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Assessment of antioxidant capacities and phenolic contents of Nigerian cultivars of onions (*Allium cepa* L) and garlic (*Allium sativum* L)

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This report assessed and compared the antioxidant potentials, quantities of ascorbic acid and phenolic compounds in methanolic extract of varieties of onions and garlic cultivars in Nigeria. The pH and total acidity of the extracts were equally determined. Antioxidancy of the cultivars were analyzed using the *in vitro* assay techniques with 2,2-diphenyl-1-picryl Hydrazyl (DPPH) free radical scavenging and ferric reducing capacity. Ascorbic acid phenol content was determined by volumetric and Folin-Ciocalteu's method respectively. The pH and total acidity were respectively 5.65 and 0.150mmol/L (red onion), 5.69 and 0.123mmol/L (white onion) and 6.94 and 0.105mmol/L (garlic). Red onion had the highest value of total phenols, ascorbic acid and free radical scavenging activity of 14.25±0.35mg GAE/ml, 229.098mg/100g, 66.44% respectively. In DPPH assay, red and white onion showed higher tendency to inhibit auto-oxidation when compared to garlic. The ferric reducing ability was greatest in garlic and least in white onions. These data indicate that with respect to antioxidant activity, red onion variety has highest health promoting potential among others.

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