# ELEMENTAL, PHYTOCHEMICAL AND PROXIMATE ANALYSIS OF SOLANUM AMERICANUM MILL. (SOLANACEAE) LEAVES CONSUMED IN BALI, TARABA STATE, NIGERIA: ASSESSMENT OF NUTRITIONAL VALUE.

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**Abstract** – Solanumamericanum is a vegetable as well a medicinal plant belonging to the family Solanaceae. The leaves of Solanumamericanum have been studied for their minerals (elemental), phytochemical and proximate (nutrient) components. All analyses have been carried out by the use of standard analytical methods. Mineral composition had been determined via ashing technique using furnace at $550^0$C and the ash received was dissolved in dilutehydrochloricacid. Sodium, potassium and calcium wereevaluated by the use flame photometric methods and iron was estimated using UV spectrophotometer. For proximate analysis, the moisture content was estimated through oven drying approach and protein content wasevaluated via the micro-Kjeldahl technique. Neutralization and dry technique was used for crude fiber determination and crudelipid was determined using cold extraction method. The phytochemical constituents, saponins, phytates, flavonoids, alkaloids and oxalates were estimated using titrimetric techniques whilst tannins were evaluated using spectrophotometric method. The results obtained confirmed a moisture content, ash content, crude fibre, crudelipids, crudeprotein and carbohydrates of 6.76%, 10.00%, 13.30%, 7.50%, 4.70% and 57.74% respectively. The minerals (elemental) evaluation showed the presence of potassium, calcium, iron and sodium, in order of decreasing concentration of 6.229% (62290mg/L), 1.846% (18460mg/L), 0.091% (910mg/L) and 0.005% (50mg/L) respectively. The phytochemical constituents confirmed the concentration of tannins, saponins, phytates, flavonoids, alkaloids and oxalates to be0.40 mg/100g, 2.00 %, 32.79 %, 16.00 %, 9.90 % and 6.30 mg/100g respectively. From the outcomes, it could be concluded that the leaves of Solanumamericanum comprise of someuseful nutrients, mineral and secondary metabolites justifying the medicinal popularity and viable efficiency of the plant components. Assessing the effects, the plant is nutritive thus the presence of some anti-nutritive components like tannins, saponins, phytates, flavonoids, alkaloids and oxalates.