

COMPARATIVE ANALYSIS OF THE CHEMICAL COMPOSITION OF THE HAEMOLYMPH, FLESH AND THE MICROFLORA CONTENT OF THE GUTS OF SOME AFRICAN LAND SNAILS IN ABEOKUTA, NIGERIA

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Abstract

Comparative analyses of the biochemical composition of the haemolymph, proximate composition of the flesh and the microbial content of the guts of some African land snails: *Archachatina marginata*, *Achatina achatina*, *Achatina fulica* and *Limicolaria aurora* found in Abeokuta were carried out. Analysis of the haemolymph revealed that *A. achatina* and *L. aurora* recorded the highest concentrations of glucose, protein, Ca^{2+} , Na^+ , Cl^- , and PO_4^{3-} , while *A. marginata* had the highest lipid content (30.80mg/dl). Proximate analysis of the flesh, however, showed that *A. marginata* had the highest protein content (16.08g/100g) and dry matter content (27.61g/100g) while *L. aurora* had the least protein content (7.67g/100g). The highest carbohydrate, crude fibre, fat and ash contents of the flesh were recorded for *L. aurora*. Despite their different locations (Kuto, Iberekodo, Osiele and Alabata), there were close similarities in the range of gut microflora. A positive correlation ($r = 0.88$, $P < 0.01$) was obtained between liveweight and total protein content of the flesh suggesting that the protein content of snails available for human consumption might be dependent on their live weights.