

AUSNUT 2007

Australian Food, Supplement & Nutrient
Database 2007

for estimation of population nutrient
intakes

Explanatory Notes

Food Standards Australia New Zealand

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INTRODUCTION

Food Standards Australia New Zealand (FSANZ), under contract to the Department of Health and Ageing (DoHA), has developed a survey specific nutrient database (AUSNUT 2007) for estimating nutrient intakes from food, beverages and dietary supplements consumed as part of the National Children's Nutrition and Physical Activity Survey ('the Survey'). This work was performed in close collaboration with the Commonwealth Scientific Industrial and Research Organisation (CSIRO) and the Therapeutic Goods Administration (TGA).

AUSNUT 2007 contains nutrient values for 4,225 foods, beverages and supplements consumed throughout the Survey, which took place from February to August 2007. The data in AUSNUT 2007 therefore reflect the food supply and preparation practices over that time period. Ancillary details such as the derivation of the nutrient data are also provided for each food, beverage and supplement consumed.

NUTRIENTS REPORTED IN AUSNUT 2007

AUSNUT 2007 contains data for up to 37 nutrients. These include:

- Energy, including and excluding the contribution of dietary fibre to energy
- Proximate constituents including moisture (water), protein, total fat, total carbohydrate, total sugars, starch, dietary fibre and alcohol
- Fatty acid components including total saturated, total monounsaturated, total polyunsaturated, linoleic, alpha linolenic and total long chain omega 3 fatty acids
- Vitamins including vitamin A (retinol equivalents, preformed and provitamin), thiamin, riboflavin, niacin equivalents, vitamin C, vitamin D, vitamin E, total folates and dietary folate equivalents
- Minerals including calcium, iodine, iron, magnesium, phosphorus, potassium, sodium and zinc
- Other components including caffeine and cholesterol.

AUSNUT 2007 does not report energy, including and excluding the contribution of dietary fibre, and proximate constituents including moisture (water), protein, total fat, total carbohydrate, total sugar, starch and alcohol for dietary supplements.

Values for linoleic and alpha linolenic acids, total long chain omega 3 fatty acids, vitamin D, vitamin E, folate (expressed as dietary folate equivalents), iodine and caffeine were not previously published in AUSNUT 1999¹.

For further information regarding the list of nutrients reported in AUSNUT 2007, including information on units, limits of reporting, derivation and assumptions and limitations see Appendix 1.

¹ AUSNUT 1999 was based on the technical support files used for the 1995 Australian National Nutrition Survey (NNS)

DERIVATION OF NUTRIENT DATA

Source of nutrient data

AUSNUT 2007 incorporates nutrient composition data from a range of sources. These include:

- nutrient composition data published in NUTTAB 2006 (FSANZ, 2007)
- unpublished nutrient composition data commissioned by FSANZ
- Australian food and supplement label data
- recipes
- nutrient composition data taken from international food composition tables and databases including:
 - New Zealand food tables (Athar et al, 2006)
 - British food tables (Food Standards Agency, 2002)
 - Danish food tables (Møller, et al, 2005)
 - United States Department of Agriculture (USDA, 2006)
- supplement data provided by the Therapeutic Goods Administration (TGA)
- other - imputed, calculated, or taken from the 1995 National Nutrition Survey (NNS) database.

For information on the derivation of nutrient data for each food, beverage and supplement published in AUSNUT 2007 see the AUSNUT 2007 Food File.

Derivation codes

Each food, beverage and supplement published in AUSNUT 2007 is assigned a derivation code which indicates how the majority of nutrient data for each food, beverage and supplement were derived.

The derivation codes used in AUSNUT 2007 were:

- *Analysed* – for foods and beverages that were primarily derived using Australian analytical data
- *Recipe* – for foods and beverages that were derived using an average recipe as commonly prepared in Australia
- *Label* – for foods, beverages and supplements where the brand could be identified
- *Imputed* – for foods and beverages that were primarily derived by using nutrient data from a similar food or beverage
- *Borrowed* – for foods and beverages that were primarily derived from nutrient data published in international food composition tables and electronic databases
- *95 NNS* – for foods and beverages that were primarily derived from nutrient data published in AUSNUT 1999.

Although each food, beverage and supplement was assigned an overall derivation code, individual nutrient values for some foods may have been derived using a different technique. For example, a food described as being *Analysed* may have a small number of nutrient values that were imputed from similar foods.

PROCESS FOR DEVELOPING NUTRIENT DATA FOR AUSNUT 2007

Methods for developing nutrient data for food and beverages

A subset of FSANZ's reference database NUTTAB 2006 was used as a basis for developing AUSNUT 2007. The subset was developed by reproducing foods published in NUTTAB 2006² that were likely to be relevant to the Survey.

NUTTAB 2006 did not include a value for every nutrient being reported in the Survey, therefore a data extension process was undertaken to ensure inclusion of a nutrient value for each nutrient being reported, for every food and supplement included in the database. This involved incorporating:

- unpublished nutrient data held by FSANZ including data generated in 2006 for foods commonly consumed by children
- imputed, borrowed, estimated, and calculated nutrient data.

This formed the 'draft nutrient database', the core dataset from which subsequent data were developed using a range of methods. These include:

Using a single existing nutrient line³ for a survey food or beverage

Where the description of a survey food or beverage matched that of a food or beverage in the draft nutrient database, the existing nutrient line from the draft nutrient database was used without amendment. For example, where respondents reported consuming *Milk, full fat (whole), dry powder*, this was matched directly to the food in the draft nutrient database *Milk, powder, cow, regular*.

Combining several existing nutrient lines to produce a new survey food or beverage

Where a description of a survey food or beverage was less specific than a food in the draft nutrient database, nutrient data from several foods in the draft nutrient database were combined to produce a representative nutrient profile for the survey food. This approach was used for most of the fruits and vegetables consumed during the Survey where the cultivars were not reported. For example, the different cultivars of peeled potatoes including coliban, sebago, new, desiree, and pontiac were weighted according to their approximate market share to produce a representative nutrient profile of *Potato, peeled, raw, not further specified*.

Modifying an existing nutrient line to produce a new survey food or beverage

Where the description of a food or beverage in the draft nutrient database was similar to a survey food or beverage, except for a particular characteristic, the food or beverage in the draft nutrient database was modified to account for that characteristic. This approach was used for many of the low or reduced fat, reduced salt, fortified, or intense sweetened varieties of products consumed during the Survey. These characteristics were modified by:

- Imputing nutrient data from a similar food or beverage in the draft nutrient database. For example, if a respondent reported consuming *Milk, flavoured, coffee, reduced fat* the food

² For information on the development of NUTTAB 2006 please refer to the Explanatory Notes for use with the NUTTAB 2006 Online Version and NUTTAB 2006 Electronic Release - March 2007
<http://www.foodstandards.gov.au/monitoringandsurveillance/nuttab2006/supportingdocumentat3504.cfm>

³ 'Nutrient line' refers to the complete nutrient profile for a given food

in the draft nutrient database *Milk, cow, fluid, flavoured, coffee, regular fat* would be used as a basis for developing a new nutrient line and the fat content would be modified based on the fat content of the food in the draft nutrient database *Milk, cow, fluid, flavoured, strawberry, reduced fat*. Other nutrient modifications may also have been necessary, for example, reducing the cholesterol and retinol value when the fat content was reduced or adjusting the moisture, protein or carbohydrate contents to account for the reduction in total fat.

- Using nutrient data from product labels. For example, if a respondent reported consuming *Juice, orange, no added sugar, added vitamin E* the food in the draft nutrient database *Juice, orange, no added vitamin C* would be used as a basis for developing a new nutrient line, and the vitamin E value would be modified to reflect the vitamin E value presented in the nutrition information panel of commonly consumed brands of orange juice fortified with vitamin E.

Using existing nutrient lines as ingredients in recipe calculations to produce a new survey food or beverage

Recipe calculations were used to generate nutrient data for:

- mixed dishes prepared at home
- mixed dishes purchased commercially where the respondent was unable to identify the individual ingredients or their amounts
- a food cooked from a single raw ingredient (e.g. boiled zucchini from raw zucchini)
- some processed foods where no suitable existing data were available.

The general approach for mixed dishes involved:

- consulting current, popular recipe books, label instructions, Australian food magazines and websites to identify appropriate recipes for home prepared foods
- combining individual ingredients and their relative proportions
- applying an appropriate nutrient retention factor to each individual ingredient if necessary
- applying an appropriate weight change factor to the uncooked recipe if necessary.

Only the latter two steps were required for foods cooked from single raw ingredients.

Recipes for processed products (e.g. *Biscuit, savoury, lavosh, unflavoured*) were developed using label ingredient lists. Using this approach, the amount of each major ingredient was modified so that the final nutrient data were similar to the nutrient data presented on the product's nutrition information panel. It should be noted that this process does not generally take into account the use of food additives that do not contribute to nutrient content and the recipe generated may not reflect the exact formulation of the product available for sale.

Developing a new nutrient line for a survey food or beverage

Where the methods outlined above were not appropriate new nutrient lines were developed for survey foods and beverages by:

- using nutrient data from international food composition tables and databases such as the USDA, UK, NZ and Danish food tables
- using industry or label data
- imputing nutrient data from similar foods or from levels permitted in the Food Standards Code

- reproducing nutrient data published in AUSNUT 1999.

In each of these instances it was necessary to develop some individual nutrient values by techniques outlined earlier, as these data sources rarely included all nutrients being reported in the Survey. Where data were borrowed from international food composition tables, care was given to ensure the units and mode of expression matched those used in the Survey (USDA, 2006; Food Standards Agency, 2002; Athar et al. 2006; Møller, et al, 2005).

Food descriptions with characteristics not specified

Unspecified nutrient lines were developed for survey foods and beverages where a respondent was unable to identify the exact food or beverage or cooking method of the food they consumed.

Nutrient data for unspecified foods were derived using two approaches:

- Ensuring the nutrient data were representative of all survey foods that had a similar description, but varied with respect to the characteristic of interest. For example, a nutrient line for *'bread, white, not further specified'* drew on nutrient data for all white, fresh or toasted, fortified or unfortified breads, weighted according to consumption patterns observed in the Survey.
- Assigning an unspecified food a nutrient profile of the most frequently consumed product from the relevant category. For example, *'Chicken, ns as to part, cooked nfs, ns as to skin'* could be assigned the nutrient line for *'Chicken, breast, lean, baked'* as this might have been the most frequently consumed type of chicken and cooking method reported during the Survey. This latter approach was more likely to be used for unspecified foods eaten by few respondents or where the use of another food was unlikely to have any significant effect on the Survey outcomes.

Due to the weighting techniques used to develop unspecified lines, the resulting nutrient data do not reflect any particular food actually consumed. In addition the weighting assumptions reflect patterns observed in this Survey and may not be appropriate for use in other circumstances.

