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Aflatoxin Contamination, Phenolic Contents Concentration in Tigernuts as Affected by Traditional Household Processes.

Mohamed H. H. Roby, **Samah, A. Abd-Eltwab** and A. M. A. El Fakhrany.

Food Science and Technology Department, Faculty of Agriculture, Fayoum University.

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Abstract

Most of the physical methods used in preparing tigernuts tubers have variable effects on its phenolic content, antioxidant activities and aflatoxins (AFs) contamination. Effects of immersing in boiling water (blanching), soaking at $25 \pm 5^\circ\text{C}$ and roasting at $130 \pm 5^\circ\text{C}$ on the content of aflatoxin, concentration of phenolic compounds and antiradical activity of tigernuts were studied. Results showed that blanching in water showed the highest reduction on phenolic compounds than roasting and soaking. Antioxidant potency estimated by DPPH and ABTS assay demonstrated a similar pattern. The effect of blanching, roasting and soaking on reduction of AFs in artificially contaminated tigernuts were respectively, 30, 70 and 12.95%. In general, these methods reduce AFs concentrations significantly, but do not eliminate them completely.

عميد الكلية

رئيس مجلس القسم

أ.د/ منى عبد

أ.د/ عوض عبد التواب محمود

التواب الخشاب