

14TH INTERNATIONAL FOOD DATA CONFERENCE

Food composition databases: application for healthy diets and sustainable agrifood systems transformation

Oral presentations

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(O1.2) Establishing an EFSA open-access European Food Composition Database (EU FCDB) in Europe

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Background and objectives: The establishment of an EFSA (European Food Safety Authority) open-access European food composition database (EU FCDB) represents a critical advancement in standardising and harmonising food composition data across Europe. The EFSA EU FCDB aims to provide high-quality, comprehensive, and regularly updated nutritional data to support public health policies, dietary assessments, food safety regulations, and risk assessments. By offering a centralised and scientifically robust resource, supported by national compilers, it ensures consistency in nutrient data across Member States and enhances the accuracy of dietary intake evaluations. It also fosters cooperation between EFSA, international networks, and data users.

Methods: Key components include the integration of sixteen national food composition datasets in Europe, adherence to standardised methodologies for data collection and quality assurance, and incorporation of analytical, calculated, and estimated values for the nutrient content of key foods, fortified products, and dietary supplements. Addressing challenges in data completeness and consistency has necessitated use of validated recipe calculations, yield and retention factors, and imputation methods for missing values. Additionally, the project advocates for identification and prioritisation of key foods, ensuring representation of the most nutritionally significant foods. Expanding food classification coverage is also vital to accommodate emerging trends such as plant-based diets, reformulated products, novel food sources, and other datasets such as those describing climate impact of foods and food systems.

Results: Technical solutions for data submission, retrieval, and interoperability are fundamental for success. Recommendations include implementing standardised data formats using FoodEx2, developing automated validation and harmonisation, and providing mechanisms for downloading. These improvements will support stakeholders by enabling integration of data into dietary monitoring tools, risk assessment models, and public health surveillance systems.

Conclusions: The EFSA EU FCDB will serve as a pivotal resource for researchers, policymakers, public health authorities, and industry professionals, facilitating evidence-based decision-making, nutrition policy development, and consumer education. By fostering data transparency, accessibility, and methodological rigor, this database can significantly enhance the accuracy of dietary intake assessments and contribute to improved nutritional monitoring, food safety measures, and public health outcomes across Europe.

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Keywords: food composition database; food data; data quality; database quality; food coding; European activities