FOOD STANDARDS
Australia • New Zealand
Te Mana Kounga Kai - Ahitereiria me Aotearoa

About the Australian Food Composition Database - Release 3

December 2025

Overview

The Australian Food Composition Database (AFCD) is a reference database containing detailed information on the nutrient content of foods commonly available in Australia. The data is primarily sourced from high-quality laboratory analysis.

Understanding the dataset

The Release 3 dataset includes 1,588 foods containing between 58 - 268 'nutrients' or food components such as energy and caffeine.

It is available as a searchable database and as 6 downloadable files including:

- Food details
- Nutrient profiles
- Recipes
- Retention factors
- Nutrient details
- Food group information

Foods included

The database mainly contains foods which are frequently eaten by Australians or used as ingredients in other foods, such as flour. A food may also be included if it contains a lot of a particular nutrient, such as iodine in seaweed, or if high quality data was available.

Nutrients reported

Each food in the database reports a minimum of 58 core nutrients to align with our survey database, AUSNUT 2023. However, up to 210 additional nutrients (268 in total) may be reported for each food depending on the data available.

If a value is not reported in a food for a particular nutrient, it does not mean that the nutrient is not present in the food. It means that analytical data for that nutrient in the food is not currently available to us.

Information relating to each nutrient including equations published in AFCD can be found with the online searchable database as part of the *'Browse nutrient list'* function and in AFCD – Nutrient Details (Excel, 102KB).

Sources of Data

AFCD mainly contains analytical data collected from the 1980s onwards through:

- analytical programs commissioned by FSANZ
- analytical projects undertaken by academic or industry groups in collaboration with FSANZ
- data provided to FSANZ by academic, industry or other research groups.

A smaller proportion of data comes from recipe calculations, overseas food composition tables, the food industry, food label information and imputing from similar foods. We use

derivation codes to describe the source of the data which are provided in Release 3 – Food Details (Excel, 1.1 MB).

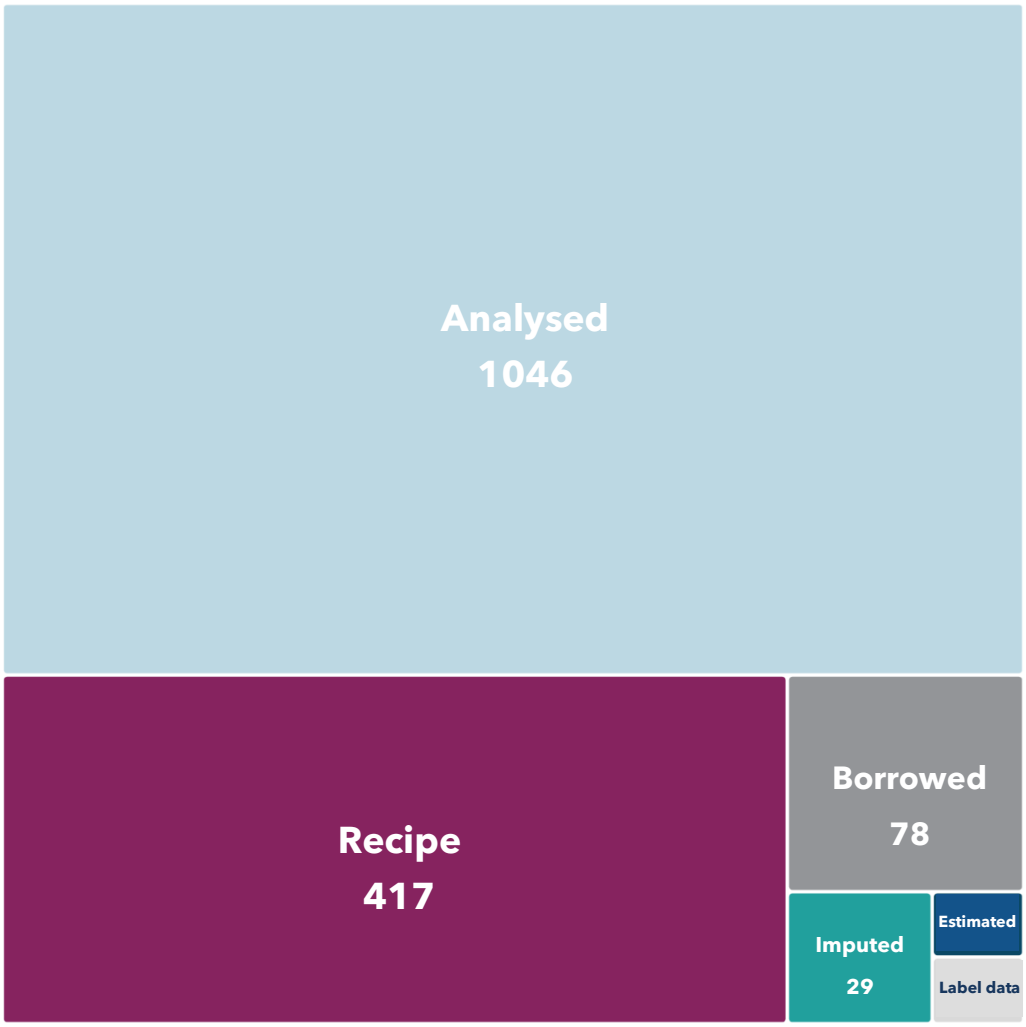

Figure 1: Derivation of foods in Release 3

Approach to updating the dataset

Reviewing the dataset

With each release, we review data for suitability to be continued in the dataset. Consideration is given to the age and quality of the data, and the availability of the food in the current market.

