Uduak Luke et al., J Clin Toxicol 2016, 6:6(Suppl)
http://dx.doi.org/10.4172/2161-0495.C1.021

Assessment of levels of heavy metals in fluted pumpkin (*Telfairia occidentalis*) leaves planted at varying distances away from mega refueling service stations in Nigeria

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Bioaccumulation of heavy metals has been reported to be common in leafy vegetables planted in gardens located at 20 meters away from traffic-congested highways, automobile mechanic workshops and refueling service stations. This study assessed the level of some heavy metals in the leaves of fluted pumpkin (*Telfairia occidentalis*) planted at varying distances (10, 20, 30, 40 and 50 m) away from mega refueling service stations (MRSS) in three Southern Nigerian States. The leaves harvested after three months of planting were processed using standard procedures for heavy metals determination. The heavy metals (Pb, Ni, Mn, Cd, and Zn) were determined following standard atomic absorption spectrophotometric methods. The results showed that the levels of Pb, Cd and Ni accumulated in the leaves were significant ($p<0.05$) between, but not within, the different distances. Also, the levels of the heavy metals recorded in these leaves followed the order: 10 m>20 m>30 m>40 m>50 m. However, the levels of these heavy metals in the leaves planted at 10 and 20 m away from MRSS were significantly ($p<0.05$) higher, compared to the levels recorded for 30, 40 and 50 m, respectively. These observations indicated that planting of *Telfairia occidentalis* leaves within 20 m distance from MRSS is likely to expose the leaves to the risk of heavy metals contamination and bioaccumulation and; the vegetables planted within this range from MRSS may be hazardous for human consumption. Therefore, it may be concluded that it is safer to cite farmlands for *Telfairia occidentalis* beyond 30 m from MRSS to reduce the rate of exposure to MRSS-related heavy metals contamination, and bioaccumulation of the heavy metals in the leaves.

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