



Nutrition Panel Calculator

Explanatory Notes

August 2011



Disclaimer

FSANZ makes the Nutrition Panel Calculator available for the benefit of the public, on the understanding that you will exercise your own skill, care and judgement with respect to its use. You are under no obligation to use the Nutrition Panel Calculator and the Nutrition Panel Calculator is only one of many sources of generally accepted food composition data available for use.

FSANZ has taken great care to ensure the material provided in the Nutrition Panel Calculator is as correct and accurate as possible. Changes to the Nutrition Panel Calculator are to be expected from time to time, in an effort by FSANZ to provide you with the most contemporary food composition data and web service possible. The food composition data used in the Nutrition Panel Calculator for a particular food or ingredient can vary over time, as data are updated. As such, the results generated by the Nutrition Panel Calculator for your product can also vary over time.

FSANZ makes no warranty that the results generated by the Nutrition Panel Calculator will be free from error, or if used will ensure compliance with the relevant requirements of the *Australia New Zealand Food Standards Code*. Before relying on the results generated by the Nutrition Panel Calculator in any important matter, you should carefully evaluate the accuracy, completeness and relevance of the results for your purposes, and should obtain appropriate expert advice relevant to your particular circumstances.

By accessing the Nutrition Panel Calculator, you acknowledge that in no event shall FSANZ be liable for any incidental or consequential damages resulting from its use.

Any reference to a brand name product contained in the Nutrition Panel Calculator 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 the FSANZ data were generated. It is also not to be taken as a statement that a particular product complies, or does not comply, with any labelling declarations that might have been made for it or with any regulatory requirements. If you require current data on a specific branded product you should contact the manufacturer of that product.

Limitations of food composition data

FSANZ alerts you to the inbuilt limitations of the Nutrition Panel Calculator. Food composition data used in the Nutrition Panel Calculator may represent an average of 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 a number of factors, including changes in season, processing practices and ingredient source. In addition, most of the food composition data on the Nutrition Panel Calculator were originally developed not for the purpose of calculating nutrition information panels, but for

general reference, or for evaluating public health data, where minor variations in values and the use of approximations have no significant impact.

You should be aware that given these limitations, the results generated by the Nutrition Panel Calculator may not be as representative as nutrient data obtained from a laboratory analysis of your product.

Data storage and confidentiality

Data you enter for your product is stored within your web browser's storage. This is to optimise the confidentiality of your product information.

You are responsible for your data storage. You are advised that certain actions such as uninstalling your web browser, updating your web browser version or deleting files from your browsing history may result in the deletion of your product information. You are advised to use the backup/restore function before you perform any of the above actions to ensure the retention of your product information. FSANZ does not store or retain any of your data and shall not be held responsible for any data loss.

Copyright

© Commonwealth of Australia and Food Standards Australia New Zealand, 2011

ISBN number: 978-0-642-34574-5

Requests for further authorisation should be directed to:

Information Officer
Food Standards Australia New Zealand
PO Box 7186
Canberra BC ACT 2610
Australia

Email: information@foodstandards.gov.au

Acknowledgements

FSANZ acknowledges the contribution of nutrient composition data from:

- Professor Heather Greenfield and co-workers at the University of New South Wales
- Associate Professor Jayashree Arcot and others at the University of New South Wales
- *'Tables of composition of Australian Aboriginal Foods'* by J Brand-Miller, KW James and PMA Maggiore¹
- McCance and Widdowson *The Composition of Foods* and its supplements, United Kingdom Food Standards Agency
- the US Department of Agriculture's National Nutrient Database for Standard Reference^{2,3}
- the Concise New Zealand Food Composition Tables, 6th and 8th Editions, New Zealand Institute of Plant & Food Research and The New Zealand Ministry of Health^{4,5}
- the Danish Food Composition Databank, Revision 7⁶
- Australian journal articles and
- the Australian and New Zealand food industry.

FSANZ would also like to thank the following organisations and individuals who have contributed to the production of the Nutrition Panel Calculator. In particular we wish to thank Mr James Peek, Mr Charles Wannop and Mr Jonathan Rumbold for programming assistance, food analysts from government and private agencies who provided analytical services, government regulatory agencies such as the New Zealand Institute for Plant and Food Research and the New Zealand Food Safety Authority, Dr Peter Nichols of the CSIRO and the Omega-3 Centre, and members of FSANZ's food composition advisory group. Many food companies have also generously provided data and assistance that has aided in the compilation of the food composition data that may be contained in the Nutrition Panel Calculator.

If you wish to provide comments or suggestions, please complete the feedback form available on-line from the Nutrition Panel Calculator or contact:

Food Composition Program
Food Standards Australia New Zealand
PO Box 7186
Canberra BC ACT 2610
Australia

