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Extraction of oil from water melon seeds using drying method (sunlight and oven)

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This study was conducted to investigate the effect of two drying methods (sunlight and oven) on the quality and quantity of oil from watermelon (*Citrillus lanatus*) seeds. The oils produced were used to fry yam chips. The water melon seeds were removed from the pod and washed, the dried seeds (sun-dried or oven-dried) were de-hulled, dry milled into fine crumbs using blender. The powdered product was later put into pestle machine for extraction of oil. Result shows that there was no significant difference in the quantity of oil obtained from either of the samples. The sun-dried sample yielded 40% of oil/100 g of seeds, compared to the oven-dried samples which yielded 37% of oil/100 g of seeds. However, it was observed that Free Fatty Acid (FFA) and acid value were higher in sun-dried sample relative to oven dried sample. Free fatty acid value for sun dried sample was 3.3 mg KOH/g and oven dried sample was 2.2 mg KOH/g. This is important variable considering the quality of oil because the lower the FFA, the better the quality of the oil. Crude protein in the seed was 26%, which compared favorably with high proteins seeds and nuts like cowpea (22.7%) and soy beans (35%). The results show that there is no significant difference between the samples. The result of sensory property using student t test revealed that (f) calculated at $p < 0.05$ and $p < 0.01$ are 2.101 and 2.878, respectively from the result; there is no significant difference between the values.

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