

## Physicochemical Analysis of Soxhlet Extracted Oils from Selected Northern Nigerian Seeds

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**Abstract :** The aim of the present study is to investigate the potential use of the selected seed oils. The oil was extracted using Soxhlet apparatus and the physicochemical characteristics of the oil determined using standard methods. The following results were obtained for the physicochemical parameters analysed: for Egusi seed oil, Oil yield 53.20%, Saponification value  $178.03 \pm 1.25$  mgKOH/g, iodine value  $49.10 \pm 0.32$  g I<sub>2</sub>/100 g, acid value  $4.30 \pm 0.86$  mgKOH/g, and Peroxide value  $5.80 \pm 0.27$  meq/kg were obtained. For Pawpaw seed oil, Oil yield 40.10%, Saponification value  $24.13 \pm 3.93$  mgKOH/g, iodine value  $24.87 \pm 0.19$  g I<sub>2</sub>/100g, acid value  $9.46 \pm 0.40$  mgKOH/g, and Peroxide value  $3.12 \pm 1.22$  meq/kg were obtained. For Sweet orange seed oil, oil yield 43.10%, Saponification value  $106.30 \pm 2.37$  mgKOH/g, Iodine value  $37.08 \pm 0.04$  g I<sub>2</sub>/100g, acid value  $7.59 \pm 0.77$  mgKOH/g, and Peroxide value  $2.21 \pm 0.46$  meq/kg were obtained. From the obtained values of the determined parameters, the oils can be extracted from the three selected seeds in commercial quantities and that the egusi and sweet orange seed oils may be utilized in the industrial soap production.

**Keywords :** Carica papaya, Citrus sinensis, physicochemical, iodine value, peroxide value

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