

Assessment of Proximate Composition and Heavy Metal in *Vigna unguiculata* (White Beans) Sold in Kazaure Market, Jigawa State, Nigeria

Authors : Abdu Umar Adamu, Saidu Akun Abdullahi, Al-Hassan Muhammed, Hamisu Abdu

Abstract : Leguminous plants such as beans have been considered as a source of protein in this present work. The proximate analysis on beans (*Vigna unguiculata*) were determined in order to identify the nutritional content as well as presence of some heavy metals accumulation in washed and unwashed beans (white Beans) sold in Kazaure market Jigawa State Nigeria. On the average comparative analysis, the result has indicated that, the *Vigna unguiculata* had protein content of 61.1%, fibre 4.5%, ash 10.4%, moisture 5%, carbohydrate 15.8% and total lipid 4.9%, therefore it could be suggested that beans has enough nutritional content that helps the people health. The heavy metal analysis of unwashed white beans showed that Fe (17.37 ± 6.71)mg/kg had the highest concentration followed by Zn (6.41 ± 3.09), Cu (5.69 ± 2.42), Cd (0.46 ± 0.65) and Pb (0.57 ± 0.94)mg/kg , while the washed beans shows that Zn (0.11 ± 0.17), Fe (0.01 ± 0.006), Cd (0.02 ± 0.01), Cu (0.03 ± 0.021), Pb (0.01 ± 0.006)mg/kg. The washed white beans are safe for consumption and also the concentration of heavy metal are negligible and of nontoxic effect to human health.

Keywords : white beans, protein, proximate composition, heavy metal

Conference Title : ICCIS 2016 : International Conference on Chemical Industry and Science

Conference Location : Jeddah, Saudi Arabia

Conference Dates : January 26-27, 2016