Email: npc@foodstandards.gov.au

First published: October 2001

Published with minor revisions: November 2001

Published with minor revisions: March 2002

Published with revisions (Release 2): April 2002

Published with revisions (Release 3): February 2004

Published with revisions (HTML Version 2.0): October 2004

Published as a fully revised version: August 2011

TABLE OF CONTENTS

1.	<i>INTRODUCTION</i>	9
2.	<i>BACKGROUND</i>	11
3.	<i>GETTING STARTED</i>	12
	3.1 What you need to know	12
	3.2 Main steps to produce a nutrition information panel	12
4.	<i>GETTING TO KNOW THE NPC NAVIGATION BAR</i>	13
5.	<i>GETTING TO KNOW THE NPC SCREENS</i>	14
	5.1 The Welcome Screen	14
	5.2 The Recipe Screen	14
	5.3 The Add Ingredient Screen	15
	5.4 The Create NIP Screen	17
6.	<i>CREATING A NEW RECIPE</i>	18
	6.1 Naming your new recipe.....	18
	6.2 Adding ingredients	19
	6.3 Creating a nutrition information panel	30
	6.4 Printing/ saving the nutrition information panel.....	35
7.	<i>COPYING AN EXISTING RECIPE</i>	37
8.	<i>LOADING AN EXISTING RECIPE</i>	38
9.	<i>DELETING AN EXISTING RECIPE</i>	39
10.	<i>BACKUP/ RESTORING RECIPES AND CUSTOM INGREDIENTS</i>	40
11.	<i>NUTRITION INFORMATION PANELS FOR FOODS THAT REQUIRE BOILING, FRYING OR OTHER PROCESSING</i>	42
	11.1 Calculating a nutrition information panel for boiled foods	42
	11.2 Calculating a nutrition information panel for fried foods.....	45
	11.3 Other processing practices.....	48
12.	<i>CAN'T FIND THE INGREDIENT ON THE NPC?</i>	51
13.	<i>THE NPC DATABASE 2011</i>	53
	13.1 Limitations of food composition data	53
	13.2 Food IDs, categories and descriptions	53
	13.3 Nutrients.....	55

14. REFERENCES61

Appendix 1. Producing the NPC database 2011.....64

Appendix 2. Guide to the food grouping system used in Australian food composition databases69

Appendix 3. Format of a nutrition information panel72

Appendix 4. The Australian Food Composition Program.....73

Appendix 5. Weight change factors75

Appendix 6. Specific gravities of a selection of beverages and other liquid foods...91

Appendix 7. Calculating edible portions.....96

Appendix 8. Presentation of data in the NPC98

[Return to Table of Contents](#)

1. INTRODUCTION

The NUTRITION PANEL CALCULATOR (NPC) has been provided to assist food manufacturers and retailers obtain average nutrient quantities for nutrition labelling. The NPC is supported by a food composition database (the NPC database 2011), which contains nutrient data for more than 2500 foods/ingredients.

The NPC database contains the most up-to-date and relevant data available at the time of release, sourced from several previously published Australian food composition databases including NUTTAB (**NUT**rient **TAB**les) (mainly NUTTAB 2010⁷) and AUSNUT (**AU**stralian food and **NUT**rient database) (mainly AUSNUT 2007⁸) databases. NUTTAB is Australia's reference nutrient database. AUSNUT is a survey database. It contains nutrient values for foods consumed during national nutrition surveys. It should be noted that neither of these databases have been designed for the purposes of calculating nutrition information panels.

Standard 1.2.8 Nutrition Information Requirements of the [Australia New Zealand Food Standards Code](#)⁹ requires that most packaged foods display a nutrition information panel on the label. The nutrition information panel must present, among other particulars, the average quantities of:

- energy (expressed in kilojoules)
- protein
- fat
- saturated fat
- carbohydrate
- sugars and
- sodium

in both 100 g (or 100 mL) of the food and a serving of the food. An example of a basic nutrition information panel is provided at [Appendix 3](#).

The [User Guide to Standard 1.2.8 - Nutrition Information Requirements](#)¹⁰ provides further details regarding the required format and content of a nutrition information panel, and interpretation and application of the Standard generally.

Standard 1.1.1 Preliminary Provisions - Application, Interpretation and General Prohibitions permits the derivation of **average** nutrient quantities for the purposes of nutrition labelling through several methods including food analysis, calculation from ingredient nutrient values, or calculation from generally accepted data (such as that presented with the NPC). The NPC is designed to assist you to obtain average nutrient quantities for nutrition labelling.

The NPC database contains Australian food composition data. It is most applicable for use in Australia. New Zealand users are warned that it may not be suitable for their use. For more details regarding the Australian Food Composition Program, see [Appendix 4](#).

The NPC is designed to work best with the following web browsers:

- Internet Explorer 7 and above
- Firefox 3 and above
- Google Chrome and
- Safari.

[Return to Table of Contents](#)

2. BACKGROUND

THE NPC IS TEXT BASED (HTML) and consistent with the Government's online accessibility requirements.

The NPC database 2011 comprises nutrient data for 2520 foods/ ingredients, sourced from FSANZ's food composition databases NUTTAB and AUSNUT. The number of records extracted from each database shown in the table below.

Database	No. of records	% total records
NUTTAB 2006 ¹¹	36	1
NUTTAB 2010	779	31
AUSNUT Special Edition ¹²	433	17
AUSNUT 2007	1188	47

In response to user feedback, nutrient data for 84 previously unpublished foods/ ingredients (e.g. sodium containing food additives) have also been added.

Unlike the NUTTAB and AUSNUT databases, the NPC database presents nutrient values for energy and the six nutrients that must be declared only. For consistency with Standard 1.2.8, previously published values for carbohydrate and energy have been revised. For further information regarding the development of the NPC database, see [Appendix 1](#).

If you are interesting in learning more about the development of NUTTAB or AUSNUT, the Explanatory Notes for these databases may be obtained from the FSANZ website (www.foodstandards.gov.au).

[Return to Table of Contents](#)

3. GETTING STARTED

3.1 What you need to know

BEFORE YOU START producing your nutrition information panel you need to know:

1. What ingredients you are using
2. How much of each ingredient you use
3. Your final recipe or batch weight and
4. The serve size and number of serves per package.

