

Cassava (*Manihot esculenta* Crantz) is a cyanogenic plant which is toxic when consumed without sufficient processing. Cassava is characterized by the presence of linamarin, a cyanogenic glycoside which can be hydrolyzed by endogenous linamarase enzyme to release hydrogen cyanide, in a process known as cyanogenesis. The study determined levels of cyanide in the sweet cassava variety collected from different districts in Kenya. Determination of cyanide contents of cassava was carried out spectrophotometrically using modified picrate paper method. Levels of cyanide in cassava varied significantly ( $p < 0.05$ ) ( $n = 324$ ) across the geographical location. Cyanide content of cassava from Kakamega was highest [ $80.79 \pm 4.55$  mg hydrogen cyanide (HCN) equivalents/kg of fresh cassava weight] followed by those from Kitui ( $70.46 \pm 2.21$  mg HCN equivalents/kg of fresh cassava weight), while cassava from Kisii had the lowest cyanide concentration ( $43.27 \pm 3.75$  mg HCN equivalents/kg of fresh cassava weight). The cyanide concentrations of cassava from the rest of the regions such as Nairobi and Thika fall in the middle,  $66.00 \pm 2.12$  and  $54.84 \pm 6.5$  mg HCN equivalents/kg of fresh cassava weight respectively. Nonetheless, the cyanide contents of cassava from the sampled regions were greater than the accepted level (10 mg/kg) by the World Health Organization (WHO).