

Appendix 2

Search strategies for paper on irradiated fruits and vegetables

Published literature was searched using EBSCOhost for studies investigating the effects of irradiation on nutrient content of fruits and vegetables. EBSCOhost searches the following databases: Food Science Source, FSTA - Food Science and Technology Abstracts, MEDLINE, MEDLINE with Full Text, EconLit with full text, and SocINDEX with Full Text.

Searches were conducted using the following terms:

- “fruit or vegetable name” and “irradiation” and (“nutrient” or “vitamin”)
- “fruit or vegetable name” and “irradiation” and (“ascorbate” or “ascorbic acid” or “ascorbic” or “vitamin C”)
- “fruit or vegetable name” and “irradiation” and (“carotene” or “carotenoid” or “vitamin A”)
- “irradiation” and “folate”
- “irradiation” and (“vitamin E” or “tocopherol”) and (“vegetable” or “fruit”)

Hand searching of reference lists from review articles and articles found using the above search terms was also used to extend publications included in the review.

In addition, other relevant studies were identified and sourced from:

- The reference lists of
 - Three recent review articles specifically focused on the effect of irradiation on fruit and vegetables (Allothman et al. 2009; Arvanitoyannis et al. 2009; Dionisio et al. 2009)
 - The Nutrition Assessment conducted by FSANZ for Application A1038 – Irradiation of persimmons (2011)
 - The Nutrition Assessment conducted by FSANZ for Application A443 – Irradiation of tropical fruit (2002)
- Electronic search (31 May 2012) using EBSCOhost (containing the following databases: Food Science Source, FSTA - Food Science and Technology Abstracts, MEDLINE, MEDLINE with Full Text, EconLit with full text, and SocINDEX with Full Text) and the Medical Subject Heading subject term “food irradiation”
- Searches within the journals Radiation Physics and Chemistry, Journal of Food Composition and Analysis, Journal of Food Safety, Food Chemistry, Journal of Agricultural and Food Chemistry, Journal of Food Protection, HortScience, HortTechnology, and Journal of the American Society for Horticultural Science

- Hand-searching the reference lists in relevant publications
- Publications of international organisations
 - Statement summarising the Conclusions and Recommendations from the Opinions on the Safety of Irradiation of Food adopted by the BIOHAZ and CEF Panels (European Food Safety Authority 2011)
 - Final rule by the Food and Drug Administration on the use of ionising radiation for control of food-borne pathogens, and extension of shelf-life, in fresh iceberg lettuce and spinach (Food and Drug Administration 2008)
 - Revision of the opinion of the Scientific Committee on Food on the irradiation of food (Scientific Committee on Food 2003)
 - High-dose irradiation: wholesomeness of food irradiated with doses above 10 kGy (World Health Organization 1999)

References

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Arvanitoyannis IS, Stratakos AC, Tsarouhas P (2009) Irradiation applications in vegetables and fruits: a review. *Crit Rev Food Sci* 49(5):427–462

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European Food Safety Authority (2011) Statement summarising the Conclusions and Recommendations from the Opinions on the Safety of Irradiation of Food adopted by the BIOHAZ and CEF Panels. *EFSA Journal* 9(4):2107

Food and Drug Administration. Irradiation in the production, processing and handling of food. Department of Health and Human Services. 21 CFR Part 179. Federal Register 73(164), p. 49593-49603. 2008.

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