

Abstract

Protein concentrate with 69.5% protein was prepared from defatted (Ibbaa99) bread wheat bran, Protein concentrate was degradation by pancreatic Trypsin enzyme at optimum condition (pH 8, 2ml/volume recording (400) enzymatic unit for 4 hours duration time with degree of decomposition of 19.8%. The separation of protein hydrolysate by gel filtration chromatography gave many peaks, three peaks represented peptide of a concentrate of (0.234, 0.546, 0.789) mg/ml respectively and their molecular weight (1-7) k Dalton. Immune activity was tested by experimented mice BAB/c All the hydrolysates can activate the proliferation of mice splenocytes and the values of SI (0.26-0.59) (in stimulated cells with Con A) were significantly different from the control indicating its higher immunomodulation activity with synergistic of Con A. The poly peptide 3 showed higher immunomodulation activity. The isolated peptides showed that the greatest antioxidant capacities measured by either the reducing power or the DPPH radical-scavenging were gained (54.8, 70.1, 75.6)% for three fraction respectively. This antioxidant poly peptide showed high reducing power per unit, hydroxyl radical scavenging ratio and Cu²⁺ chelating ability (32.6, 45.9, 87.9)% and inhibition activity for ABTS radical (12.6, 35.9, 57.9)% and estimate Trolox concentration (0.345, 0.467, 0.560) μmol