

UK Food Composition Data – Updating the McCance and Widdowson Integrated Dataset

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The Institute of Food Research's Food Databanks National Capability is leading a 4-year project (2009-2013), funded by the Department of Health, to review, update and maintain UK data on the composition of foods, culminating in the publication of the 7th edition of McCance and Widdowson's "*The Composition of Foods*". The project is supported by the British Nutrition Foundation, LGC Ltd, Eurofins Laboratories Ltd and The Royal Society of Chemistry.

Further details can be accessed at the website: <http://www.ifr.ac.uk/fooddatabanks/>

The main aim of the project is to provide reliable and up-to-date information on the nutritional content of foods to support the Department of Health's rolling programme of nutrient analysis surveys. The data is used in conjunction with food consumption data collected in dietary surveys to monitor the nutritional content of the nation's diet. The published data is also available for use by industry, researchers, health practitioners and consumers.

Existing published data was reviewed, with input from expert users, and four priority areas for analysis to provide new data were identified: products that may contain trans-fatty acids from industrial sources, eggs, fish and fish products and fruit and vegetables.

The survey of processed foods that had previously been sources of trans-fatty acids was completed and published in 2011. Sixty two composite samples, made up of a number of different brands, based on consumption and market share, were analysed for a full range of nutrients. Samples included pizza, garlic bread, breakfast cereals, quiche, fat spreads, a range of fish and meat products, chips, savoury snacks, confectionery and ice cream. Results showed that levels of trans-fat were considerably reduced compared with previous analyses of similar foods carried out over the last 20-30 years. Higher levels of trans-fats were generally due to the presence of natural sources of trans-fat (e.g. dairy sources) and the results confirmed that industry efforts to reformulate products to reduce trans-fat content had been effective.

A survey of eggs, consisting of 8 composite samples made up of a number of different types of chicken egg, including enriched cage, barn, free range and organic eggs was completed in 2011 and published in 2012. Results showed that the nutrient composition of eggs is broadly similar to existing data from analyses carried out in the late 1980s, although current levels of fat-soluble vitamins D and E, and selenium appear to be higher. Content of total fat, saturated fat and cholesterol was lower, reflecting a reduction in the ratio of yolk to egg white. The results were consistent with known changes in egg production processes and chicken feed and may also reflect improvements in analytical methods. The survey was supported by the British Egg Industry Council and also provided new data for content of vitamin K₂ (menaquinone), choline and amino acids in eggs.

An analytical survey of fish and fish products, consisting of 56 composite samples, has been completed and the results will be published later in 2012. Samples were prioritised according to current or increasing market share and adequacy of existing data and complemented recent surveys in Sweden and Iceland. Eighteen different species of natural fish and seafood including white fish, oily fish, molluscs and crustaceans were sampled. Processed fish and fish products including frozen fish products, tinned fish and smoked fish were also sampled. Composite samples, consisting of between 4 and 15 sub-samples were analysed for a range of nutrients including macronutrients, individual fatty acids, inorganics, water-soluble vitamins and fat-soluble vitamins, including vitamin D₃ and 25-hydroxy vitamin D₃.

A survey consisting of 59 composite samples of fresh and processed fruit and vegetables commenced in November 2011 and is currently nearing completion.

The current version of the Composition of Foods Integrated Dataset (CoFIDS), containing data published up to 2002, is available from The National Archives. The UKFoodComp team is updating and revising the CoFIDS and, to enable new data to be made available as soon as possible, updates will be published based on revisions by food group. The first food group to be updated will be cereals and cereal products (approx 480 foods). Updated data will include the addition of analytical data for new/unpublished foods, updated industry data and updated values calculated from recipes. Publication of updated data for the cereals and cereal products food group is planned for 2012.