Methods for developing nutrient data for dietary supplements

The majority of nutrient composition data developed for dietary supplements consumed during the Survey were derived using formulation data provided by the TGA. Data provided by TGA included information on the product's name, AUST-L number, maximum daily dose, and formulation with the name and amount of each active, excipient and proprietary ingredient provided on a per dose basis. Where necessary, data provided by the TGA were converted into the units and modes of expression used in this Survey (e.g. retinol, vitamin D and vitamin E contents expressed in International Units would be converted to micrograms or milligrams as appropriate).

Where nutrient data could not be obtained from the TGA, they were derived by conducting internet searches, or visiting local supermarkets and pharmacies. Where respondents were unable to identify the exact dietary supplement consumed during the Survey or where FSANZ was unable to identify nutrient data for dietary supplements specified by the respondent, unspecified nutrient lines were generated using two approaches:

- Ensuring the nutrient data were representative of all dietary supplements consumed during the survey that had a similar description. For example, a nutrient line for *Multivitamin & mineral, tablet, not further specified* drew on nutrient data for the most commonly consumed multivitamin and mineral supplements weighted according to consumption patterns observed in the Survey. This was the approach used for most unspecified supplements.
- Assigning an unspecified supplement a nutrient profile of the most frequently consumed product from the relevant category. For example, *Acidophilus, solid formulation, not further specified* could be assigned the nutrient line for the most frequently consumed brand of probiotic supplement reported during the Survey.

LIMITATIONS OF DATA PRESENTED IN AUSNUT 2007

General limitations of food composition data

AUSNUT 2007 has been developed specifically for use with the National Children's Nutrition and Physical Activity Survey and therefore may not necessarily be appropriate to use with other surveys.

Nutrient data presented in AUSNUT 2007 should be regarded as approximations of the likely nutrient content of the food, beverage and supplement to which they refer. This is because the nutrient composition of foods is variable and dependent on a range of factors. There are inherent factors affecting nutrient composition (e.g. the cultivar of a plant that is selected) and also factors associated with variability in production, formulation and storage practices (Pennington, 2008).

In addition, 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').

Where the presence of a nutrient could not be quantified, assumptions were made about the concentration of this nutrient in the food and beverage in question. For most nutrients reported in AUSNUT 2007, where laboratories reported a nutrient concentration as being below the limit of reporting, the concentration was assumed to be zero. In these cases, the limit of reporting was well below what was considered a nutritionally significant concentration and the use of a zero value had no effect on estimated population nutrient intakes. In a limited number of cases, where it was judged that a food was likely to contain a particular nutrient or the laboratory has reported that trace levels are present, the food has been assigned a concentration equivalent to half the limit of reporting determined in FSANZ's most recent analytical program. These values are set out in Appendix 1. Specific issues associated with reporting of some nutrients are discussed below.

Issues associated with values for specific nutrients

AUSNUT 2007 reported values for iodine and vitamin D for the first time in a comprehensive Australian database. Data users should be aware of particular uncertainty associated with these data, all of which draw from limited analytically-determined data sets.

Iodine was assumed to be present in almost all foods reported in AUSNUT 2007. However, for many foods, including widely consumed foods such as meat, poultry, fruit and vegetables, laboratories have reported iodine concentrations as being below the limit of reporting. The

limit of reporting for iodine was high in relation to expected population intakes. As an element present in the environment, it can reasonably be expected that iodine will be present in almost all foods even though it may not be possible to measure levels. Therefore, all foods, with very few exceptions, were assumed to have an iodine concentration of half the limit of reporting, where laboratories have not been able to quantify concentrations.

All animal foods were assumed to contain cholecalciferol and 25-hydroxy cholecalciferol at half the limit of reporting, if levels could not be quantified; plant foods were assumed not to contain vitamin D. The underlying data on vitamin D concentrations is particularly sparse and the levels reported in AUSNUT 2007 should be interpreted with caution. In addition, the conversion factor used to estimate total vitamin D activity from the levels of individual vitamers may not be the most appropriate and may overestimate total vitamin D activity (Jakobsen, 2008, *pers. comm.*).

Folate values have been substantially altered since AUSNUT 1999 through the incorporation of Australian analytical data, the majority of which have been determined using an improved method of analysis which tends to yield higher folate values than previously. However, this method can yield unexpected results and in some cases professional judgement was used to determine whether or not an analysed value was accepted. In addition, label values have sometimes been used to assign a folic acid value. For these reasons, folates values in individual foods should be interpreted with caution.

Values for vitamin E drew largely on analysed values, some of which were relatively old and may not reflect current commercial practices relating to the addition of alpha tocopherol as an antioxidant in oily foods. In addition, the available data do not distinguish between the different isomers of alpha tocopherol, which may have differing bioactivity. Analysed values for gamma- and delta-tocopherols were included in the estimation of vitamin E, but not alpha-tocotrienol as very little data was available on levels of this vitamer.

Long chain omega-3 fatty acids may occur in a range of animal foods. While concentrations are generally highest in marine foods, as a proportion of total fatty acids, total mass of these acids may still be significant in higher fat animal foods such as eggs and cheese. In a number of foods reported in AUSNUT 2007, concentrations of individual long chain omega 3 fatty acids were at or just above the limit of reporting and therefore their quantification was associated with considerable uncertainty. As a result of improvements in the measurement of these acids in recent years, the most recent analytical data were used in this database. For milk, the most recent data indicated that none of those acids were present at or above the limit of reporting. In contrast, the most recent data for yoghurt indicated a concentration of two of those acids at the limit of reporting.

Use of label data – foods and supplements

For many fortified foods, label data were used to assign a vitamin or mineral concentration to a specific food, when analytical data for that food were not available. Values for added vitamins and minerals declared on labels may underestimate actual values as extra nutrient may be added to ensure the declared levels, at a minimum, are achieved throughout the life of the product.

All supplement data were based on formulation information as supplied to the TGA by manufacturers or, where not available from the TGA, from product labels or websites.

Recipe assumptions – selection of recipe, retention factors, weight change factors

Development of nutrient data by a recipe approach involved the use of assumptions about the actual recipe used, any weight change factors required to account for moisture loss or gain, and assumptions about the effect of cooking on nutrient levels.

In particular, the choice of recipe was subjective. Generally recipes attempt to follow current cooking practices, such as the use of prepared sauces. Where salt was added as an ingredient in a recipe, an unspecified nutrient line containing both iodised and non-iodised salt was used as the ingredient.

Weight change factors used in AUSNUT 1999 were also used in this database and some additional factors were determined by FSANZ for more recent cooking practices, such as reheating frozen foods. In some cases, weight change factors were adjusted to achieve a moisture content in the final food that was comparable to those determined by analysis of similar foods.

There is a limited set of published nutrient retention factors available to account for the effect of cooking on vitamin and mineral levels. Generally, retention factors published by the USDA (USDA, 2003) were used, although it was necessary to expand these to include factors for iodine and vitamins D and E. Due to the limited evidence base for these factors, they should be regarded as indicative only.

Recipes for each recipe food are provided in the AUSNUT 2007 Recipe File.

IDENTIFICATION OF FOODS REPORTED IN AUSNUT 2007

Coding System

Foods, supplements and beverages reported in AUSNUT 2007 are assigned a unique eight-digit numeric identification code consisting of a five digit food group code followed by a three digit number. The first five digits reflect the food group codes developed during the Survey for use in this and future food surveys. For a summary of the food grouping system used in AUSNUT 2007 see Appendix 3.

The first three digits represent the major food group code for reporting purposes. The next two digits represent the sub-major food groups. The final three digits represent sequential numbers within a food group, where foods are arranged in alphabetical order. This is illustrated below for the major food group tea, subdivided into the sub-major groups of regular and herbal teas, with three unique foods included in these groups.

111	Tea
11101	Tea, Regular, Caffeinated (including flavoured teas)
11101001	<i>Tea, regular, without milk, brewed from leaf or teabags</i>
11102	Tea, Regular, Decaffeinated
11103	Tea, Herbal
11103001	<i>Tea, herbal, other than chamomile, without milk</i>
11103002	<i>Tea, barley, without milk</i>

In addition, each food and beverage has also been assigned an eight digit alpha-numeric FSANZ data management system code. These are provided for cross-referencing purposes to

NUTTAB 2006 foods and other FSANZ published data. For a summary of the food group codes see Appendix 4.

Additional codes have not been reported for dietary supplements.

Food names and descriptions

The foods and beverages in AUSNUT 2007 were assigned a name that uses what was considered to be the most commonly used name for the type of food, in addition to providing nutrient relevant information such as flavour, fat content, presence of caffeine, the addition of salt, intense sweetener, vitamins and minerals, and methods of cooking.

In general, the name reported in AUSNUT 2007 captures the most commonly available form of a food or beverage, and, where relevant, the exceptions to the commonly available form of the food or beverage. For example, sugar-sweetened carbonated beverages are simply referred to as *soft drinks* followed by the flavour, whereas the intense sweetened versions are referred to as *soft drink, intense sweetened*. In situations where the common form of the food or beverage is not clear, nutritionally relevant information is included. For example, boiled white rice is referred to as either *boiled with salt* if salt is included, or *boiled without salt* if no salt has been included.

The addition of vitamins and/or minerals to a food or beverage for fortification purposes is identified in the food name, by either identifying the specific nutrient or, where multiple nutrients are added, referring in general to the addition of nutrients, with further detail on the exact nutrients provided in the food description field. Where a food is always supplied in a fortified form, such as bread-making flour with the mandatory addition of thiamin, this information is not included in the food name but is included in the food description.

The Description field provides further information about the food, such as information on common ingredients or preparation techniques.

Unspecified foods are those where Survey respondents have been unable to identify one or more characteristics of the food. These foods have been named according to two main approaches:

- where some characteristics of a food are known, these are indicated, as is the characteristic that is not known, for example *Cake, uniced, not further specified*
- where no characteristics are known, the food is referred to as being 'not further specified' or 'not specified as to type', for example *Cake, not further specified*.

The dietary supplements in AUSNUT 2007 were assigned a general name representing the general category of supplement followed by the Brand name, for example, *Multivitamin & mineral (Amcal)*.

Matching foods consumed to nutrient lines

Very few foods and beverages are named with reference to a specific brand and use of brand names has been avoided wherever possible in AUSNUT 2007. This is because the formulation of specific products may change over time and brands may have only a short market life. In the few cases where a specific brand is mentioned in the name of a food, this is generally intended to provide guidance for the user in situations where there are a number of

products available with similar appearance but with differing nutrient composition and is not intended to provide definitive data on the composition of that specific branded product. The values reported should be regarded as broadly reflecting the average composition of that class of food.

However in order to assist those who may wish to use AUSNUT 2007 in future population dietary surveys, a file is provided that shows the nutrient data that were applied to specific branded products. Information on brands consumed in the Survey was not collected for all categories of foods; the categories for which brand level information was recorded were:

- sports and energy drinks
- cordials
- fruit juices and fruit drinks
- breads
- biscuits, sweet and savoury
- breakfast cereals
- muesli bars and other cereal bars
- butters and margarine spreads
- frozen fish and chicken products
- dry mix and prepared sauces
- milk
- yoghurt
- ice cream tubs and individual ice cream products
- frozen potato chips, fries and wedges.

