

The extraction of different proteins in selenium enriched peanuts and their antioxidant properties

Abstract

In this study, the selenium enriched peanuts and the different solubility proteins extracted from them were investigated. The dried defatted selenium enriched peanuts (SeP) powder (0.3147 $\mu\text{g/g}$) had a 2.5-fold higher mean total selenium concentration than general peanuts (GP) powder (0.1233 $\mu\text{g/g}$). The SeP had higher concentration of selenium, manganese and zinc than that of GP, but less calcium. The rate of extraction of protein was 23.39% for peanuts and alkali soluble protein was the main component of protein in SeP, which accounted for 92.82% of total soluble protein and combined selenium was 77.33% of total selenium protein. In different forms of proteins from SeP, the WSePr due to higher concentration of selenium had higher DPPH free-radical scavenging activity, higher reducing activity and longer induction time than other proteins.