

Almond (*Prunus dulcis* L.) protein quality.

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Abstract:

Three marketing varieties of almonds; Carmel, Mission, and Nonpareil; were analyzed for proximate composition and protein nutritive quality. Moisture, lipids, protein, ash, sugars, and tannins ranges were 3.05-4.33%, 43.37-47.50%, 20.68-23.30%, 3.74-4.56%, 5.35-7.45%, and 0.12-0.18%, respectively. No detectable hemagglutinating and trypsin inhibitory activities were present in Carmel, Mission, and Nonpareil almonds. Amino acid analyses indicated the sulfur amino acids (methionine + cysteine), lysine, and threonine to be the first, second, and third limiting amino acids in almonds when compared to the recommended amino acid pattern for children 2-5-year old. However, compared to the recommended amino acid pattern for adults, sulfur amino acids were the only limiting amino acids in almonds tested. True Protein Digestibility (% TPD) values for Carmel, Mission, and Nonpareil were 88.55 ± 1.26 , 92.25 ± 1.05 , and 82.62 ± 1.47 , respectively. Protein Digestibility Corrected Amino Acid Scoring (PDCAAS) values suggested almond proteins to be of poor nutritional quality.