While FSANZ has endeavoured to prepare representative nutrient data, the application of that data to a specific branded product in this file is not to be taken in any way as providing definitive data on the composition of that specific branded product or implying that a specific product does or does not contain the ingredients and nutrients identified in the name and description of the AUSNUT 2007 nutrient line. If you require information on the nutrients in a specific product, you should check the product's nutrition information panel or consult the manufacturer.

PROCESS FOR DEVELOPING A MEASURES DATABASE FOR AUSNUT 2007

AUSNUT 2007 includes at least one measure for each food and beverage consumed during the Survey. Where possible, additional measures have also been provided. Measures for dietary supplements are not provided.

Methods for developing measures data for food and beverages

The AUSNUT 2007 measures were derived using a range of methods. These include:

- AUSNUT 1999 measures file
- Label data or other data provided by the food industry
- Weighing products
- Imputation or calculation
- Average serve sizes as reported during the Survey.

The AUSNUT 1999 measures file was used as a basis for developing the AUSNUT 2007 measures file where foods were common to both databases. Many of the AUSNUT 1999 measures were taken from USDA publications. As AUSNUT 2007 contains many foods that were not in the earlier database, additional data sources were used, as set out below. Also, AUSNUT 1999 values were updated where necessary to reflect changes in products over time.

Where a brand could be identified, label portion size information was used as a basis for assigning a standard measure. For example, *Breakfast cereal, mixed grain (wheat, corn, oat), clusters, nuts, added vitamins B1, B2 & folate & Fe* was assigned a measure based on the average mass of common brands of breakfast cereal.

Some measures were updated using recent industry information. For example, strawberry measures were updated to include the average weight of small, medium and large strawberries supplied by the Victorian Strawberry Growers (2006). Egg measures were also updated to include the average weight and edible portions of different size eggs provided by the Australian Egg Corporation (2007).

In some cases FSANZ developed a measure by weighing foods and beverages using household scales. In these cases FSANZ focussed on commonly consumed foods and beverages for which FSANZ held no measure or where the measure may have changed over time. For example, FSANZ focussed on weighing purchased coffees, confectionery items, bowls of common breakfast cereals with added milk, bowls of cooked pasta, pizza slices, chicken nuggets, confectionery, breads and bread rolls.

Where the above methods were not appropriate common measures were assigned by:

- Imputing a measure from a similar food or beverage where the weight difference was considered negligible. For example, a cup of *Juice, orange, pulp free, added vitamin C* was assumed to be of similar mass to a cup of *Juice, orange, added vitamin C*. This approach was also used for fortified products. For example a slice of *Bread, from white flour, added folate* was assumed to be similar to a slice of *Bread, from white flour*.
- Measures were also calculated when converting a food from a raw product to a cooked product. For example to determine a measure for a slice of toast, the average weight of a slice of regular bread was used and a weight loss factor applied to estimate the weight of the slice of bread after toasting.
- Using the average serving size as reported in the Survey. For example, this approach was used for some mixed dishes.

AUSNUT 2007 FILES

AUSNUT 2007 contains up to 37 nutrient values for 4,225 foods, beverages and supplements consumed during the Survey.

AUSNUT 2007 does not report energy, including and excluding the contribution of dietary fibre, and proximate constituents including moisture (water), protein, total fat, total carbohydrate, total sugar, starch and alcohol for dietary supplements.

AUSNUT 2007 is available as:

- four core 'Microsoft Excel™ files' located on the FSANZ website
- nine complete 'Database files' available from FSANZ for download into specialised databases.

AUSNUT 2007 Microsoft Excel™ Files

The core AUSNUT 2007 Microsoft Excel™ files include:

- Food File containing information relating to each food, beverage and supplement consumed
- Nutrient File containing information relating to all 37 nutrients for foods and beverages consumed
- Nutrient File containing information relating to 28 nutrients for supplements consumed
- Measures File.

For further information regarding the type of information found in each of these files see Tables 1, 2, 5 and 7 below.

AUSNUT 2007 database files

The complete AUSNUT 2007 database includes the following nine files:

- Food File containing information relating to each food, beverage and supplement consumed
- Nutrient File containing information relating to all nutrients
- Recipe File containing information relating to recipe foods
- Retention Factor File
- Measures File
- Brand Match File
- Dietary Supplement File
- Food Table Definitions File
- AUSNUT 2007 – AUSNUT 1999 matching file.

The information reported in each of these files is outlined below.

Information reported in the Food File

The food file contains non-nutrient information about the foods, beverages and supplements reported in AUSNUT 2007. For a summary of the information included in the food file please refer to Table 1 below.

Table 1: Summary of information included in the 'Food File'

Food File	
<i>Component Heading</i>	<i>Description of Component Heading</i>
Food ID	FSANZ specific food identification code.
Survey ID	Survey specific food identification code.
Food Name	Name commonly used to describe the food, beverage or supplement.
Food Description	A detailed description of the food, beverage or supplement, including its appearance, texture, production and preparation.
Food Derivation	Source of the majority of nutrient data e.g. analysed, calculated, borrowed or label data etc.
Nitrogen Factor	Nitrogen factor used to calculate protein content from measured nitrogen content.
Fat Factor	Fat factor used to calculate mass of fatty acids.
Specific Gravity	Specific gravity of the product (if applicable).
Food Sampling Details	Includes detailed information on origin of the nutrient data, such as the number of samples purchased for analysis, the date and place of purchase, basis for imputation or borrowing of data. Sampling details are not provided for recipe foods.

Information reported in the Nutrient File

The nutrient file contains information specific to the food, beverage and supplement nutrients.

Each nutrient value is presented on a per 100 g edible portion basis, with the exception of dietary supplements which are presented per 100 dosage units. For a summary of the information included in the nutrient file please refer to Table 2 below.

Table 2: Summary of information included in the Nutrient File

Nutrient File	
<i>Component Heading</i>	<i>Description of Component Heading</i>
Food ID	FSANZ specific food identification code.
Survey ID	Survey specific food identification code.
Nutrient ID	Nutrient Identification Code (shorthand way of presenting Nutrient ID e.g. Protein is 'PROT')
Nutrient Description	Full nutrient name e.g. 'Protein'
Nutrient Scale	Units the nutrient is presented in e.g. grams
Nutrient Value	Value of the nutrient reported

Information reported in the Recipe File

This file contains information about the ingredients used in a food or beverage derived using a recipe. Data contained in this file includes: the food name and food identification code; the ingredient name and food identification code; the proportions of the ingredients; nutrient retention factors; and weight change factors. The nutrient retention factors contained in this

file are identified by code number only. More detailed information on the retention factors used in recipe foods can be found in the *Retention Factor* file. For a summary of the information included in the recipe file please refer to Table 3 below.

Table 3: Summary of information included in the Recipe File

Recipe File	
<i>Component Heading</i>	<i>Description of Component Heading</i>
Food ID	FSANZ specific food identification code.
Survey ID	Survey specific food identification code.
Food Name	Name commonly used to describe the food, or beverage.
Weight Change (%)	Weight change on a percentage basis to account for moisture losses or gains from cooking.
Ingredient ID	FSANZ ingredient identification code.
Ingredient survey ID	Survey specific ingredient identification code.
Ingredient Name	Name commonly used to describe the ingredient.
Ingredient Weight (g)	Weight of the ingredient in grams.
Ingredient Retention Factor	Retention factor identification code.

Information reported in the Retention Factor File

This file contains information relating to nutrient retention factors. Retention factors are applied to foods and beverages used as ingredients in a recipe to take into account the effect of processing factors such as light and heat. Retention factors will vary depending on the food and beverage in question and on the method of processing. For a summary of the information included in the retention factor file please refer to Table 4 below.

Table 4: Summary of information included in the Retention Factor File

Retention Factor Files	
<i>Component Heading</i>	<i>Description of Component Heading</i>
Retention Factor ID	Retention factor identification code.
Retention Factor Name	Name commonly used to describe the product.
Retention Factor Nutrient ID	Retention factor nutrient identification code (shorthand way of presenting the nutrient ID e.g. B1 for thiamin).
Nutrient Description	Description of the retention factor nutrient identification code (full nutrient name e.g. Thiamin).
Nutrient Scale	Units the nutrient is presented in e.g. milligrams.
Retention Factor	Value of retention factor reported.

Information reported in the Measures File

This file provides information on common measures for each food and beverage consumed during the Survey. For a summary of the information included in the measures file please refer to Table 5 below.

Table 5: Summary of information included in the Measures File

Measures File	
<i>Component Heading</i>	<i>Description of Component Heading</i>
Food ID	FSANZ specific food identification code.
Survey ID	Survey specific food identification code.
Food Name	Name commonly used to describe the food, beverage or supplement.
Quantity	The number of food measures (e.g. 1).
Food Measure Descriptor	The type of measure e.g. cup.
Food Measure Description	Further information regarding the food measure if applicable e.g. chopped.
Volume	The volume of the food measure in milliliters if applicable.
Gram Weight	The mass of the food measure in grams.
Source	Origin of the food measure.

Information reported in the Brand Match File

This file indicates, for a given nutrient line, the specific branded products that were assigned these nutrient values. For a summary of the information included in the brand match file please refer to Table 6 below.

Table 6: Summary of information included in the Brand Match File

Brand Match File	
<i>Component Heading</i>	<i>Description of Component Heading</i>
Food ID	FSANZ specific food identification code.
Survey ID	Survey specific food identification code.
Food Name	Name commonly used to describe the food, beverage or supplement encompassed by this nutrient line.
Brand Name	Specific products matched to the nutrient line for the given Food ID.

Information reported in the Dietary Supplement File

This file includes information on the dietary supplements consumed during the survey. For a summary of the information included in the dietary supplement file please refer to Table 7 below.

Table 7: Summary of information included in the Dietary Supplement File

Dietary Supplement File	
<i>Component Heading</i>	<i>Description of Component Heading</i>
Survey ID	Survey specific food identification code.
Supplement Name	General name used to describe the dietary supplement. Includes general category description and brand.
Nutrient Description	Full nutrient name e.g. 'Calcium'.
Nutrient Scale	Units the nutrient is presented in e.g. milligrams.
Nutrient Value	Value of the nutrient reported.

Information reported in the Table Definitions File

This file contains information relating to the field type (e.g. whether the field is text or numeric), field length and number of decimal places for each component reported in the food, nutrient, recipe and retention factor files.

Information reported in the AUSNUT 2007 – AUSNUT 1999 File

This file cross references foods reported in AUSNUT 2007 with foods reported in AUSNUT 1999.

