

## Abstract

The honey consumed in most of Africa is harvested from traditional hives and processed using traditional methods. This work presents the quality characteristics of honey samples (n = 72) processed using traditional methods and on sale in various important beekeeping zones in Kenya: West Pokot, Baringo, Mwingi, Tana, North Kinangop, Mbeere, Nandi Hills, Mida Creek, Kakamega and Taita. The quality of the honey was compared to international standards as proposed in the Codex Alimentarius. The quality markers analyzed were moisture, hydromethylfurfural (HMF), sugar content, diastase, proline content, and free acidity. Moisture was determined using a honey refractometer, HMF and Diastase content were determined through spectrophotometry, sugars were determined by High Performance Liquid Chromatography (HPLC), proline was determined through spectrophotometry and free acidity quantified by volumetry - titration technique. Average constituent values were at 16.00 - 21.20% (moisture); 3.70 - 389.36 mg/kg (HMF); 20.83 - 300.6 mg/kg (proline); 8.03 - 56.98 Schade units (diastase); 57.03 - 102.66% (fructose and glucose levels) and 18.00 - 71.85 50 mg/kg (free acidity). Most of the samples had constituent levels within the limits set in the Codex Alimentarius. Traditional honey harvesting and processing methods seem not to have negative effects on the major honey constituents. However, excessive smoking during harvesting had compromised the aroma and flavour of some samples. In an effort to promote beekeeping as an eco-friendly, sustainable alternate source of livelihoods, training in best apiculture practices, improved extension services and establishment of honey marketplaces is being done to improve honey quality in Kenya.