

Nutritional Compositions and Antioxidant Properties of Typical Urhobo Nigerian Soups

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Abstract

In this study, the nutritional compositions and antioxidant properties of six typical Urhobo (Nigerian) soups; Amiedi (Elaeis guineensis extract), Palm oil ('Oghwo-evwri'), Egusi (Citrullus lanatus)–Okro (Abelmoschus esculentus) soup ('Emuigari-ishavwo'), Pepper (Iribo-erhare), Egusi-vegetable ('Emuigarifo'), and Egusi-Pepper ('Ovwovwo') were investigated. The results show that the typical Urhobo soups were rich in protein and contained extremely low concentrations of reducing sugars. The highest concentrations of high density lipoprotein (HDL)-cholesterol (7.35 ± 0.25 mg/ml), low density lipoprotein (LDL)-cholesterol (1.19 ± 0.67 mg/ml), and triglycerides (6.67 ± 0.29 mg/ml) were observed in 'Ovwovwo', 'Amiedi' and 'Emuigari ishavwo', respectively. The 2,2-diphenyl-1-picrylhydrazyl (DPPH) radical scavenging assay results showed that all the soup samples exhibit high antioxidant properties. Also, the highest radical scavenging effect was observed in Amiedi and Emuigari-ishavwo soups. The high amount of phenolic and flavonoid compounds in the soups is a measure of their antioxidant capacities. The soups are not only nutritious but also health protective.

Keywords: Typical Urhobo soups, Nutritional compositions, Phenols, Flavonoids, DPPH radical, Antioxidant activity.

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