A procedure for grouping food consumption data for use in food allergen risk assessment

A procedure for grouping food consumption data for use in food allergen risk assessment

Food allergic subjects need to avoid the allergenic food that triggers their allergy. However, foods can also contain unintended allergens. Food manufacturers or authorities need to perform a risk assessment to be able to decide if unintended allergen presence constitutes a risk to food allergic consumers. One of the input parameters in risk assessment is the amount of a given food consumed in a meal. There has been little emphasis on how food consumption data can be used in food allergen risk assessment. The aim of the study was to organize the complex datasets from National Food Consumption Surveys from different countries (France, Netherlands and Denmark) to be manageable in food allergen risk assessment. To do this, a two-step method was developed. First, based on initial groups of similar food items, the homogeneity of consumption was evaluated using a customized clustering method. Then, the risk was calculated for each initial food group and its subgroups to verify if it also represents a relevant difference in risk. Forty-eight food groups were designated in Denmark (53 in the Netherlands, 54 in France). Finally, summary statistics and names for each food group for the Danish data illustrate the results when applying the procedure.

General information
State: Published
Organisations: Department of Applied Mathematics and Computer Science, Statistics and Data Analysis, National Food Institute, Research Group for Gut Microbiology and Immunology, Division of Risk Assessment and Nutrition, Netherlands Organisation for Applied Scientific Research - TNO, ANSES - French Agency for Food, Environmental and Occupational Health & Safety
Contributors: Birot, S., Madsen, C. B., Kruizinga, A. G., Christensen, T., Crépet, A., Brockhoff, P. B.
Pages: 111-123
Publication date: 2017
Peer-reviewed: Yes

Publication information
Journal: Journal of Food Composition and Analysis
Volume: 59
ISSN (Print): 0889-1575
Ratings:
BFI (2018): BFI-level 1
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 1
Scopus rating (2017): CiteScore 3.12 SJR 1.054 SNIP 1.402
Web of Science (2017): Impact factor 2.956
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 3.15 SJR 1.095 SNIP 1.481
Web of Science (2016): Impact factor 2.752
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 2.99 SJR 1.123 SNIP 1.613
Web of Science (2015): Impact factor 2.78
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 2.71 SJR 1.164 SNIP 1.755
Web of Science (2014): Impact factor 1.985
BFI (2013): BFI-level 1
Scopus rating (2013): CiteScore 2.8 SJR 1.252 SNIP 1.684
Web of Science (2013): Impact factor 2.259
ISI indexed (2013): ISI indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): CiteScore 2.44 SJR 1.102 SNIP 1.55
Web of Science (2012): Impact factor 2.088
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): CiteScore 2.72 SJR 1.304 SNIP 1.636
Web of Science (2011): Impact factor 2.079
ISI indexed (2011): ISI indexed yes
Web of Science (2011): Indexed yes
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 1.219 SNIP 1.506
Web of Science (2010): Impact factor 1.948
BFI (2009): BFI-level 1
Scopus rating (2009): SJR 1.43 SNIP 1.769
Web of Science (2009): Indexed yes
BFI (2008): BFI-level 1
Scopus rating (2008): SJR 1.292 SNIP 1.508
Scopus rating (2007): SJR 1.065 SNIP 1.604
Web of Science (2007): Indexed yes
Scopus rating (2006): SJR 0.79 SNIP 1.448
Scopus rating (2005): SJR 0.577 SNIP 0.884
Web of Science (2005): Indexed yes
Scopus rating (2004): SJR 0.454 SNIP 0.857
Web of Science (2004): Indexed yes
Scopus rating (2003): SJR 0.343 SNIP 0.568
Web of Science (2003): Indexed yes
Scopus rating (2002): SJR 0.55 SNIP 0.809
Web of Science (2002): Indexed yes
Scopus rating (2001): SJR 0.268 SNIP 0.532
Scopus rating (2000): SJR 0.345 SNIP 0.789
Scopus rating (1999): SJR 0.353 SNIP 0.718

Original language: English
Keywords: Food allergy, National Food Consumption Surveys, Food groups, Probabilistic risk assessment, Food analysis, Food composition, Automatic procedure, Allergen contamination
DOI:
10.1016/j.jfca.2017.01.008
Source: FindIt
Source-ID: 2351238088
Research output: Research - peer-review › Journal article – Annual report year: 2017