 0.422 and 0.792, respectively. The moisture content, titratable acidity, ascorbic acid, rupture strength and terminal velocity were 20.04%, 0.33%, 118.4 mg/100 g fresh weight, 21.49 N mm$^{-2}$ and 5.44 m s$^{-1}$, respectively. Protein, K, Ca, P, Mg and N amount were 14.13%, 1.12%, 0.21%, 0.12 %, 0.07% and 2.26%, respectively.