Fineli®, food composition data files

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The food composition database Fineli®, maintained by the National Institute for Health and Welfare, contains data on over 4 000 foods and their nutrient values. Nutrient values of foods are updated continuously as the selection of foods changes. Updated composition data are published once a year, on average.

The file *food.csv* includes **food identification data**, such as name, processing method, food type, ingredient class and food use class. The foods are average foods and, therefore, the composition of a particular brand can deviate even considerably from the nutrient values of the average foods. Sometimes, however, examples of brands are given in connection with the food name.

Food ingredients are classified according to origin into **ingredient classes (IGCLASS)**. The codes and descriptions of the different ingredient classes are listed in the file *igclass.csv*. The ingredient class lists both ready-to-eat ingredients and ingredients used in food processing. The classification is hierarchical, and the foods are placed into a sub-category. Each ingredient is classified under one ingredient class only.

The food use class (FUCLASS) categorises foods according to their use. The codes and descriptions of the different ingredient classes are listed in the file *fuclass.csv*. The classification is hierarchical, and the foods are placed into a sub-category. Each food is classified under one food use class only.

Food **recipes** are included in the file *contribfood.csv*. The recipes list the mass of ingredients both in uncooked and cooked dishes. Decrease in ingredient mass due to water evaporation is taken into account in the recipes.

The file *component_value.csv* includes data on the **nutrient values** of foods. Nutrient value gives the weight of a nutrient factor in 100 grams of food per edible portion, with the exception of foods that are acquired or served unpeeled. For these foods the database gives nutrient values for both the edible part (e.g. a peeled banana) and the weight of the merchandise (e.g. an unpeeled banana). For fish and meat, the nutrient value is given for the edible portion. The database user can calculate nutrient compositions also by **food portions** by using the portions given in the file *foodaddunit.csv* (small, medium and large).

Additional data on nutrient values are given under method and acquisition, which both describe the origin of the nutrient value. Missing data are specifically indicated, although also the value zero is possible due to earlier versions of the database.

The file *component.csv* lists identification data for nutrient factors (name, unit of measurement and nutrient factor class). The unit of measurement specifies which types of unit apply to the nutrient

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values of each nutrient factor. The nutrient factor class specifies the group of the nutrient factor (e.g. water-soluble vitamins).

Food energy is expressed in kilojoules only, but can be converted by the user into calories by dividing the kilojoules by 4.184. Food energy is calculated as required by legislation by using the coefficients below:

- fat 37 kJ/g
- protein 17 kJ/g
- available carbohydrates 17 kJ/g
- alcohol 29 kJ/g
- fibre 8 kJ/g
- sugar alcohols (xylitol and sorbitol) 10 kJ/g
- organic acids (e.g. acetic, citric and lactic acid) 13 kJ/g

The energy content reported by the manufacturer may differ from the energy content given in Fineli due to differences in the definition of carbohydrates.

Carbohydrates are given as available carbohydrates (CHOAVL) indicating the total amount of starch and sugars. Protein is calculated by multiplying the total amount of nitrogen in the food by 6.25. The total amount of fat (FAT) refers to the total amount of fat-soluble nutrients (including fatty acids, phospholipids, sterols). The variable FACIDCTG gives the total calculated amount of fatty acids stored as triglycerides. Free fatty acids can be calculated by using the formula FAFRE = 0.956* FACIDCTG.

Vitamin A is given in retinol equivalents by using the formula VITA = retinol + 0.0083* beta-carotene. Vitamin E is based on the content of alpha-tocopherol in the food. Concentrations of vitamins (vitamin C, thiamin, riboflavin, vitamin B12, folic acid, niacin, pyridoxine and vitamin A) take into account the loss of the vitamin in cooking. The assessment of waste is based on the data collected by Lena Bergström (Uppsala: Livsmedelsverket, Report 32/1994). The calculated amount of salt (NaCl) is based on the formula NaCl = 2.548* Na.

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