3.2 Main steps to produce a nutrition information panel

There are four main steps to produce a nutrition information panel using the NPC. You need to:

1. Search the NPC database (or your custom list) for each ingredient in your recipe
2. One at a time, select and add each ingredient to your ingredient list, including the amount used
3. Enter your final recipe or batch weight (if it is different to the weight of your ingoing ingredients), the serve size and number of serves per package and
4. Produce your nutrition information panel and then print or save it.

[Return to Table of Contents](#)

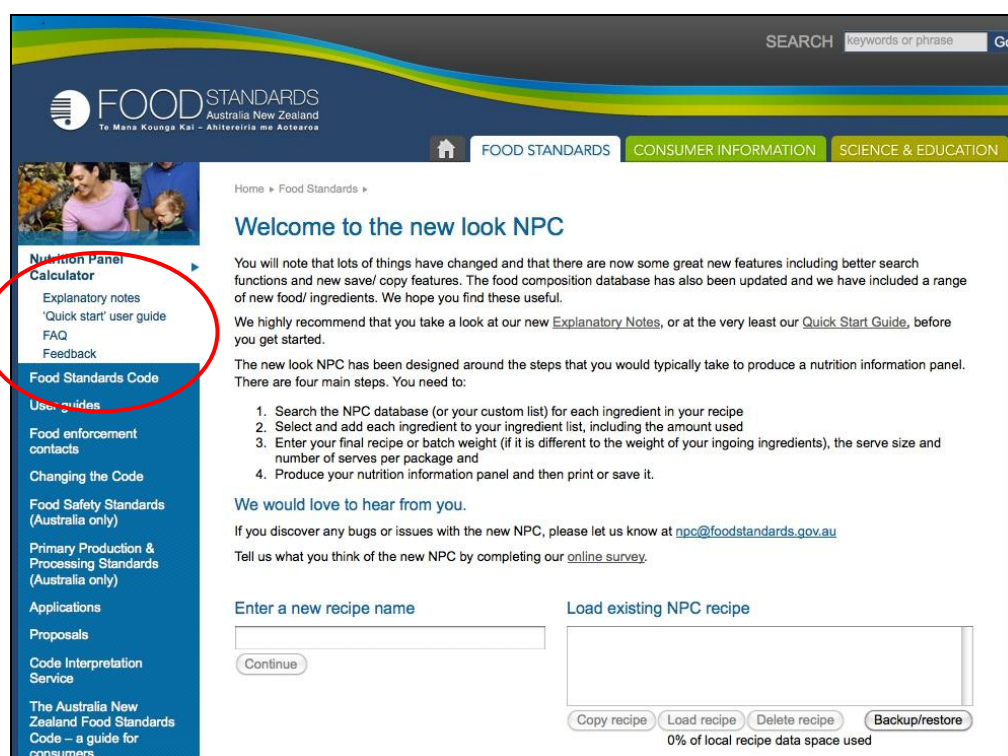
4. GETTING TO KNOW THE NPC NAVIGATION BAR

WHEN YOU ACCESS THE NPC, the first thing you see is the Welcome Screen. From here, you can create a new recipe, load an existing recipe, delete an existing recipe, copy an existing recipe with a different recipe name, and backup/restore all recipes and custom ingredients.

There are four links displayed in the navigation bar in the left hand margin of the Welcome Screen, which you can access at any time while using the NPC.

The four links are:

1. [Explanatory notes](#) – This link gives you direct access to these Explanatory Notes.
2. [‘Quick start’ user guide](#) – This link gives you direct access to a short user guide with some basic instructions to get you started.
3. [FAQ](#) – This link contains frequently asked questions and answers about using the NPC.
4. [Feedback](#) – This link provides a feedback form to make it easier for you to submit comments or feedback.



SEARCH Go

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

Home > Food Standards >

Welcome to the new look NPC

You will note that lots of things have changed and that there are now some great new features including better search functions and new save/ copy features. The food composition database has also been updated and we have included a range of new food/ ingredients. We hope you find these useful.

We highly recommend that you take a look at our new [Explanatory Notes](#), or at the very least our [Quick Start Guide](#), before you get started.

The new look NPC has been designed around the steps that you would typically take to produce a nutrition information panel. There are four main steps. You need to:

1. Search the NPC database (or your custom list) for each ingredient in your recipe
2. Select and add each ingredient to your ingredient list, including the amount used
3. Enter your final recipe or batch weight (if it is different to the weight of your ingoing ingredients), the serve size and number of serves per package and
4. Produce your nutrition information panel and then print or save it.

We would love to hear from you.

If you discover any bugs or issues with the new NPC, please let us know at npc@foodstandards.gov.au

Tell us what you think of the new NPC by completing our [online survey](#).