GLOSSARY

AUST-L number	Unique code identifying listed therapeutic goods contained in the Australian Register of Therapeutic Goods. In this database, refers to dietary supplements
CSIRO	Commonwealth Scientific & Industrial Research Organisation
DoHA	Australian Government Department of Health and Ageing
Dosage unit	Form in which dietary supplements are consumed. Commonly this refers to a single tablet or capsule; for powdered products in this database, a dosage unit is 1 gram of powder and for liquid products, a dosage unit is 1 millilitre of liquid
FSANZ	Food Standards Australia New Zealand
Limit of reporting	The lowest concentration level at which the laboratory reports analytical results.
Nfs	Not further specified
NNS	National Nutrition Survey
Ns	Not specified
Respondent	A person who participated in the Survey
Supplement	A listed therapeutic good, typically containing one or more vitamin, mineral, other nutritive substance or herbal substance
Survey	Kids Eat, Kids Play, the National Children's Nutrition & Physical Activity Survey 2007
TGA	Therapeutic Goods Administration

REFERENCES

Athar, N., McLaughlin, J. and Taylor, G. (2003) The Concise New Zealand Food Composition Tables. 6th edition. Palmerston North: New Zealand Institute for Crop and Food Research.

Australian Egg Corporation. (2007). Which egg? <http://eggs.org.au/index.asp?pageid=228>

Food Standards Agency. (2002) McCance and Widdowson's The Composition of Foods, 6th Summary Edition. Cambridge: Royal Society of Chemistry.

Food Standards Australia New Zealand. (2007). NUTTAB 2006 – Australian Food Composition Tables. Canberra: FSANZ.
<http://www.foodstandards.gov.au/monitoringandsurveillance/nuttab2006/index.cfm>

Jackobsen, J. (2008) Personal Communication, Danish National Food Institute at the Technical University of Denmark, February 2008.

Møller, A., Saxholt, E., Christensen, A.T., Hartkopp, H.B. and Hess Ygil, K. (2005) Danish Food Composition Databank, revision 6.0. Food Informatics, Dept Nutrition, Danish Institute for Food and Veterinary Research. www.foodcomp.dk

National Health & Medical Research Council & Ministry of Health. (2005). Nutrient Reference Values for Australia and New Zealand. Canberra: Commonwealth of Australia

Pennington, J.A.T. (2008). Applications of food composition data: Data sources and consideration for use. J Food Composition & Analysis, 21: S3-S21.

United States Department of Agriculture. (2003). USDA Table of Nutrient Retention Factors, Release 5. <http://www.ars.usda.gov/Main/docs.htm?docid=9448>

United States Department of Agriculture. (2006) National Nutrient Databank for Standard Reference. Release 19. www.nal.usda.gov/fnic/foodcomp/search

Thomson, C. (2006). Personal communication. Victorian Strawberry Growers Association.

APPENDICES

Notes about nutrients

Appendix 1

Table A1: Nutrients reported in AUSNUT 2007

<i>Nutrient Name</i>	<i>Unit</i>	<i>Usual derivation</i>	<i>Value assigned to trace or non-detected levels (unit per 100 g)</i>	<i>Remarks, including assumptions and limitations</i>
Energy				
Excluding dietary fibre	kilojoules	Calculated	Not applicable	See Appendix 2 for equation
Including dietary fibre	kilojoules	Calculated	Not applicable	See Appendix 2 for equation
Proximate constituents				
Moisture (water)	grams	Analysed	0	Zero value assigned to foods essentially free of water (sugars, oils); all other foods contained measurable water levels
Protein	grams	Calculated	0	Calculated from analysed nitrogen; choice of conversion factor for foods with mixed protein sources will influence reported protein content; factors used are provided in the AUSNUT 2007 Food File
Fat, total	grams	Analysed	0	-
Carbohydrate, total	grams	Calculated	Not applicable	Sum of sugars, starch and other minor carbohydrate components, see Appendix 2 for equation
Sugars, total	grams	Calculated	0	Calculated from analysis of individual sugars, see Appendix 2 for equation. Sugars may be imputed zero in some food groups such as meats
Starch	grams	Analysed	0	Starch may be imputed zero in some food groups, such as milk, meats, water-based beverages and sugars
Dietary fibre	grams	Analysed or imputed	0	Fibre content is imputed as zero in a range of foods, such as carbonated beverages, fish and meats
Alcohol	grams	Analysed or imputed	0	Only measured in those foods known to contain significant quantities of ethanol. For other foods, a zero value is imputed.
Fatty acid components			0% of total fatty acids	Levels of individual fatty acids are calculated from analysis of the percentage of that fatty acid as a total of all fatty acids. This figure is multiplied by the fat content of the food and a factor to account for the presence of non-fatty acid components (e.g. sterols) in the fat. Choice of factor will influence reported fatty acid content; factors used are provided in the AUSNUT 2007 Food File
Saturated fatty acids, total	grams	Calculated	0	Zero values may have been imputed where a food contains a fat content of less than 0.2 g/100 g. See Appendix 2 for equation
Monounsaturated fatty acids, total	grams	Calculated	0	Zero values may have been imputed where a food contains a fat content of less than

<i>Nutrient Name</i>	<i>Unit</i>	<i>Usual derivation</i>	<i>Value assigned to trace or non-detected levels (unit per 100 g)</i>	<i>Remarks, including assumptions and limitations</i>
Polyunsaturated fatty acids, total	grams	Calculated	0	0.2 g/100 g. See Appendix 2 for equation Where polyunsaturated trans fatty acids have been measured separately from other polyunsaturates, they are not included in the sum of polyunsaturates (other than conjugated linoleic acid). See Appendix 2 for equation. Zero values may have been imputed where a food contains a fat content of less than 0.2 g/100 g
Linoleic acid	grams	Calculated	0	Includes conjugated linoleic acid, where this has been separated from linoleic acid in analysis
Alpha linolenic acid	grams	Calculated	0	-
Long chain omega 3 fatty acids, total	milligrams	Calculated	0	See Appendix 2 for equation. Only includes fatty acids with a least 20 carbons.
Vitamin components				Label data were used to assign a vitamin concentration for many fortified foods. Values for added vitamins declared on labels may underestimate actual values as extra nutrient may be added to ensure the declared levels, at a minimum, are achieved throughout the life of the product
Vitamin A expressed as retinol equivalents	micrograms	Calculated	Not applicable	From preformed vitamin A and provitamin A, see Appendix 2 for equation
Preformed vitamin A (retinol)	micrograms	Analysed	0	Zero value imputed for many plant based foods that do not contain animal fats.
Provitamin A expressed as beta-carotene equivalents	micrograms	Calculated	Not applicable	Calculated from analysed values for beta carotene, alpha carotene and cryptoxanthin (where measured). For most foods only beta carotene values were available. See Appendix 2 for equation
Thiamin	milligrams	Analysed	0	Thiamin levels in some specialty breads have been estimated from analysed levels in regular breads
Riboflavin	milligrams	Analysed	0	-
Niacin equivalents, total	milligrams	Calculated	0	Calculated from measured, preformed niacin, together with niacin derived from the amino acid tryptophan. Where data on tryptophan levels were not available, protein content has been used instead. See Appendix 2 for equations
Vitamin C	milligrams	Analysed	0	
Vitamin D	micrograms	Calculated	0 or 0.12	Data set is indicative only and draws on a large number of assumptions; use data with caution. Calculated from analysed levels of four different vitamers. See Appendix 1 for equation. Zero value assigned to plant based foods. For animal based foods, a figure of 0.12 has been used where analysis has not been able to quantify levels. Borrowed and label data also used.
Vitamin E	milligrams	Calculated	0	Calculated from levels of alpha, beta and gamma tocopherol, with no adjustment for different bioactivity of stereoisomers. For most foods only alpha tocopherol values were available. See Appendix 2 for equation
Folate, total	micrograms	Analysed	0	Includes naturally occurring folates and added folic acid, see Appendix 2 for equation. Folic acid may have been analysed for major contributing foods, or may be based on label values. Folates dataset substantially revised since the 1995 National Nutrition Survey.

<i>Nutrient Name</i>	<i>Unit</i>	<i>Usual derivation</i>	<i>Value assigned to trace or non-detected levels (unit per 100 g)</i>	<i>Remarks, including assumptions and limitations</i>
Folate, dietary folate equivalents	micrograms	Calculated	0	Includes naturally occurring folates and added folic acid, expressed as set out in Nutrient Reference Values (NHMRC, 2006). See Appendix 2 for equation
Mineral components				Label data were used to assign a mineral concentration for many fortified foods. Values for added minerals declared on labels may underestimate actual values as extra nutrient may be added to ensure the declared levels, at a minimum, are achieved throughout the life of the product
Calcium	milligrams	Analysed	0	-
Iodine	micrograms	Analysed	0.5	Data set draws on a relatively small set of analytical values. All foods analysed in Australia were assigned the value of 0.5 micrograms per 100 g where levels of iodine were not able to be quantified. A zero value was imputed for a small number of foods (e.g. sodium bicarbonate, rainwater) and some foods analysed in New Zealand were assigned a level of 0.1.
Iron	milligrams	Analysed	0	-
Magnesium	milligrams	Analysed	0	-
Phosphorus	milligrams	Analysed	0	-
Potassium	milligrams	Analysed	0	-
Sodium	milligrams	Analysed	0	-
Zinc	milligrams	Analysed	0	-
Other components				
Caffeine	milligrams	Analysed	0	For foods that do not contain coffee, chocolate or guarana, caffeine has been imputed as zero
Cholesterol	milligrams	Analysed	0	For plant-based foods, cholesterol has generally been imputed as zero.

There are multiple nutrients reported in AUSNUT 2007 that have been derived using equations. These are outlined below. All equations refer to values reported per 100 g of food.

Energy

AUSNUT 2007 reports energy with and without dietary fibre using the following equations:

Energy without dietary fibre

Energy (kJ) = Protein (g)*17 + total sugars (g)*16 + total fat (g)*37 + starch (g)*17 + glycogen (g)*17 + dextrin (g) * 17 + maltodextrin (g)*17 + sorbitol/mannitol (g)*16 + lactic/acetic acids (g)*15 + malic/quinic/citric acids (g)*10 + alcohol (g)*29

Energy with dietary fibre

Energy (kJ) = Energy without dietary fibre (kJ) + dietary fibre (g)*8

Carbohydrate

AUSNUT 2007 primarily reports carbohydrate as available carbohydrate using the following equations:

Available carbohydrate

Available carbohydrate (g) = fructose (g) + glucose (g) + sucrose (g) + lactose (g) + maltose (g) + galactose (g) + maltotriose (g) + starch (g) + glycogen (g) + oligosaccharides (g) + maltodextrin (g) + dextrans (g) + sorbitol (g) + glycerol (g) + mannitol (g)

Carbohydrate was estimated by difference for some foods developed using label data:

Carbohydrate by difference

Carbohydrate by difference (g) = 100 – (water + protein + fat + dietary fibre + ash + alcohol (if an alcoholic product) + (if quantified or added to the food) organic acids + sugar alcohols + polydextrose (g))

Total sugars

AUSNUT 2007 reports total sugars using the following equation:

Total sugars (g) = fructose (g) + glucose (g) + sucrose (g) + lactose (g) + maltose (g) + galactose (g)

Total saturated fatty acids

AUSNUT 2007 reports total saturated fatty acids using the following equation:

Total saturated fatty acids (g) = sum of individual saturated fatty acids (g)

The following fatty acids are included: C4:0, C6:0, C8:0, C10:0, C11:0, C12:0, C13:0, C14:0, C15:0, C16:0, C17:0, C18:0, C19:0, C20:0, C21:0, C22:0, C24:0.