Incorporating new analytical data

Each release is updated to incorporate new data which has become available to FSANZ since the previous release to enhance the currency of the data. The Release 3 dataset was updated to include analytical data from two programs undertaken by FSANZ since the publication of Release 2. These include:

- 2021-22 Key foods program
- 2022-23 Key foods program

These programs focused on providing data for:

- commonly consumed foods that are major sources of several nutrients in an Australian's diet
- foods that were likely to be a major source of a single nutrient in an Australian's diet
- foods for which we held out-dated, limited or no Australian-derived analytical data
- foods that allowed verification of our recipe assumptions
- foods that were new to the market.

The dataset was also updated to include analytical data provided by external stakeholders including:

- 2019 Curtin University vitamin D analytical program
- 2020 Hort Innovation potato analytical program
- 2020 Hort Innovation fruit and vegetable analytical program

The new analytical data included foods which were not previously part of the core dataset, as well as updates to nutrient profiles of foods which had already been captured in the dataset.

Notes on the dataset

Analytical data

Laboratory analysis represents the nutrient content of a particular sample of foods and ingredients, determined at a particular time. The nutrient composition of foods and ingredients can vary substantially between batches and brands because of several factors, including changes in season, changes in formulation, processing practices and ingredient source.

Analysis of nutrients is also associated with its own uncertainty. This can be particularly significant when levels of a nutrient are low and close to the level at which they can be reliably quantified (the 'limit of reporting' or LOR).

In general, the analytical techniques used are widely accepted methods conducted by experienced laboratories with National Association of Testing Authorities (NATA) accreditation.

Analytical results reported to be less than the limit of reporting ("<LOR") by the laboratory are reported as zero in the Australian Food Composition Database.

Recipe calculations

Recipe calculations are typically used to generate nutrient data for:

- cooked meat, poultry, seafood, eggs, fruits and vegetables
- prepared beverages such as coffees and smoothies
- simple homemade cakes, biscuits and slices

In this dataset, almost half the recipes (210 of 417) are for cooked red meats using analytical data for the cooked separated lean meat and fat portions and gross composition

data measured by the laboratory for each meat cut to determine the different trim levels. This helps to reflect the varying amounts of fat that may be removed between purchase and eating.

The recipe method used for each food varies with the type of food, the ingredient and preparation information available, and whether analytical data for a similar food is available and is comparable to that used internationally for similar purposes (Charrondiere, U.R., 2021).

For a complete list of recipes used in Release 3, including associated retention and weight change factors, refer to Release 3 – Recipes (Excel, 107KB).

Notes on recipes

Nutrient retention factors

Retention factors are applied to recipes to account for nutrient losses when a food undergoes a preparation or cooking process. The retention factors used in our recipes align with those used in AUSNUT 2023 and are available in AUSNUT 2023 – Nutrient retention factors (Excel, 281KB).

Weight change factors

Weight change factors used in Release 3 recipes were based on the Release 2 dataset. Due to the limited evidence base for these factors, they should be regarded as indicative only. Weight change factors are included in Release 3 – Recipes (Excel, 107KB) along with other details of the recipes.

Borrowed data

Whole nutrient profiles were generally borrowed for foods imported into Australia where the nutrient composition is expected to be consistent with data reported by international sources or scientific literature such as dried herbs and spices. Borrowed data was also used to fill gaps for a small number of nutrients in a food where most data were based on analysis.

Label data and imputation

This technique involved imputing nutrient data from a similar food or beverage in the dataset, then updating key nutrient values using Nutrition Information Panel data from product labels. This was done for a small number of foods such as salt reduced butter.

Other methods

A small proportion of nutrient profiles were developed using other methods, often combining elements of the methods discussed above. These foods form a small portion of the dataset, with the approaches taken based on the individual food and the best available information at the time.

Equated components

Equated components are values for nutrients that we have calculated using specific equations from other analysed components for that food. For example, energy content is equated from protein, fat, carbohydrates and other nutrients. Equations are available in Release 3 – Nutrient details (Excel, 102KB).

Identification codes, names and descriptions

Each food in AFCD is assigned a classification and descriptive information to help users easily identify and view the data. Information on food names, descriptions and sampling details is available in Release 3 – Food Details (Excel, 1.1 MB).

Small updates have been made to the classification system used in the database to align with AUSNUT 2023. More detailed information about the updates and changes to the food classification codes are also explained in more detail in AUSNUT 2023 – About the classifications (PDF 271KB).

Brand names

Brands are included in AFCD food names where they provide clarity among a range of similar products, such as breakfast cereals. Any reference to a brand name within the database is not to be taken as an authoritative statement of the composition of that product, due to changes in formulation that may have occurred since our data was generated, or due to the limitations noted above with analytical data. If you require current data on a specific branded product, you should contact the manufacturer of that product.

Measures

A small number of foods in Release 3 were assigned a common serve size to support the online search function. The measures align with those developed for AUSNUT 2023.

Detailed information about the development and content of the food measures dataset is provided in AUSNUT 2023 – About the food measures (PDF, 177KB).

Dataset validation

The nutrient data underwent an extensive internal and external data validation process.

FSANZ undertook a series of data validation activities both as individual foods were developed, and following compilation of the complete dataset. Some activities focused on individual foods, while others focussed on specific nutrients, food categories, recipes, factors and system calculations. The Release 3 food nutrient dataset underwent an expert peer review process at multiple points throughout its development.