Enter a new recipe name

Load existing NPC recipe

0% of local recipe data space used

[Return to Table of Contents](#)

5. GETTING TO KNOW THE NPC SCREENS

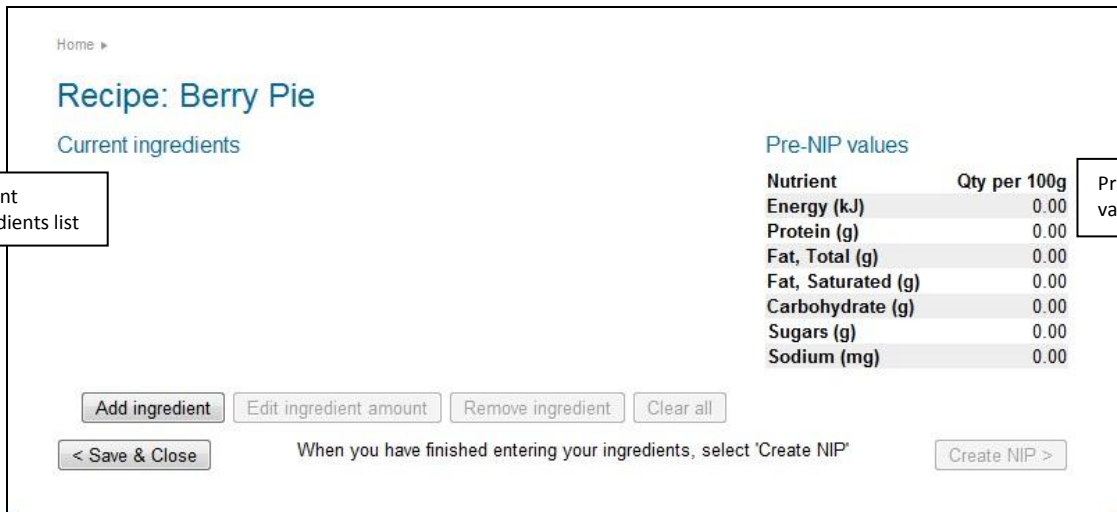
5.1 The Welcome Screen

WE HAVE ALREADY talked about the Welcome Screen. From here, you can create a new recipe, load an existing recipe, delete an existing recipe, copy an existing recipe with a different recipe name, and backup/restore all recipes and custom ingredients. If you create a new recipe or select load, the next screen you see is the Recipe Screen.

5.2 The Recipe Screen

This is the main screen where you add ingredients. The screen is divided into two sections. On the left is your current ingredients list. As you add each ingredient, it is shown in this list. There is no limit to the number of ingredients you can add, but you can add each ingredient to a recipe only once.

On the right is nutrition information panel data (pre-NIP values). This is re-calculated as each new ingredient is added.



Home ▶

Recipe: Berry Pie

Current ingredients

Pre-NIP values

Nutrient	Qty per 100g
Energy (kJ)	0.00
Protein (g)	0.00
Fat, Total (g)	0.00
Fat, Saturated (g)	0.00
Carbohydrate (g)	0.00
Sugars (g)	0.00
Sodium (mg)	0.00

Current ingredients list

Pre-NIP values

When you have finished entering your ingredients, select 'Create NIP'

To get started, you click on the 'Add ingredient' button. The Recipe Screen is overlaid with the Add Ingredient Screen but it remains visible underneath.

Once you have finished adding ingredients, you click on the 'Create NIP' button. The Recipe Screen will be overlaid with the Create NIP Screen but again it remains visible underneath.

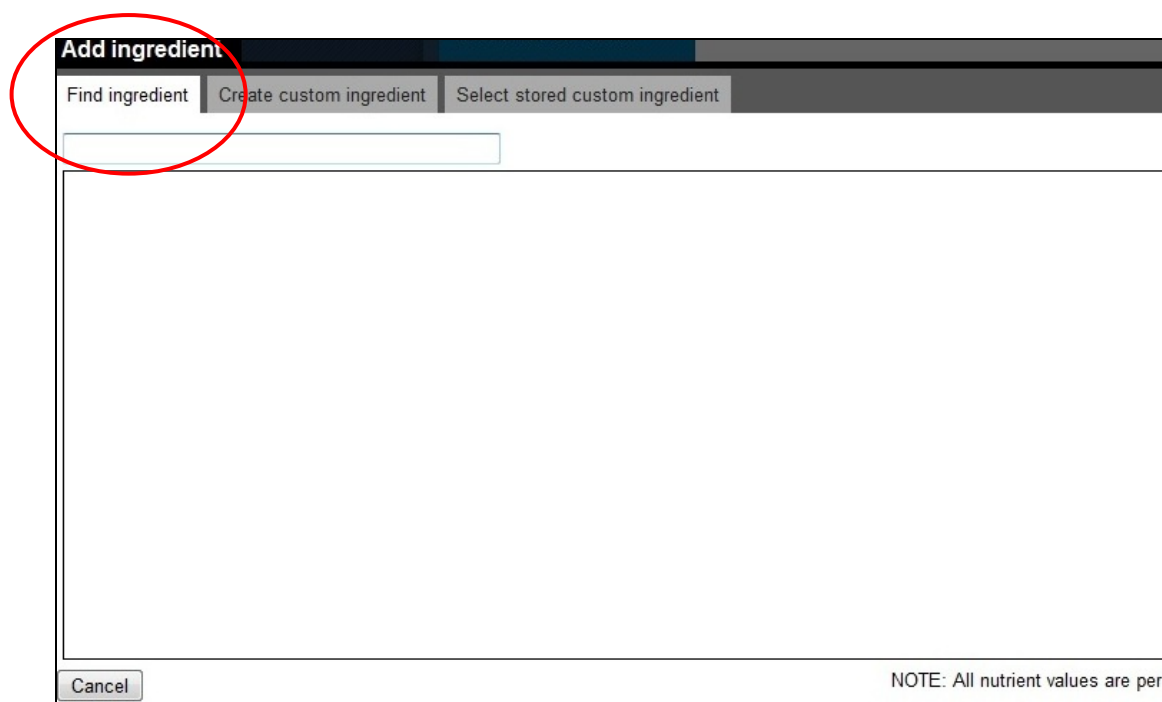
5.3 The Add Ingredient Screen

The Add Ingredient Screen has three tabs. These are:

1. Find ingredient – Use this tab to search the NPC database for each of the ingredients in your product
2. Create custom ingredient – Use this tab to enter your own custom ingredient and nutrient values and
3. Select stored custom ingredient – Use this tab to select an ingredient from your own list of previously saved custom ingredients.

