

## **Influence of Cooking on the Functional Properties of Dioscorea Schimperiana During Chips Production**

**Authors :** Djeukeu Asongni William, Leng Marlyse, Gouado Inocent

**Abstract :** Background: Process for obtaining D. schimperiana chips involves a long period of cooking followed by drying of obtained products in the sun. Such a process could induce the modification of the functional properties of the chips, thus reducing the technological uses of these products. This study was conducted with a view to assessing the impact of this process on the chips of D. schimperiana. Methods: The chips used were purchased in Baham, Bamendjou and Bagangté markets during the month of February 2013. A representative sample of each market chips was formed by mixing the chips of several sellers. The control sample consisted of fresh yams that have been sliced to the average size of local chips then dried in the oven at 45 ° C for 36 h. On each sample was performed the analysis of the physico-chemical properties (carbohydrates, lipids, proteins, iron , phosphorus, reducing sugars, ash and total starch) and gelling properties both with and without inhibitor alpha-amylases (0.018 and 0.146 mol / l). Results: Results show that the levels of ash 2.99 g / 100gms, iron 1.01 g / 100gms and phosphorus 532.06 mg / 100gms fresh sample were significantly higher than those of the products obtained in the traditional process. The functional properties of the chips obtained from different methods shows that the peak viscosity of the fresh sample is larger than the other samples with or without inhibitor. In addition, the fresh sample has the lowest breakdown under the same conditions. Conclusion: These results show that traditional process reduces technological potential of chips, thus limiting the value of D. schimperiana.

**Keywords :** Dioscorea schimperiana, chips, functional properties, technological properties, valorization

**Conference Title :** ICNFS 2015 : International Conference on Nutrition and Food Sciences

**Conference Location :** Zurich, Switzerland

**Conference Dates :** July 29-30, 2015