

Abstract

The objective of this work was to evaluate the effect of moisture content variation on reduction of superficial area, volume and equivalent sphere diameter of coffee berries. Four varieties of *Coffea arabica* (cv Catuai Vermelho, Catuai Amarelo, Mundo Novo and Catimor) and one variety of *Coffea canephora* (cv Conilon) were used. From the results obtained, it was concluded that moisture content in the coffee berries affects its physical properties causing significant decrease of the superficial area, volume and diameter of the equivalent sphere during a drying process. The varieties of coffee had different shrinkage behaviour. The Conilon coffee had the highest level of berry shrinkage, the volume decreased 35% during the drying process from 1.38 to 0.12 dry basis (d.b.) berry moisture content. The shrinkage behaviour during the drying process was well explained by a polynomial model with coefficient of determination greater than 90%.