

## **ABSTRACT**

An experiment was conducted to determine amino acid and fatty acid profile of indigenous chicken reared in Kenya under a free range feeding system. Five cocks of each ecotype were purchased, slaughtered and transported to JKUAT and Durban University of Technology, within 12 and 24 hours respectively in an insulated box containing ice. Amino acid profile was estimated using Pico Tag by hydrolysis with acid for 24 hours, derivatized and analyzed by reverse phase HPLC. Fatty Acid Methyl Esters (FAME) were synthesized by a direct/one-step extraction transesterification method. FAME were then separated and quantified using gas chromatography. The amino acid and fatty acid profile of indigenous chicken in Kenya was affected by the ecotype as well as the part of the chicken (breast or thigh). The amino acid profile of experimental chicken revealed values higher than the RDA. The ratio of  $\omega$ -6: $\omega$ -3 though higher than 4:1, demonstrated that the consumption of indigenous free ranging chicken meat is likely to give favourable health outcomes.