Total monounsaturated fatty acids

AUSNUT 2007 reports total monounsaturated fatty acids using the following equation:

Total monounsaturated fatty acids (g) = sum of individual monounsaturated fatty acids

The following fatty acids are included: C10:1, C14:1, C15:1, C16:1, C17:1, C18:1, C20:1, C22:1, C24:1.

Total polyunsaturated fatty acids

AUSNUT 2007 reports total polyunsaturated fatty acids using the following equation:

Total polyunsaturated fatty acids (g) = sum of individual polyunsaturated fatty acids

The following fatty acids are included: C18:2w6, C18:3w3, C18:3w6, C18:4w3, C20:2w6, C20:3w3, C20:3w6, C20:4w6, C20:5w3, C22:2w6, C22:4w6, C22:5w3, C22:6w3.

Calculation of mass of linoleic and alpha linolenic fatty acids

The proportion of a fatty acid in a food has generally been measured as a percentage of total fatty acids. The equivalent mass of an individual fatty acid is calculated as follows:

Fatty acid (g) = Fatty acid (% of total fatty acids/100)*fat content (g)*fat factor.

Fat factors used in AUSNUT 2007 are the same as those set out in NUTTAB 2006.

Long chain omega 3 fatty acids

AUSNUT 2007 reports total long chain omega 3 polyunsaturated fatty acids using the following equation:

Total long chain omega 3 fatty acids (mg) = C20:3w3 (mg) + C20:5w3 (mg) + C22:5w3 (mg) + C22:6w3 (mg)

Vitamin A

AUSNUT 2007 reports vitamin A expressed as retinol equivalents and provitamin A expressed as beta-carotene equivalents using the following equations:

Vitamin A expressed as retinol equivalents

Retinol equivalents (µg) = retinol + beta-carotene/6 + alpha-carotene/12 + cryptoxanthin/12 (µg)

Provitamin A expressed as beta-carotene equivalents

Beta carotene equivalents = betacarotene + alpha-carotene/2 + cryptoxanthin/2 (ug)

Vitamin E

AUSNUT 2007 reports vitamin E using the following equation:

Vitamin E (mg) = alpha tocopherol + beta-tocopherol/2 + gamma-tocopherol/10 (mg)

Niacin equivalents

AUSNUT 2007 reports niacin values as niacin equivalents using the following equation:

Niacin equivalents (mg) = preformed niacin (mg) + niacin derived from tryptophan (mg)

Niacin derived from tryptophan

The amount of niacin able to be formed in the body from the amino acid tryptophan is estimated as:

$$\text{Niacin derived from tryptophan (mg)} = \text{tryptophan (mg)} * 0.017$$

Where a tryptophan value is not available, niacin derived from tryptophan is estimated instead from the protein content of the food:

$$\text{Niacin derived from tryptophan (mg)} = \text{protein (g)} * 0.167$$

Folates

AUSNUT 2007 reports folates as total folates and dietary folate equivalents using the following two equations:

Total folates

$$\text{Total Folates } (\mu\text{g}) = \text{food folate } (\mu\text{g}) + \text{folic acid } (\mu\text{g})$$

Dietary folate equivalents

$$\text{Dietary Folate Equivalent } (\mu\text{g}) = \text{food folate } (\mu\text{g}) + 1.67 * \text{folic acid } (\mu\text{g})$$

Vitamin D

AUSNUT 2007 reports vitamin D using the following equation:

$$\text{Vitamin D } (\mu\text{g}) = \text{cholcalciferol} + 25\text{-hydroxycholcalciferol} * 5 + \text{ergocalciferol} + 25\text{-hydroxyergocalciferol} * 5$$

Food Group Code	Food Group Name
11	NON-ALCOHOLIC BEVERAGES
111	Tea
11101	Tea, Regular, Caffeinated (including flavoured teas)
11102	Tea, Regular, Decaffeinated
11103	Herbal Tea
112	Coffee And Coffee Substitutes
11201	Coffee Beverage
11202	Dry Coffee Powder
11203	Decaffeinated Coffee, Beverage
11204	Dry Decaffeinated Coffee Powder
11205	Coffee Substitutes, Beverage
11206	Dry Coffee Substitutes
11207	Coffee-Based Mixes, Beverage
11208	Dry Or Concentrate Coffee-Based Mixes
113	Fruit And Vegetable Juices, And Drinks
11301	Fruit Juices
11302	Fruit Juices, concentrate
11303	Fruit Juices, Fortified
11304	Vegetable Juices
11305	Vegetable Juices, Fortified
11306	Fruit and vegetable juice blends
11307	Fruit Drinks (Ready to Drink, Made From Concentrate)
11308	Fruit Drinks (Ready to Drink, Made From Concentrate), intense sweetened
11309	Fruit-Flavoured Drink Base
11310	Fruit-Flavoured Drink Base, Intense Sweetened
11311	Fruit-Flavoured Drink Base, Fortified
114	Cordials
11401	Cordials, Made From Concentrate
11402	Cordials, Made From Concentrate, Intense Sweetened
11403	Cordial Concentrate
11404	Cordial Concentrate, Intense Sweetened
115	Soft Drinks, And Flavoured Mineral Waters
11501	Soft Drinks, Non-Cola
11502	Soft Drinks, Non-Cola, Intense Sweetened
11503	Soft Drinks, Cola, Caffeinated
11504	Soft Drinks, Cola, Intense Sweetened, Caffeinated
11505	Soft Drinks, Cola, Decaffeinated
11506	Soft Drinks, Cola, Intense Sweetened, Decaffeinated
11507	Flavoured Mineral Waters
11508	Flavoured Mineral Waters, Intense Sweetened
116	Electolyte, Energy and Fortified Drinks
11601	Electrolyte Drinks (Sports Drinks)
11602	Electrolyte Drink Bases (Sport Drink Bases)
11603	Energy Drinks
11604	Energy drinks, intense sweetened
11605	Formulated Beverages

Food Group Code	Food Group Name
117	Mineral Waters And Water
11701	Mineral Water, Unflavoured
11702	Soda Water
11703	Domestic Water (including tap, tank/rain water)
11704	Purchased Packaged Water (e.g. Bottled)
11705	Purchased Packaged Water (e.g. Bottled), Fortified
118	Other Beverage Flavourings and Prepared Beverages
11801	Fortified Dry Beverage Flavourings
11802	Fortified Beverage Flavourings Made Up, Unspecified Strength
11803	Unfortified Dry Beverage Flavourings
11804	Unfortified Beverage Flavourings Made Up, Unspecified Strength
11805	Other Beverages (E.g. Probiotics)
12	CEREALS AND CEREAL PRODUCTS
121	Flours And Other Cereal Grains And Starches
12101	Grains (Other Than Rice)
12102	Grains, Rice
12103	Grains, Flavoured Rice
12104	Cereal Flours, Dry Starch Powders
12105	Cereal Flours, Dry Starch Powders, Fortified
122	Regular Breads, And Bread Rolls (Plain/Unfilled/Untopped Varieties)
12201	Breads, And Bread Rolls, White
12202	Breads, And Bread Rolls, White, Fortified
12203	Breads, And Bread Rolls, Mixed Grain
12204	Breads, And Bread Rolls, Mixed Grain, Fortified
12205	Breads, And Bread Rolls, Wholemeal
12206	Breads, And Bread Rolls, Wholemeal, Fortified
12207	Breads, And Bread Rolls, Rye
12208	Breads, And Bread Rolls, Rye, Fortified
12209	Breads, And Bread Rolls, Fibre-Increased
12210	Breads, And Bread Rolls, Fibre-Increased, Fortified
12211	Breads, And Bread Rolls, Not Stated As To Major Flour , Or Fortification
123	English-Style Muffins, Flat Breads, And Savoury and Sweet Breads
12301	English-Style Muffins
12302	Flat Breads (E.g. Pita Bread)
12303	Savoury Filled or Topped Breads And Bread Rolls (E.g. Cheese and Bacon Topped Rolls)
12304	Savoury Filled or Topped Breads And Bread Rolls (E.g. Cheese and Bacon Topped Rolls), Fortified
12305	Sweet Breads, Buns and Scrolls
12306	Sweet Breads, Buns and Scrolls, Fortified
12307	Tortilla, Taco Shells, And Corn Bread
124	Pasta And Pasta Products
12401	Pasta, Including Plain, Flavoured and Egg Varieties
12402	Pasta, Including Plain, Flavoured and Egg Varieties, Fortified
12403	Filled Pasta, E.g. Ravioli, Tortellini (no sauce)
12404	Noodles, All Varieties
125	Breakfast Cereals and Bars, Unfortified and Fortified Varieties
12501	Breakfast Cereal, Corn Based
12502	Breakfast Cereal, Corn Based, Fortified

Food Group Code	Food Group Name
12503	Breakfast Cereal, Oat Based
12504	Breakfast Cereal, Oat Based, Fortified
12505	Breakfast Cereal, Rice Based
12506	Breakfast Cereal, Rice Based, Fortified
12507	Breakfast Cereal, Wheat Based
12508	Breakfast Cereal, Wheat Based, Fortified
12509	Breakfast Cereal, Wheat Based, With Fruit And/Or Nuts
12510	Breakfast Cereal, Wheat Based, With Added Fruit/And Or Fortified
12511	Breakfast Cereal, Mixed Grain
12512	Breakfast Cereal, Mixed Grain, Fortified
12513	Breakfast Cereal, Mixed Grain, With Fruit And/Or Nuts (Includes Muesli)
12514	Breakfast Cereal, Mixed Grain, With Fruit And/Or Nuts, Fortified (Includes Mueslis)
12515	Breakfast Cereal, Other
12516	Breakfast Cereal, Other, Fortified
12517	Breakfast Cereal, Breakfast Bars
12518	Breakfast Cereal, Breakfast Bars, Fortified
126	Breakfast Cereal, Hot Porridge Type
12601	Breakfast Cereal, Hot Porridge Type, Made From Oats (Including plain, flavoured and added fruit varieties)
12602	Breakfast Cereal, Hot Porridge Type, Made From Other Grains (Including plain, flavoured and added fruit varieties)
13	CEREAL-BASED PRODUCTS AND DISHES
131	Sweet Biscuits
13101	Sweet Biscuits, Plain Or Flavoured Including Short Bread Varieties
13102	Sweet Biscuits, Plain With Fruit Or Nuts
13103	Sweet Biscuits, Fruit-Filled Or Fancy
13104	Sweet Biscuits, Cream-Filled
13105	Sweet Biscuits, Chocolate-Coated, Chocolate Chip
13106	Sweet Biscuits, Other Toppings
132	Savoury Biscuits
13201	Savoury Biscuits, Plain, Low Fat (<6% Fat)
13202	Savoury Biscuits, Plain, High Fat (>6% Fat)
13203	Savoury Biscuits, Flavoured
13204	Rice and Corn Crackers and Cakes
133	Cakes, Buns, Muffins, Scones, Cake-Type Desserts
13301	Cakes, Cake Mixes
13302	Cake-Type Muffins And Mixes
13303	Cake-Type Desserts
13304	Slices, Biscuit And Cake-Type
13305	Scones And Rock Cakes
13306	Other Desserts Containing Cereal
134	Pastries
13401	Pastry, Croissant
13402	Sweet Pastry Products, Tarts And Flans
13403	Sweet Pastry Products, Pies, Slices And Danishes
13404	Savoury Pastry Products, Tarts And Flans
13405	Savoury Pastry Products, Pies, Rolls And Envelopes
135	Mixed Dishes Where Cereal Is The Major Ingredient
13501	Pizza