5.3.1 Find ingredient tab

You use this tab to search the NPC database for each of the ingredients in your product. These are added to your current ingredients list one-by-one. As you select and add each ingredient you will go back to the Recipe Screen.



There is a secondary screen that follows on from the Find ingredient tab. This is the Ingredient Profile Screen.

When you search for an ingredient, a list of all the possible matches will be displayed. When you select your ingredient from this list, the system will present the Ingredient Profile Screen. This is where you can enter the ingredient weight.

Add ingredient ents Pre-NIP v

Ingredient: Pastry, shortcrust, commercial, raw

Description: Uncooked pastry purchased in thin sheets or blocks from supermarkets. Produces a firm

Energy: 1596 kJ

Protein: 5.5 g

Fat, total: 21.1 g

Fat, saturated: 9.2 g

Carbohydrate: 42.0 g

Sugars: 7.5 g

Sodium: 358 mg

Add ingredient amount

Amount: 0.00 Grams

< Back NOTE: All nutrient values are per 100g Edible Portion (EP) Add >

5.3.2 Create custom ingredient tab

You use this tab to enter your own custom ingredient values that you have obtained from other sources. When you add a custom ingredient, it will automatically be stored for future use and you will go back to the Recipe Screen.

Add ingredient ents Pre-NIP v

Find ingredient **Create custom ingredient** Select stored custom ingredient

Include the dietary fibre contribution to energy (8kJ per 1 g of dietary fibre)

Ingredient name:

Description:

Energy: kJ

Protein: g

Total fat: g

Saturated fat: g

Carbohydrate: g

Sugars: g

Sodium: mg

Ingredient amount: Grams

Cancel NOTE: All nutrient values are per 100g Edible Portion (EP) Create >

5.3.3 Select stored custom ingredient tab

You use this tab to select an ingredient from your own list of previously saved custom ingredients. You can also copy an existing custom ingredient, give it a different name and alter the values. When you copy a custom ingredient, the new

one will automatically be stored for future use, and once a custom ingredient is added you will go back to the Recipe Screen. You can also delete an existing custom ingredient.

Food name	Energy
Supplier X pastry	1590

Note that you can only create, copy and delete custom ingredients via the ‘Add ingredient’ button on the Recipe Screen.

5.4 The Create NIP Screen

Once you have finished adding ingredients, click on the ‘Create NIP’ button. This screen shows details about the recipe’s weight, which you might need to alter, especially if it has been cooked. To create a nutrition information panel, you need to include details about the serve size (which may be expressed as a weight or volume) and serves per package. You do this on this screen. When you have finished, the final step is to click on the ‘Create’ button. The results can be printed or saved.

Recipe weights

Initial weight g

Final weight g

Weight may change during cooking. See this [list](#) for weight change factors.

Weight change %

For your NIP

Note: It is up to you to chose an appropriate serve size and serves per package.

Serve size Grams

Serves per package

[Return to Table of Contents](#)

6. CREATING A NEW RECIPE

BELOW ARE STEP-BY-STEP INSTRUCTIONS for creating a new recipe and producing a nutrition information panel. The example used is a Berry Pie.

6.1 Naming your new recipe

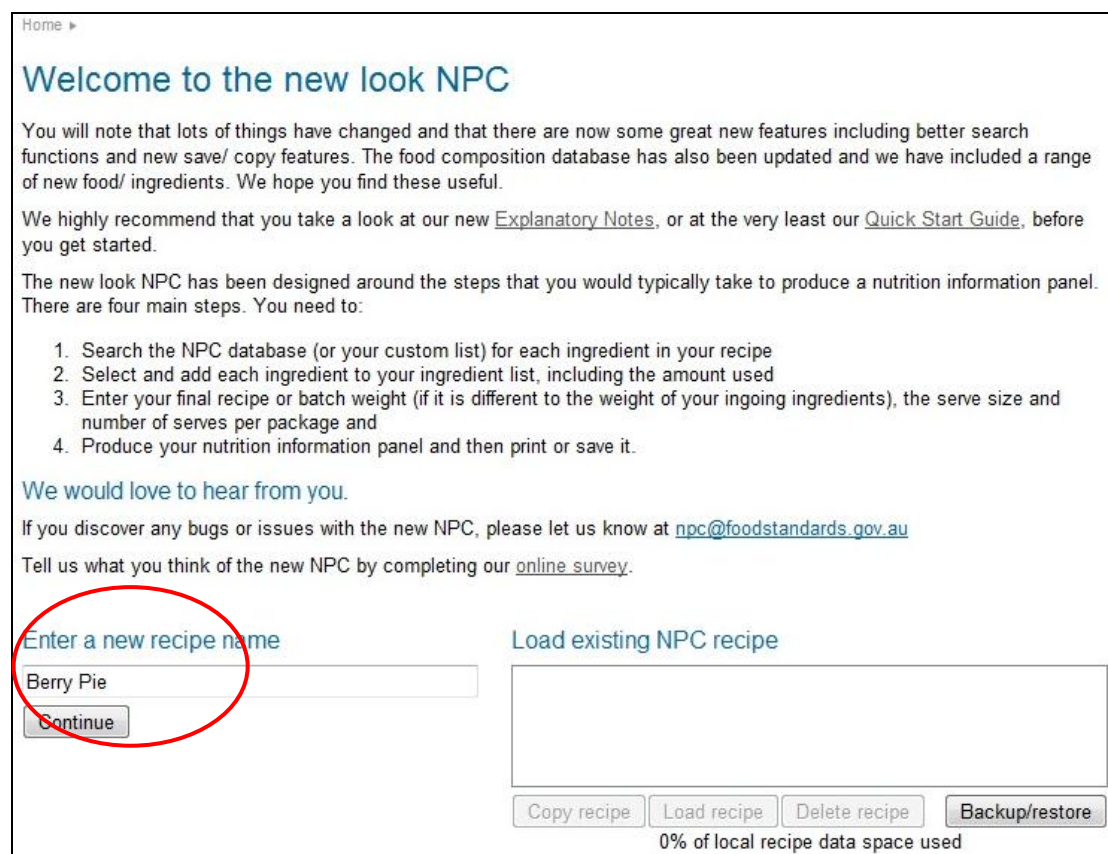
The first step is to give your new recipe a name. The name is up to you, but make sure it is meaningful and contains enough detail so that you can find it again later. You do not need to include a date because the creation date is automatically added.

