

Determination of Physical Properties of Aonla Fruit (*Embilica officinalis*)

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ABSTRACT

Aonla is one of the most important and vitamin C rich fruit. The moisture content of aonla cultivar viz., Chakaiya and NA-7 were 80.5% and 78.5% respectively. Determining the physical characteristics of Aonla fruits are very important to optimize the design parameters of food processing equipment. The mean values of size, sphericity, aspect ratio, surface area, volume, density, pulp to seed ratio of cultivars Chakaiya and NA-7 were 36.33 mm and 32.95 mm; 95.8% and 94.7%; 90.84% and 88.23% ; 4249.9 mm² and 3601.8 mm²; 28.95 cm³ and 22.56 cm³; 1.06 g/cc and 1.07 g/cc; 21.14 and 15.77 respectively. Based on sphericity value the shape of fruit was classified as spheroid to oblate. The mean values of seed radial diameters of Chakaiya and NA-7 were 13.46 mm and 13.54 mm respectively. The mean seed weight for Chakaiya and NA-7 were 1.40 g and 1.45g respectively. It was observed that the maximum cutting force required for cutting the Chakaiya variety along the stem end side was 8.4 to 9.9 kgf . While, the force required for cutting the NA-7 variety along the stem end side was estimated to be 8.6 to 11.8 kgf .

Key words : Aonla fruit, Aspect ratio, Physical properties, Sphericity.