Food Group Code	Food Group Name
13502	Sandwiches And Filled Rolls (Where Recipe Not Known)
13503	Hamburgers
13504	Taco And Tortilla-Based Dishes
13505	Savoury Pasta/Noodle And Sauce Dishes
13506	Savoury Rice-Based Dishes
13507	Savoury Dumplings
13508	Other Savoury Grain Dishes
136	Batter-Based Products
13601	Pancakes, Crepes And Dishes
13602	Drop Scones, Pikelets
13603	Waffles
13604	Batters And Batter Puddings
13605	Doughnuts
13606	Crumpets
14	FATS AND OILS
141	Butters
14101	Butter, Regular
14102	Butter, Reduced Fat
14103	Butter, Unspecified Type
142	Dairy Blends
14201	Dairy Blend, Regular
14202	Dairy Blend, Reduced Fat
14203	Dairy Blend, Fortified
14204	Dairy Blend, Unspecified Type
143	Margarine and Table Spreads
14301	Polyunsaturated Margarine Spreads, >65% Fat
14302	Polyunsaturated Margarine Spreads, <65% Fat
14303	Monounsaturated Margarine Spreads, >65% Fat
14304	Monounsaturated Margarine Spreads, <65% Fat
14305	Cooking Margarine
14306	Margarine Spreads With Added Phytosterols
14307	Unspecified Margarine Spread
144	Vegetable/Nut Oil
14401	Vegetable/Nut Oil Blends
14402	Polyunsaturated Oils
14403	Monounsaturated Oils
14404	Unspecified Vegetable/Nut Oils
145	Other Fats
14501	Animal-Based Solid Fats
14502	Vegetable-Based Solid Fats
14503	Other Fats
14504	Unspecified Other Fats
146	Unspecified Fats
14601	Unspecified Dairy-Based Fat Or Margarine Used As A Spread
14602	Unspecified Solid Fats Or Oil Used In Cooking
14603	Unspecified Spread, Cooking Oil Or Fat Used In Cooking
15	FISH and SEAFOOD PRODUCTS AND DISHES
151	Fin Fish (Excluding Commerically Sterile)
15101	Fin Fish, Fresh, Frozen

Food Group Code	Food Group Name
15102	Smoked Fish
152	Crustacea And Molluscs (Excluding Commercially Sterile)
15201	Crustacea, Fresh, Frozen
15202	Molluscs
153	Other Sea And Freshwater Foods
15301	Fish Roe
15302	Eel
154	Packed (Commercially Sterile) Fish And Seafood
15401	Packed Fin Fish
15402	Packed Crustacea And Molluscs
15403	Packed Other Sea and Fresh Water Foods
155	Fish And Seafood Products (Homemade and Takeaway)
15501	Fin Fish, Battered Or Crumbed
15502	Crustacea And Molluscs, Battered Or Crumbed
15503	Fish And Seafood Products
156	Mixed Dishes With Fish Or Seafood As The Major Component
15601	Mixed Dishes With Fish As The Major Component, Plus Sauce
15602	Mixed Dishes With Fish As The Major Component, No Sauce
15603	Mixed Dishes With Fish As The Major Component, With Cereal Products
15604	Mixed Seafood Dishes With Crustacea, Molluscs Or Other Seafood Products As The Major Component, Plus Sauce
15605	Mixed Seafood Dishes With Crustacea, Molluscs Or Other Seafood Products As The Major Component, No Sauce
15606	Mixed Seafood Dishes With Crustacea, Molluscs Or Other Seafood Products As The Major Component, With Cereal Products
16	FRUIT PRODUCTS AND DISHES
161	Pome Fruit
16101	Apples
16102	Apples, Commercially Sterile
16103	Apples, Commercially Sterile, Intense Sweetened
16104	Pears
16105	Pears, Commercially Sterile
16106	Pears, Commercially Sterile, Intense Sweetened
16107	Other Pome Fruit
16108	Other Pome Fruit, Commercially Sterile
162	Berry Fruit
16201	Berry Fruit
16202	Berry Fruit, Commercially Sterile
16203	Berry Fruit, Commercially Sterile, Intense Sweetened
163	Citrus Fruit
16301	Oranges
16302	Lemons And Limes
16303	Other Citrus Fruit
164	Stone Fruit
16401	Peaches
16402	Peaches, Commercially Sterile
16403	Peaches, Commercially Sterile, Intense Sweetened
16404	Other Stone Fruit
16405	Other Stone Fruit, Commercially Sterile

Food Group Code	Food Group Name
16406	Other Stone Fruit, Commerically Sterile, Intense Sweetened
165	Tropical Fruit
16501	Bananas
16502	Pineapples
16503	Pineapples, Commerically Sterile
16504	Other Tropical Fruit
16505	Other Tropical Fruit, Commerically Sterile
16506	Other Tropical Fruit, Commerically Sterile, Intense Sweetened
166	Other Fruit
16601	Other Fruit
16602	Other Fruit, Commerically Sterile
16603	Other Fruit, Commerically Sterile, Intense Sweetened
167	Mixtures Of Two Or More Groups Of Fruit
16701	Mixtures Of Two Or More Groups Of Fruit
16702	Mixtures Of Two Or More Groups Of Fruit, Commerically Sterile
16703	Mixtures Of Two Or More Groups Of Fruit, Commerically Sterile, Intense Sweetened
168	Dried Fruit, Preserved Fruit
16801	Dried Vine Fruit
16802	Other Dried Fruit And Mixes
16803	Dried Fruit And Nut Mixes
16804	Preserved Fruit (E.G .Glace)
169	Mixed Dishes Where Fruit Is The Major Component
16901	Mixed Dishes Where Fruit Is The Major Component
17	EGG PRODUCTS AND DISHES
171	Eggs
17101	Eggs, Chicken
17102	Eggs, Chicken, Modified (E.g. Omega-3, Folate)
17103	Eggs, Other (E.g. Duck Eggs)
172	Dishes Where Egg Is The Major Ingredient
17201	Egg Dishes, Savoury (e.g. omelete, scrambled, quiche)
17202	Egg Dishes, Sweet (e.g. souffle)
173	Egg Substitutes and Dishes
17301	Egg Substitute, Powdered And Frozen Mix
17302	Egg Substitute, Dishes
18	MEAT, POULTRY and GAME PRODUCTS and DISHES
181	Muscle Meat
18101	Beef
18102	Lamb
18103	Pork
18104	Veal
18105	Muscle Meat, Unspecified
182	Game And Other Carcase Meats
18201	Game And Other Carcase Meats (e.g. Kangaroo, Rabbit, Venison)
183	Poultry And Feathered Game
18301	Chicken
18302	Other Poultry (e.g. Duck, Turkey)
18303	Feathered Game (e.g. Quail, Emu)
184	Organ Meats And Offal, Products And Dishes
18401	Liver

Food Group Code	Food Group Name
18402	Kidney
18403	Other Organ Meats And Offal
18404	Liver Paste And Pate
18405	Liver Dishes
18406	Kidney Dishes
18407	Other Organ Meat And Offal Dishes
185	Sausages, Frankfurts And Saveloys
18501	Sausage
18502	Frankfurts, And Saveloys
186	Processed Meat
18601	Bacon
18602	Ham
18603	Processed Delicatessen Meat, Red
18604	Processed Delicatessen Meat, White
18605	Meat Paste
18606	Canned Processed Meat
187	Mixed Dishes Where Beef, Veal Or Lamb Is The Major Component
18701	Beef, Or Veal Stew, Casserole, Stir Fry With Gravy Or Sauce Only
18702	Lamb Stew, Casserole, Stir Fry With Gravy Or Sauce Only
18703	Beef, Or Veal Stew, Casserole, Stir Fry With Cereal Products
18704	Lamb Stew, Casserole, Stir Fry With Cereal Products
18705	Beef, Or Veal, Crumbed, Battered, Meatloaf Or Patty Type With Cereal
18706	Lamb Crumbed, Battered, Meatloaf Or Patty Type With Cereal
18707	Beef, Or Veal, Crumbed, Battered, Meatloaf Or Patty Type With Vegetable
18708	Lamb Crumbed, Battered, Meatloaf Or Patty Type With Vegetable
18709	Beef, Or Veal, Crumbed, Battered, Meatloaf Or Patty Type With Cereal And Vegetable
18710	Lamb, Crumbed, Battered, Meatloaf Or Patty Type With Cereal And Vegetable
18711	Beef, Or Veal, Sausage Dish
18712	Lamb Sausage Dishes
18713	Unspecified Red Meat, Mixed Dish
188	Mixed Dishes Where Pork, Bacon, Ham Is The Major Component
18801	Pork, Bacon, Ham Stew, Casserole, Stir Fry With Gravy Or Sauce Only
18802	Pork, Bacon, Ham Stew, Casserole, Stir Fry With Cereal Products
18803	Pork, Bacon, Ham, Crumbed, Battered, Meatloaf Or Patty Type With Either Cereal And/Or Vegetable
18804	Pork Sausage Dishes
18805	Unspecified Meat, Mixed Dish
189	Mixed Dishes Where Poultry Or Game Is The Major Component
18901	Poultry Or Game Stew, Casserole, Stir Fry With Gravy Or Sauce Only
18902	Poultry Or Game Stew, Casserole, Stir Fry With Cereal Products
18903	Poultry Or Game Crumbed, Battered, Meatloaf Or Patty Type With Cereal
18904	Poultry Or Game Crumbed, Battered, Meatloaf Or Patty Type With Vegetable
18905	Unspecified White Meat, Mixed Dish
19	MILK PRODUCTS AND DISHES
191	Dairy Milk (cow, sheep and goat)
19101	Milk, Cow, Fluid, Fat-Increased
19102	Milk, Cow, Fluid, Regular Whole, Full Fat
19103	Milk, Cow, Fluid, Regular Whole, Full Fat, Fortified

