

A review of composition studies of cultivated almonds: Macronutrients and micronutrients.

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Abstract:

Prunus dulcis, the cultivated sweet almond, has long been recognized as a source of nutrients in many traditional diets, and is increasingly promoted as a healthy snack and ingredient. This paper reviews the global research over the past 50 years that has contributed to knowledge on the composition and characterization of almond macronutrients and micronutrients, specifically the lipids and fatty acids, proteins and amino acids, carbohydrates (including dietary fiber), minerals and vitamins. Tables providing an overview of major macronutrient and micronutrient contents (range of means per 100 g) as reported for almonds grown in various production regions are presented. Considerable variability in lipid content has been reported within and among commercial varieties and breeding selections; total lipids range from 25 to 66 g/100 g almonds (fresh weight). Oleic and linoleic acids account for about 90% of total lipids, and saturated fatty acid levels are very low (<10%) in all varieties from all regions. However, oleic/linoleic acid ratios vary widely among varieties. Total protein contents range from 14 to 26 g/100 g almonds. α -Tocopherol is the major vitamin E isomer in all almond varieties assessed; β -, γ - and δ -tocopherols are minor components. Published data on total dietary fiber (TDF), minerals and other vitamins in almonds are limited.