

Fatty acid composition of California grown almonds.

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Abstract:

Eight almond (*Prunus dulcis* L.) cultivars from 12 different California counties, collected during crop years 2004 to 2005 and 2005 to 2006, were extracted with petroleum ether. The extracts were subjected to GC-MS analyses to determine fatty acid composition of soluble lipids. Results indicated palmitic (C16:0), oleic (C18:1), linoleic (C18:2), and α -linolenic (C18:3) acid, respectively, accounted for 5.07% to 6.78%, 57.54% to 73.94%, 19.32% to 35.18%, and 0.04% to 0.10%; of the total lipids. Oleic and linoleic acid were inversely correlated ($r = -0.99$, $P = 0.05$) and together accounted for 91.16% to 94.29% of the total soluble lipids. Statistically, fatty acid composition was significantly affected by cultivar and county.