Food Group Code	Food Group Name
19104	Milk, Cow, Fluid, Reduced Fat, < 2%
19105	Milk, Cow, Fluid, Reduced Fat, < 2%, Fortified
19106	Milk, Cow, Fluid, Skim, Non-Fat
19107	Milk, Cow, Fluid, Skim, Non-Fat, Fortified
19108	Milk, Cow, Fluid, Added Substances Other Than Nutrients (E.g. Phytosterols)
19109	Milk, Evaporated, Undiluted
19110	Milk, Condensed, Undiluted
19111	Milk, Powder, Dry, Regular Fat
19112	Milk Powder, Dry, Skim
19113	Milk, Fluid, Other (e.g. Goat and Sheep)
19114	Milk, Fluid, Unspecified
192	Yoghurt
19201	Yoghurt, Natural And Yoghurt Dips, Full Fat
19202	Yoghurt, Natural And Yoghurt Dips, Reduced Fat
19203	Yoghurt, Natural And Yoghurt Dips, Skim And Non-Fat
19204	Yoghurt, Flavoured or Added Fruit, Full Fat
19205	Yoghurt, Full Fat, Fruit and/or Cereal Added
19206	Yoghurt, Flavoured or Added Fruit, Reduced Fat
19207	Yoghurt, Reduced Fat, Fruit and/or Cereal Added
19208	Yoghurt, Flavoured or Added Fruit, Low Fat, Skim Or Non-Fat, Sugar Sweetened
19209	Yoghurt, Low Fat, Skim Or Non-Fat, Fruit and/or Cereal Added, Sugar Sweetened
19210	Yoghurt, Flavoured or Added Fruit, Low Fat, Skim, Or Non-Fat, Intense Sweetened
19211	Yoghurt, Low Fat, Skim Or Non-Fat, Fruit and/or Cereal Added Intense Sweetened
19212	Yoghurt, Drinks, Buttermilk
19213	Yoghurt, High Fat (> 4% Fat)
19214	Yoghurt, High Fat (> 4% Fat), Fruit And/Or Cereal Added
19215	Yoghurt, Added Substances Other Than Nutrients (E.g. Phytosterols)
19216	Yoghurt, Unspecified fat
193	Cream
19301	Cream, Thickened Cream, Rich Cream
19302	Cream, Sour And Sour Cream-Based Dips
19303	Cream Substitute, Artificial Cream
19304	Cream, Reduced Fat, Light, Extra Light
19305	Cream, Sour, Reduced Fat, Light, Extra Light And Sour Cream Based Dips
19306	Cream, Unspecified Fat Level
19307	Cream, Sour, Unspecified Fat Level
194	Cheese
19401	Cheese, Natural, Traditional
19402	Cheese, Natural, Reduced Fat And Fat-Modified
19403	Cheese, Cottage And Cheese, Cottage, Low Fat
19404	Cheese, Cream And Cheese, Cream, Reduced Fat, Cream Cheese-Based Dips, Fruit Cheese
19405	Cheese, Processed
19406	Cheese, Processed, Reduced Fat
19407	Cheese, Processed, Fortified
19408	Cheese, Camembert, Brie
19409	Dishes With Cheese As The Major Component
195	Frozen Milk Products
19501	Ice Cream, Tub Varieties, >10% Fat

Food Group Code	Food Group Name
19502	Ice Cream, Tub Varieties, <10% Fat
19503	Ice Cream, Individual Bar, Stick And Cone Varieties
19504	Ice Cream, Added Substances Other Than Nutrients (E.g. Phytosterols)
19505	Frozen Yoghurts, All Types, Regular Fat
19506	Frozen Yoghurts, All Types, Reduced Fat
19507	Frozen Dairy Desserts
196	Custards
19601	Custard, Regular Fat
19602	Custard, Reduced Fat
19603	Custard, Intense Sweetened
197	Other Dishes Where Milk Or A Milk Product Is The Major Component
19701	Sweet Sauces, Milk-based
19702	Dairy Desserts, Smooth Or Gelatin-Based Dairy Desserts (e.g. mousse, fruiche, creamed rice)
19703	Dairy Desserts, Smooth Or Gelatin-Based Dairy Desserts, Intense Sweetened
19704	Other Milk-, Cheese- Or Cream-Based Desserts (e.g. cheesecake)
198	Flavoured Milks
19801	Milk, Other Flavoured And Milk-Based Drinks, Full Fat
19802	Milk, Coffee/Chocolate Flavoured And Milk-Based Drinks, Full Fat
19803	Milk, Other Flavoured And Milk-Based Drinks, Reduced Fat
19804	Milk, Coffee/Chocolate Flavoured And Milk-Based Drinks, Reduced Fat
19805	Milk, Other Flavoured And Milk-Based Drinks, Low Fat, Skim Or Non-Fat
19806	Milk, Coffee/Chocolate Flavoured And Milk-Based Drinks, Low Fat, Skim Or Non-Fat
19807	Milk Other Flavoured And Milk-Based Drinks, Not Stated As To Fat
19808	Milk, Coffee/Chocolate Flavoured And Milk-Based Drinks, Not Stated As To Fat
19809	Milk-Based, Fruit Drinks
20	Dairy Substitutes
201	Dairy Milk Substitutes, Unflavoured
20101	Soy-Based Beverage, Plain
20102	Soy-Based Beverage, Plain, Fortified
20103	Soy-Based Beverage, Plain, Reduced Fat
20104	Soy-Based Beverage, Plain, Reduced Fat, Fortified
20105	Soy-Based Beverage, Plain, Skim
20106	Soy-Based Beverage, Plain, Skim, Fortified
20107	Rice-Based Beverage, Plain
20108	Oat-Based Beverage, Plain
202	Dairy Milk Substitutes, Flavoured
20201	Soy-Based Beverage, Flavoured
20202	Soy-Based Beverage, Flavoured, Fortified
20203	Soy-Based Beverage, Reduced Fat, Flavoured
20204	Soy-Based Beverage, Reduced Fat, Flavoured, Fortified
20205	Soy-Based Fruit Drinks
203	Cheese Substitute
20301	Cheese Substitute, Non-Dairy
204	Soy-Based Ice Confection
20401	Soy-Based Ice Confection, Plain
20402	Soy-Based Ice Confection, Flavoured

Food Group Code	Food Group Name
205	Soy-Based Yoghurts
20501	Soy-Based Yoghurts, Plain
20502	Soy-Based Yoghurts, Flavoured
20503	Soy-Based Yoghurts, Reduced Fat, Plain
20504	Soy-Based Yoghurts, Reduced Fat, Flavoured
21	SOUP
211	Soup (Prepared, Ready to Eat)
21101	Soup Containing Meat (Beef, Lamb, Ham)
21102	Soup Containing Chicken
21103	Soup Containing Fish Or Seafood
21104	Tomato-Based Soup
21105	Other Vegetable-Based Soup
21106	Pumpkin-Based Soup
212	Dry Soup Mix
21201	Dry Soup Mix Containing Meat (Beef, Lamb, Ham)
21202	Dry Soup Mix Containing Chicken
21203	Dry Soup Mix Containing Fish Or Seafood
21204	Tomato-Based Dry Soup Mix
21205	Other Vegetable-Based Dry Soup Mix
21206	Pumpkin-Based Dry Soup Mix
213	Canned Condensed Soup (Unprepared)
21301	Canned Condensed Soup Containing Meat (Beef, Lamb, Ham)
21302	Canned Condensed Soup Containing Chicken
21303	Canned Condensed Soup Containing Fish or Seafood
21304	Tomato Based Canned Condensed Soup
21305	Other Vegetable-Based Canned Condensed Soup
21306	Pumpkin-Based Canned Condensed Soup
22	SEED and NUT PRODUCTS AND DISHES
221	Seeds And Seed Products
22101	Seeds And Seed Products
222	Nuts And Nut Products
22201	Peanuts
22202	Peanut Products (e.g. Peanut Butter)
22203	Coconut And Coconut Products
22204	Other Nuts And Nut Products And Dishes
23	SAVOURY SAUCES AND CONDIMENTS
231	Gravies And Savoury Sauces
23101	Gravies (Prepared)
23102	Dry Gravy Mixes
23103	Savoury Sauces
23104	Savoury Sauces, Intense Sweetened
23105	Dry Savoury Sauces and Casserole Bases And Dry Mixes
23106	Pasta and Simmer Sauces, Oil- Or Cream- Or Cheese-Based
23107	Pasta And Simmer Sauces, Oil- Or Cream- Or Cheese based, Intense Sweetened
23108	Pasta and Simmer Sauces, Tomato-Based
23109	Pasta And Simmer Sauces, Tomato Based, Intense Sweetened
23110	Sauce (With Onion), From Meat-Based Stews And Casseroles
232	Pickles, Chutneys And Relishes
23201	Fruit-Based Pickles, Chutneys, Relishes And Mustard

Food Group Code	Food Group Name
23202	Fruit-Based Pickles, Chutneys, Relishes And Mustard, Intense Sweetened
23203	Vegetable-Based Pickles, Chutneys And Relishes
23204	Vegetable-Based Pickles, Chutneys And Relishes, Intense Sweetened
233	Salad Dressings
23301	Mayonnaise And Cream-Style Dressings, Full Fat
23302	Italian- And French-Style Dressings, Full Fat
23303	Mayonnaise And Cream-Style Dressings, Reduced Or Non-Fat
23304	Italian- And French-Style Dressings, Reduced Or Non-Fat, Vinegar
234	Stuffings
23401	Bread-Based Stuffings
23402	Other Stuffings
24	VEGETABLE PRODUCTS AND DISHES
241	Potatoes
24101	Potatoes
24102	Potato Products (e.g. potato chips/wedges, gems and hash browns)
24103	Potato Dishes (e.g. potato bake/scalloped potatoes/mashed potatoes)
242	Cabbage, Cauliflower And Similar Brassica Vegetables
24201	Cabbage, Cauliflower And Similar Brassica Vegetables
243	Carrot And Similar Root Vegetables
24301	Carrot And Similar Root Vegetables
244	Leaf And Stalk Vegetables
24401	Leaf And Stalk Vegetables
245	Peas And Beans
24501	Peas And Edible-Podded Peas
24502	Beans
246	Tomato And Tomato Products
24601	Tomato
24602	Tomato Products
247	Other Fruiting Vegetables
24701	Pumpkin
24702	Squash And Zucchini
24703	Other Fruiting Vegetables
248	Other Vegetables And Vegetable Combinations
24801	Other Vegetables
24802	Onion, Leek And Garlic
24803	Mixtures Of Two Or More Vegetables
249	Dishes Where Vegetable Is The Major Component
24901	Vegetables And Sauce
24902	Stuffed Vegetables And Vegetable Dishes
24903	Vegetables And Sauce Only, From Meat-Based Stews and Casseroles
25	LEGUME AND PULSE PRODUCTS AND DISHES
251	Mature Legumes And Pulses
25101	Mature Legumes And Pulses
252	Mature Legume And Pulse Products And Dishes
25201	Legume And Pulse Products
25202	Dishes Where Mature Legumes Are The Major Component
25203	Meat Substitutes
25204	Dishes Where Meat Substitutes Are The Major Component