Step 1: Go to the Welcome Screen and type in the name of your recipe in the box *Enter a new recipe name*.

Step 2: Click on the button 'Continue' to proceed to the Recipe Screen.

In this case, your recipe name might be 'Berry Pie'.

Saving is done at each step, so it is not possible to close without saving your work, no matter where you are up to.



Home ▶

Welcome to the new look NPC

You will note that lots of things have changed and that there are now some great new features including better search functions and new save/ copy features. The food composition database has also been updated and we have included a range of new food/ ingredients. We hope you find these useful.

We highly recommend that you take a look at our new [Explanatory Notes](#), or at the very least our [Quick Start Guide](#), before you get started.

The new look NPC has been designed around the steps that you would typically take to produce a nutrition information panel. There are four main steps. You need to:

1. Search the NPC database (or your custom list) for each ingredient in your recipe
2. Select and add each ingredient to your ingredient list, including the amount used
3. Enter your final recipe or batch weight (if it is different to the weight of your ingoing ingredients), the serve size and number of serves per package and
4. Produce your nutrition information panel and then print or save it.

We would love to hear from you.

If you discover any bugs or issues with the new NPC, please let us know at npc@foodstandards.gov.au

Tell us what you think of the new NPC by completing our [online survey](#).

Enter a new recipe name

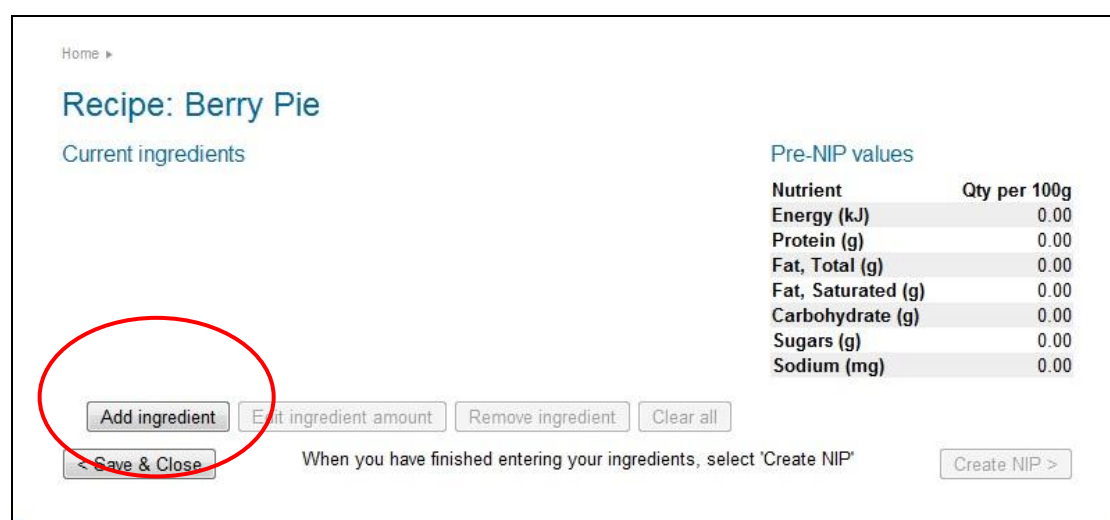
Load existing NPC recipe

0% of local recipe data space used

6.2 Adding ingredients

Once in the Recipe Screen, the next step is to add the ingredients that go into making your product.

To do this, click on the 'Add ingredient' button. You can search the NPC database, create custom ingredients, or select from your previously saved custom ingredients. Each of these options are explained below.



Home ▶

Recipe: Berry Pie

Current ingredients

Pre-NIP values

Nutrient	Qty per 100g
Energy (kJ)	0.00
Protein (g)	0.00
Fat, Total (g)	0.00
Fat, Saturated (g)	0.00
Carbohydrate (g)	0.00
Sugars (g)	0.00
Sodium (mg)	0.00

When you have finished entering your ingredients, select 'Create NIP'

6.2.1 Finding ingredients from the NPC database

Step 1: Type in your search word(s) in the *Find ingredient* box. Or, type in the exact FOOD ID (unique identification number), if known. Searching commences as soon as you begin typing. There is no need to hit the 'Enter' key but it might help when searching by the FOOD ID.

