Effects of two different processing methods on chemical composition and dry matter losses of *Hibiscus sabdariffa* L. (Roselle) seeds


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**Target Audience:** Nutritionists, Feed manufacturers

**Abstract**

This study was carried out to evaluate effects of processing methods on chemical compositions and dry matter losses of *Hibiscus sabdariffa* L. seeds. Two processing methods (cooking and sprouting) with each having three different durations were adopted. There were seven treatments with unprocessed *H. sabdariffa* (control) and three cooking duration methods (30min, 60min and 90min) and three sprouting duration methods (3days, 6days and 9days) with each treatment having three replicates in a Completely Randomized Design (CRD). Results indicated that there was a significant (p < 0.05) differences observed for the mean values in all the parameters except dry matter. The dry matter losses of the processed seeds increased (p <0.05) in sprouting and cooking with time, There was an (p < 0.05) increase in crude proteins and ash contents for the two processing methods but a (p < 0.05) decrease was observed for ether extract and fiber fractions. In addition, a (p < 0.05) decrease was observed for phytate contents in both processing methods. However, a (p < 0.05) decrease was observed for tannin content in cooking, whereas sprouting showed a significant increase in tannin levels. The cooking (p < 0.05) declined the oxalate content in *H. sabdariffa* seeds, and sprouting on a contrary had no effect on it. There was an (p < 0.05) increase in Phosphorus and Iron concentrations but a (p < 0.05) decrease was observed for magnesium and potassium concentrations as compared to the unprocessed seeds. It could be concluded that the two processing methods improved the nutritional quality of *H. sabdariffa* seeds, with some amount of losses in dry matter.

**Key words:** Cooking, Sprouting, Chemical compositions, Mineral contents, Anti-nutrients, Dry matter losses