

Title Nutritional composition and antinutritional factors of mung bean seeds (*Phaseolus aureus*) as affected by some home traditional processes

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Abstract

The effects of some domestic traditional processes, such as dehulling, soaking, germination, boiling, autoclaving and microwave cooking, on the nutritional composition and antinutritional factors of mung bean seeds were studied. Germination and cooking processes caused significant ($p<0.05$) decreases in fat, carbohydrate fractions, antinutritional factors and total ash contents. All processes decreased the concentrations of lysine, tryptophan, threonine and sulfur-containing amino acids. However, all treatments were higher in total aromatic amino acids, leucine, isoleucine and valine contents than the FAO/WHO reference. Dehulling, soaking and germination processes were less effective than cooking processes in reducing trypsin inhibitor, tannins and hemagglutinin activity contents. Also, germination was more effective in reducing phytic acid, stachyose and raffinose. Germination resulted in a greater retention of all minerals compared to other processes. In vitro protein digestibility and protein efficiency ratio were improved by all processes. The chemical score and limiting amino acids of mung bean subjected to the various processes varied considerably, depending on the type of process.