

The Effect of Roasting and Frying on Fatty Acids Profile and Antioxidant Capacity of Almonds, Pine, Cashew and Pistachio in Jordan

Hadeel Ghazzawi and Khalid AL-Ismael
The University of Jordan, Jordan

The aim of this study was to evaluate the effect of frying and roasting on the fatty acids profile and antioxidant activity of selected nuts (almonds, pine, cashew and pistachio) in Jordan. Raw and roasted nuts were purchased from 2 major local stores in Amman Jordan. Sample of raw nuts were fried according to the Jordanian homemade way. The three forms of nuts had been analyzed for fatty acids profile and antioxidant capacity. The results showed that frying almonds decreased significantly oleic acid (OL) and oxidative stability presented by 1,1-Diphenyl-2-picryl-hydrazyl (DPPH) values as compared to raw and roasted almonds ($p < 0.05$). Saturate fatty acid content (SFA) of fried and roasted almonds significantly increased as compared to raw almonds ($p < 0.05$). Frying and roasting pine lead to a significant increase on the total phenolic compounds and SFA as compared to raw pine. Roasting decreased significantly the linoleic acid (LA) and α -linoleic acid (ALA) (essential fatty acids) contents of pine ($p < 0.05$). Roasting cashew decreased the DPPH and LA significantly and increased the SFA significantly ($p < 0.05$). Frying cashew decreased DPPH, LA and OL significantly as compared to raw cashew. Flavonoid content of roasted pistachio increased significantly as compared to raw and fried pistachio ($p < 0.05$). In conclusion, the responses of selected nuts to roasting and frying process according to the Jordanian cuisine were varied. Frying enhances a fatty acids profile. Roasting stimulates antioxidant capacity on nuts type.

Biography:

Hadeel Ghazzawi is an Assistant Professor, at University of Jordan; Amman, Jordan (March. 2016 - present): • Member of Department of Nutrition and Food Technology, Faculty of Agriculture Full-Time Lecturer, The University of Jordan; Amman, Jordan (Sep. 2013 -Feb 2016 Department of Nutrition and Food Technology, Faculty of Agriculture Full Time Lecturer, at Al-Kala Moon University; Daratiah Damascus, Syria (Dec. 2006 - Sep. 2008) • Department of Nutrition and Food Science. Health Sciences College Dietician and Nutritional Consultant, Nutrition and Diet Centre; Jeddah, Saudi Arabia (Aug. 2005 - Nov. 2006) Nutritional Lecturer and Educator, Abbott; Jeddah, Saudi Arabia (Jan. 2001 -Jul. 2001) • Providing training and educational materials and sessions for hospitals and health clinics in topics in babies, lactating and pregnant women food. Education Doctoral, Nutritional Science, University of Vienne; Austria (2008 - 2011)