Physicochemical characteristics of Carissa congesta fruit during maturation

ABSTRACT

Carissa congesta is a straggling semi-vine and underutilized indigenous shrub belonging to family Apocynaceae. The fruit is very tempting due to its clustered forms with attractive colors ranged from white-pinkish, pinkish-red, dark red, purplish-red and dark purple throughout the growth. A study was conducted to determine changes in physicochemical characteristics of C. congesta during maturation at week 8, 10, 12, 14 and 16. The experiment was arranged in a completely randomized design with three replications. The result displayed the lightness and chromaticity of C. congesta peel decreased significantly as fruit matured. There were apparent changes in hue values resulting in a color transition from red to purple as maturation progressed. With increasing maturity, there were abrupt declines in firmness, titratable acidity and vitamin C. These changes were associated with considerable increases in soluble solids concentration and pH. The knowledge of the changes in mentioned traits would be a useful guide for growers to determine optimal harvesting time for C. congesta fruit.

Keyword: Color; Firmness; Soluble solids concentration; Vitamin C; Titratable acidity