ABOUT SEARCHING

Foods/ ingredients included in the NPC database tend to be core ingredients used in the preparation of recipes such as flour, sugar, milk and pasta and food industry ingredients, food processing aids and food additives. There are very few multi-ingredient foods, and these are mainly restricted to some breads, muffins, biscuits, cakes, sausages and deli meats, snack foods, toppings and soup powders. This is to encourage you to produce your nutrition information panel by building a recipe from core ingredients. In the vast majority of cases this recipe approach is likely to give you more accurate nutrient values.

When searching:

1. If you type in the word '*pasta*' you will find records that **contain** that word **anywhere** in the food name.
2. If you type in **two** words like '*pasta*' and '*chicken*', you will find records that **contain both words**, no matter where they appear in the food name.
3. **You don't have to type in the entire word.** Searching will commence as soon as you begin typing.
4. There is **no limit** to the number of records that can be displayed at one time.
5. We recommend that you type in the **single** form of the food. For example, type in '*strawberry*' not '*strawberries*', and '*peanut*' not '*peanuts*', although the NPC should find either.
6. If the system is unable to find direct matches, then it will **display possible matches** and ask you '*Did you mean...?*'
7. Try to make your searches **specific**. For example, type in '*flour*' and '*wholemeal*' and not just '*flour*'.

The first ingredient for your berry pie is shortcrust pastry. So, type in the words '*shortcrust*' and '*pastry*' to search for any records that contain both words, no matter where they appear in the food name.

All matches will be shown in the ingredient selection list below the search box. The FOOD ID, FOOD NAME, and nutrient values per 100 g edible portion (EP) for the nutrients ENERGY, PROTEIN, FAT (TOTAL), FAT (SATURATED), CARBOHYDRATE, SUGARS and SODIUM are shown. Energy is expressed in kilojoules (kJ).

Add ingredient Consumer information Nutrient Energy (kJ)

Find ingredient | Create custom ingredient | Select stored custom ingredient

pastry shortcrust Search returned 5 ingredients.

ID	Food name	Energy	Protein
02E40083	Pastry, shortcrust, commercial, baked	2090	6.6
02E40082	Pastry, shortcrust, commercial, raw	1596	5.5
02E40035	Pastry, shortcrust, raw, commercial, reduced fat	1589	7.2
02E40071	Pastry, shortcrust, wholemeal, commercial, baked	1994	10.2
02E40084	Pastry, shortcrust, wholemeal, commercial, raw	1405	7.5

Cancel NOTE: All nutrient values are per 100g Edible Portion (EP)

- Step 2:** To see all of the records, use the vertical scroll bar on the right.
- Step 3:** To see a description, click on the record so that it is yellow highlighted.
- Step 4:** To select a record, double-click on it **or** click on it so that it is yellow highlighted and hit the 'Select' button.

In this case, the record 'Pastry, shortcrust, commercial, raw' (FOOD ID 02E40082) has been selected.

The record you selected will be shown on a new screen. This is the Ingredient Profile Screen. It shows the ingredient name and description, together with all of the nutrient values. You cannot change any of the information on this screen apart from the ingredient *Amount* you use to make your product.

Add ingredient Pre-NIP v

Ingredient: Pastry, shortcrust, commercial, raw

Description: Uncooked pastry purchased in thin sheets or blocks from supermarkets. Produces a firm

Energy: 1596 kJ

Protein: 5.5 g

Fat, total: 21.1 g

Fat, saturated: 9.2 g

Carbohydrate: 42.0 g

Sugars: 7.5 g

Sodium: 358 mg

Add ingredient amount

Amount: 0.00 Grams

< Back NOTE: All nutrient values are per 100g Edible Portion (EP) Add >

Step 5: Type in the amount of the ingredient you use in your product in the box *Amount*. The NPC displays an amount of 0.00 grams/ millilitres as the default.

For solid ingredients, you can type in a weight (grams or kilograms) only. For most semi-solid/liquid ingredients, you can type in either a weight (grams or kilograms) or volume (millilitres or litres).

If you need to convert household measures (e.g. 1 small apple, ½ cup plain flour) to a gram weight, see the AUSNUT 2007 Measures File, available from the FSANZ website (www.foodstandards.gov.au).

A specific gravity value is displayed for volumes. This value cannot be altered.

You must enter an amount. It must be a positive numerical value. Make sure you select the right units.

ABOUT SPECIFIC GRAVITIES

The specific gravity value is used to convert the volume of your liquid ingredient to a gram weight. The NPC does this automatically by multiplying the volume (in mL) by the specific gravity of the liquid ingredient. It needs to do this to calculate a nutrition information panel correctly.

The specific gravity can vary for a number of reasons. Generally, the specific gravity increases with the amount of solids (e.g. sugars) and decreases with the amount of alcohol and fat present in a liquid, or air present in a whipped ingredient. It can also vary with the temperature of the ingredient.

If you don't think the NPC's specific gravity is right for your liquid ingredient, you can:

1. weigh your ingredient and enter the weight in grams or kilograms; or
2. enter it as a custom ingredient. Use the same nutrient values, but enter a different specific gravity value that better reflects your ingredient. See Section 6.2.2 Creating custom ingredients.

Step 6: Click on the button 'Add' to add your ingredient to the current ingredients list for your product. You will return to the Recipe Screen.

