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Effect of drying methods on the physicochemical properties of waterleaf (Talinum triangulare)

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# **Abstract**

This study investigated the effects of sun drying and oven drying at three different temperatures (60 0C, 70 0C and 80 0C) on the physicochemical and sensory properties of waterleaf (Talinum triangulare). About 2000 g of freshly harvested leaves were obtained, sorted, chopped into small pieces and sub-divided into five portions of 400 g each; with one portion used for initial analysis, while the remaining four portions were sundried and oven-dried at 60, 70 and 80 0C respectively. Panelists were assigned to assess the samples as well. The results of the proximate composition of the samples showed that moisture content ranged from 6.14 to 92.53% (49.34); ash content, 1.03-21.9% (11.47); crude fat, 1.13-5.89% (3.51); crude fibre, 3.59-6.21% (4.9) and crude protein, 2.73-32.29% (17.51). The mineral content of the samples showed that phosphorus content ranged from 92.43-265.59 mg/100 g (179.08); iron content, 0.10-4.50 mg/100 g (2.30); calcium content, 9.26-89.76 mg/100 g (49.51); zinc content, 0.06-5.15 mg/100 g (2.61) and potassium content, 65.54-108.11 mg/ 100 g (86.83). Ascorbic acid content ranged from 13.70-24.90 mg/100 g (19.3). The result of the sensory evaluation showed that oven-dried samples at 60 0C was significantly preferred to others. It is therefore concluded that waterleaf could be best dried using oven drying method at 60 0C, in order to retain much of the nutritional and sensory properties.

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