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Effect of preparation methods on chemical composition and aflatoxin content of peanut products

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Peanut production in Indonesia is predominantly used for food, hence the nutritional aspects and aflatoxin contamination in peanuts is essential in terms of food security and food safety. The chemical composition and aflatoxin content of selected peanut food products prepared from different methods therefore was studied. The peanut pods harvested from farmer practices in Ponorogo, East Java province were stored for one month then the kernels were prepared into deep-fried peanut, pressed-fried peanut, peanut sauce (bumbu pecel), peanut press cake (bungkil), fermented peanut press cake (tempe kacang) and deep-fried tempe kacang. Observations included the physical and chemical characteristics of peanut kernels, chemical composition of peanut products and aflatoxin content using ELISA method. The results showed that peanut kernels contained 26.3% of protein (dw) and 50.4% of fat (dw) with a relatively low amount of aflatoxin B1 (9.1 ppb) due to low moisture content (5.6%), no *A. flavus* infection and high sound/ intact kernels (73.1%). Peanuts prepared into tempe kacang showed the highest increase in protein content followed by fried tempe kacang, peanut press cake and pressed-fried peanut while fat content decreased in all products. The preparation of deep-fried and pressed-fried peanuts decreased aflatoxin B1 by 26.4% and 41.8% respectively while no significant differences were noted in peanut sauce and peanut press cake preparation. Aflatoxin B1 was two-fold higher in tempe kacang, however it significantly decreased by 38.9% after deep-fried. Excluding tempe kacang, all peanut products contained aflatoxin B1 below the national permitted maximum level (15 ppb), therefore safe for consumption.

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Prospective induction of peripheral neuropathy by the use of tartarian buckwheat

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Tartarian Buckwheat is an effective hypoglycemic medicinal herb. Its main active ingredients are flavonoids. We report here 5 cases of new onset polyneuropathy with dyskinesia prospectively induced by tartarian buckwheat products. Clinical and electrophysiological evidence along with laboratory tests were reviewed and analyzed. All patients were male, with an average age of 52.2±10.9 years old (range: 40–66 years) and had arecent history of using tartarian buckwheat for diabetes therapy. The average time of use was 2.5±1.0 months (range: 1.5–4 months). The average duration of the clinical coursewas 0.9±0.2 months (range: 0.5–1 months). Symptoms included numbness and weakness of the limbs (5/5, 100%), hoarseness (4/5, 80%), dysphagia (1/5, 20%), bilateral facial paralysis (1/5, 20%), urinary disorders (3/5, 60%) and gonadal abnormality (4/4, 100%). Nerve conduction studies suggested more severe damages in motor nerves than sensory nerves. All the patients showed abnormality on Von Frey filaments determination. Hence, tartarian buckwheat products may cause toxic peripheral nerve lesion and the use of herbal medication needs to be better regulated and closely monitored.

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