

Title            Some Physical Properties of Castor Nut relevant to the Design of Processing Equipment  
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### **Abstract**

Some of the physical properties of castor nut were studied, namely: shape, size, surface area, angle of repose, static coefficient of friction and the behaviour of the nut under compressive loading. Representative samples of plant material were collected from three varieties. The results of the investigation show that the frequency distribution of the size, shape and contact area for nuts of each variety follow a normal distribution curve. The angle of repose of the nut ranges between 25 and 29°. Castor nut Evahura had the highest value of angle of repose. The hardness values for the nuts were 23·6, 25·6 and 70·9 kN/m<sup>2</sup> for castor nut Ojji, Evahura and Asbowu varieties, respectively. The coefficient of sliding friction for each variety of nuts showed varying values on different structural surfaces.