Food Group Code	Food Group Name
26	SNACK FOODS
261	Potato Snacks
26101	Potato Crisps
26102	Potato Crisps, Reduced Fat
262	Corn Snacks
26201	Corn Chips
26202	Popcorn
263	Extruded Or Reformed Snacks
26301	Extruded Snacks
264	Pretzels
26401	Pretzels
265	Other Snacks
26501	Other Snacks
27	SUGAR PRODUCTS AND DISHES
271	Sugar, Honey And Syrups
27101	Sugar
27102	Honey And Sugar Syrups
27103	Toppings, All Flavours
27104	Toppings, All Flavours, Intense Sweetened
27105	Sauces, Sweet
272	Jam And Lemon Spreads, Chocolate Spreads, Sauces
27201	Jams And Conserves, Sugar Sweetened
27202	Jams And Conserves, Intense Sweetened
27203	Sweet Spreads, Fruit Flavoured
27204	Sweet Spreads, Fruit Flavoured, Intense Sweetened
27205	Sweet Spreads, Chocolate/Coffee Flavoured
27206	Sauces, Sweet, Fruit-Based
273	Dishes And Products Other Than Confectionery Where Sugar Is The Major Component
27301	Sugar-Based Desserts (e.g. Jelly, Meringue)
27302	Sugar-Based Desserts, Intense Sweetened (e.g. Jelly)
27303	Water Ice Confection, Gelato, Sorbet
27304	Frostings And Icing With Added Fat
27305	Other Icing
28	CONFECTIONERY AND CEREAL/NUT/FRUIT/SEED BARS
281	Chocolate And Chocolate-Based Confectionery
28101	Chocolate (Plain, Unfilled Varieties)
28102	Chocolate-Based Confectionery (With Additions, Coated, etc)
28103	Carob or Yoghurt And Carob- or yoghurt-Based Confectionery
282	Cereal-, Fruit-, Nut- And Seed-Bars
28201	Muesli Bars, Non-Chocolate (including drizzled/coated in yoghurt)
28202	Muesli Bars, Chocolate Coated or Chocolate Chip
28203	Muesli Bar, With Fruit or Fruit Paste Filling (including drizzled/coated in yoghurt)
28204	Muesli Bar, With Fruit And Nut (including drizzled/coated in yoghurt)
28205	Fruit Bar And Fruit-Based Confectionery (e.g. fruit leather, apricot delight)
28206	Nut- And Seed-Based Confectionery
28207	Bar, Cake-based
28208	Cereal-, Fruit-, Nut- And Seed-Bars, Fortified

Food Group Code	Food Group Name
283	Other Confectionery
28301	Lollies And Other Confectionery, Sugar Sweetened
28302	Lollies And Other Confectionery, Intense Sweetened
28303	Chewing Gum, Sugar Sweetened
28304	Chewing Gum, Artificially Sweetened
29	ALCOHOLIC BEVERAGES
291	Beers
29101	Beers, > 3.5% Alcohol
29102	Beers, 1.15- 3.5% Alcohol, Reduced Alcohol / Light
29103	Beers, <1.15% Alcohol, Ultra / Special / Extra Light
292	Wines
29201	Wines, Red (including sparkling varieties)
29202	Wines, White (including sparkling varieties)
29203	Fortified Wines
29204	Reduced Alcohol Wines
29205	De-Alcoholised And Non-Alcoholic Wine (including sparkling varieties)
293	Spirits
29301	Spirits
294	Other Alcoholic Beverages
29401	Liqueurs
29402	Cocktails And Other Mixed Drinks
29403	Other Alcoholic Beverages
29404	Wine Coolers
295	Pre-mixed drinks
29501	Pre-mixed drinks, Cola-Based
29502	Pre-mixed drinks, Milk-Based
29503	Pre-mixed drinks, Other
30	SPECIAL DIETARY FOODS
301	Formula Dietary Foods
30101	Biscuit And Bar Meal Replacement
30102	Milk-Based Liquid Meal Replacements
30103	Milk-Based Powder Meal Replacements
30104	Oral Supplement Liquids
30105	Oral Supplement Powders
302	Enteral formula
30201	Enteral formula
31	MISCELLANEOUS
311	Yeast, Yeast, Vegetable And Meat Extracts
31101	Yeast
31102	Yeast, Vegetable And Meat Extracts
312	Intense Sweetening Agents
31201	Intense Sweetener, Powder
31202	Intense Sweetener, Tablet
31203	Intense Sweetener, Liquid
31204	Intense Sweetener, Unspecified
313	Herbs, Spices, Seasonings And Stock Cubes
31301	Salt
31302	Herbs And Spices
31303	Stock Cubes And Seasonings

Food Group Code	Food Group Name
31304	Stock, Prepared
314	Essences
31401	Essences
315	Chemical Raising Agents And Cooking Ingredients
31501	Chemical Raising Agents And Cooking Ingredients
31502	Gelatine
31503	Other Additives
32	INFANT FORMULAE AND FOODS
321	Infant Formulae And Human Breast Milk
32101	Infant Formulae
32102	Human Breast Milk
32103	Toddler Formula, Milk Based
32104	Toddler Formula, Soy Based
322	Infant Cereal Products
32201	Infant Cereals
32202	Infant Rusks
32203	Infant Pasta And Rice Dishes
323	Infant Foods
32301	Infant Fruit And Fruit-Based Desserts
32302	Infant Vegetables and Vegetable Based Dinners
32303	Infant Egg-, Fish-, Poultry- And Meat-Based Dinners
32304	Infant Custards
32305	Infant Yoghurts
32306	Infant Gels
32307	Other Infant Desserts
324	Infant Drinks
32401	Infant Fruit Juices
33	Dietary supplements
331	Multivitamin and/or Mineral
33101	Multivitamin and/or Mineral, tablet, capsule or powder formulation
33102	Multivitamin and/or Mineral, liquid formulation
33103	Multivitamin and/or mineral, powder formulation
332	Single mineral
33201	Iron supplements
33202	Fluoride supplements
33203	Calcium supplements
33204	Zinc supplements
33205	Other single mineral supplements
333	Single vitamin
33301	Vitamin C supplements
33302	Vitamin E supplements
33303	Other single vitamin supplements
334	Herbal and homoeopathic supplements
33401	Herbal supplements
33402	Herbal and vitamin or mineral supplements
33403	Homoeopathic supplements
335	Oil supplement
33501	Fish oil supplements
33502	Fish oil supplements with added nutrients

Food Group Code	Food Group Name
33503	Cod liver oil supplements
33504	Evening Primrose oil supplements
33505	Other oil supplements
336	Sports, protein and meal replacement supplement
33601	Protein supplements
33602	Meal replacement supplements
33603	Sports Supplement
337	Fibre supplement
33701	Fibre supplement
338	Probiotics and Prebiotic Supplements
33801	Probiotics Supplements
33802	Prebiotic supplements
339	Other supplements

General food and beverage classification system used by FSANZ Appendix 4

Food group	Code	Food sub-group
Beverages	01A1	Beers
	01A2	Wines
	01A3	Other alcoholic beverages
	01B1	Teas, coffees, dry beverage flavourings
	01B2	Fruit drinks, cordials, flavoured drink bases, soft drinks
	01B3	Fruit & vegetable juices & juice drinks
Cereals & cereal products	02A1	Grains & starches
	02A2	Flours
	02B1	Breads rolls
	02B2	Muffins crumpets etc
	02B3	Other cereal-based bread equivalents
	02C1	Savoury biscuits
	02C2	Sweet biscuits
	02D1	Ready-to-eat breakfast cereals
	02D2	Cooked breakfast cereals
	02E1	Cakes, cake mixes, muffins, puddings
	02E2	Buns, scones, etc
	02E3	Batters
	02E4	Pastries
	02E5	Sweet pastry products
Fast Foods and Takeaway Foods	02E6	Savoury pastry products
	02F1	Pizza
	02F2	Sandwiches
	02F4	Other products where cereal is major ingredient
Eggs & egg products	03A1	Eggs
	03A2	Egg substitutes
	03B1	Egg dishes where egg is major component
Fats & oils	04A1	Butters
	04A2	Creams
	04B1	Polyunsaturated margarines
	04B2	Other margarines
	04C1	Vegetable oils
	04D1	Other fats
Fish & fish products	05A1	Fin fish
	05B1	Other sea & freshwater foods
	05C1	Crustacea & molluscs
	05D1	Fish products & dishes
	05D2	Crustacea & mollusc products & dishes
Fruit	06A1	Berry fruit
	06A2	Packing liquid processed berry fruit
	06B1	Citrus fruit
	06B2	Packing liquid processed citrus fruit
	06C1	Stone fruit
	06C2	Packing liquid processed stone fruit
	06D1	Other fruit
	06D2	Packing liquid processed other fruit
	06E1	Composite fruit product where fruit is major component
	06E2	Packing liquid processed composite fruits
Infant formulae & foods	07B1	Infant cereals
	07B2	Infant rusks and fingers
	07C1	Infant dinners strained junior & toddler
	07D1	Infant fruit and desserts
	07E1	Infant fruit juices

Food group	Code	Food sub-group
Meat, meat products, poultry & game	08A1	Beef
	08A2	Lamb
	08A3	Pork
	08A4	Veal
	08B1	Game & other carcass meats
	08C1	Poultry
	08C2	Feathered game
	08D1	Offal & offal products
	08E1	Battered & crumbed products
	08E2	Sausages, frankfurts, saveloys
	08E3	Other processed meats
	08E4	Meat pastes
	08F1	Composite meat & poultry products where meat is a major component
	08G1	Vegetarian meat substitutes
Milk & milk products	09A1	Milk, fluid
	09A2	Milk, condensed
	09A3	Milk, powdered
	09A4	Milk based drinks
	09B1	Traditional cheese
	09B2	Low fat & fat modified cheeses
	09B3	Cheese products
	09C1	Yoghurt full fat
	09C2	Yoghurt low fat
	09D1	Frozen milk products where milk is major component
	09D2	Other dishes where milk is major component
Sauces, pickles, soups, snacks	09E1	Imitation dairy products
	10A1	Savoury sauces
	10A2	Sweet sauces
	10B1	Pickles
	10C1	Soups
	10D1	Snack foods
	Miscellaneous foods	10E1
10F1		Vinegars
10F2		Salad dressings
10F3		Yeast
10F4		Yeast vegetable extracts
10F5		Essences
10F6		Others
Seeds & nuts	11A1	Seeds and seed products
	11B1	Nuts & nut products
Sugar preserves & confectionery	12A1	Sugars
	12B1	Preserves
	12C1	Confectionery
	12D1	Composite foods where sugar is major component
Vegetable & vegetable dishes	13A1	Vegetables
	13A2	Mature legumes
	13B1	Composite food where vegetable is major component
	13B2	Composite food where mature legume is major component
Artificial sweeteners	14A1	
Additives and cooking ingredients	14B1	
Indigenous Australian	15A1	Plant foods
	15A2	Mammal foods
	15A3	Bird foods
	15A4	Insect foods
	15A5	Fish foods
Dietary supplements	331	Multivitamin and/or Mineral

Food group	Code	Food sub-group
	332	Single mineral
	333	Single vitamin
	334	Herbal and homoeopathic supplements
	335	Oil supplement
	336	Sports, protein and meal replacement supplement
	337	Fibre supplement
	338	Probiotics and Prebiotic Supplements
	339	Other supplements