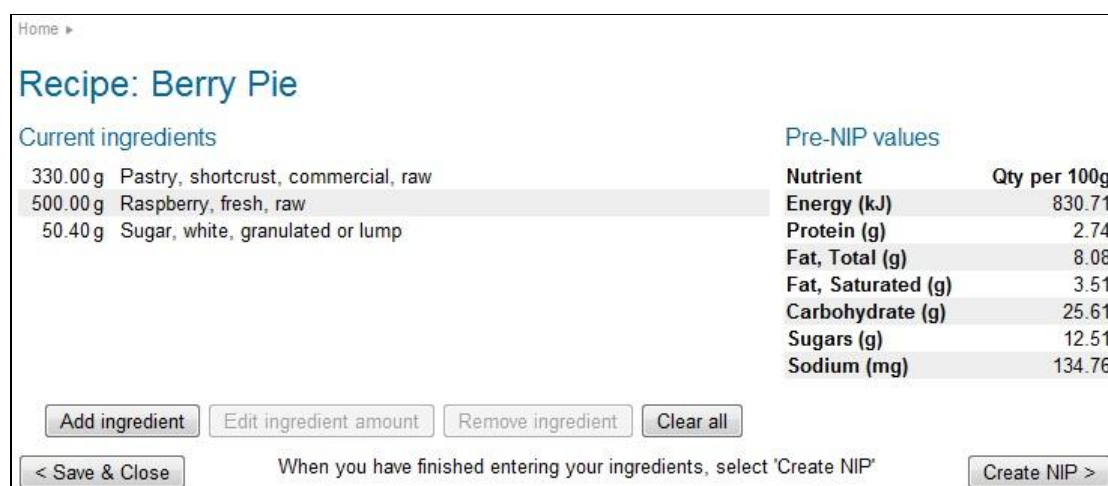
Back in the Recipe Screen, your ingredient appears in the current ingredient list and the pre-NIP values have been updated.

Step 7: If you have made a mistake, you can remove the ingredient from the current ingredients list. Click on it to yellow highlight it, and then click on the 'Remove ingredient' button.

You can edit the ingredient amount. Click on it to yellow highlight it, and then click on the 'Edit ingredient amount' button. The Ingredient Profile Screen will be displayed again. When you have made the changes to the ingredient amount, click on the 'Update' button.

Step 8: Repeat Steps 1-7 for all of your other ingredients.

At this point, the pre-NIP values show the nutrient quantities per 100 grams, based on the raw weight of your product. You might need to adjust these to take account of weight changes on cooking. See Section 6.3.1 Weights. This is how the Recipe Screen should look now.



Home ▶

Recipe: Berry Pie

Current ingredients		Pre-NIP values	
		Nutrient	Qty per 100g
330.00 g	Pastry, shortcrust, commercial, raw	Energy (kJ)	830.71
500.00 g	Raspberry, fresh, raw	Protein (g)	2.74
50.40 g	Sugar, white, granulated or lump	Fat, Total (g)	8.08
		Fat, Saturated (g)	3.51
		Carbohydrate (g)	25.61
		Sugars (g)	12.51
		Sodium (mg)	134.76

When you have finished entering your ingredients, select 'Create NIP'

If your recipe does not include any custom ingredients, you can go straight to Section 6.2.4 Checking your current ingredients list.

6.2.2 Creating custom ingredients

If you are unable to find an ingredient on the NPC database, then you can use the Create Custom Ingredient Screen to enter and save your own custom ingredient data.

ABOUT CUSTOM INGREDIENT DATA

You can obtain nutrient data from your ingredient supplier or from an online search. But you must make sure:

1. you have values for all of the 7 nutrients. Energy must be in kilojoules, sodium in milligrams and the rest in grams
2. the values are per 100 g edible portion
3. the SATURATED FAT is less than or equal to the TOTAL FAT
4. the SUGARS are less than or equal to the CARBOHYDRATES
5. the sum of PROTEIN, FAT and CARBOHYDRATE cannot be more than 100 g and
6. the data meet the requirements of the *Australia New Zealand Food Standards Code*. Make sure that the carbohydrate values have been derived by one of the two methods specified in clause 1 of Standard 1.2.8. Make sure that the correct energy factors have been used to calculate the total energy. See Standard 1.1.1 and Standard 1.2.8 of the Code.

To create a custom ingredient:

- Step 1:** In the Recipe Screen, click on the 'Add ingredient' button, and then select the Create Custom Ingredient Tab.
- Step 2:** Type the name of your custom ingredient in the box *Ingredient Name*. The name is up to you, but make sure it is meaningful and contains enough detail so that you can find it again later.
- Step 3:** Type a description of your custom ingredient in the box *Description*.
- Step 4:** Type in the values you have per 100 g EP (not per 100 mL) for ENERGY (kJ), PROTEIN, TOTAL FAT, SATURATED FAT, CARBOHYDRATE, SUGARS and SODIUM in the boxes provided.

Note: you cannot leave any boxes blank. You will get warning messages if the values you have entered do not meet the conditions outlined above. You will not be able to proceed until the values are corrected.

Add ingredient

Find ingredient Create custom ingredient Select stored custom ingredient

Include the dietary fibre contribution to energy (8kJ per 1 g of dietary fibre)

Ingredient name:

Description:

Energy: kJ

Protein: g

Total fat: g

Saturated fat: g

Carbohydrate: g

Sugars: g

Sodium: mg

Ingredient amount: Grams

 NOTE: All nutrient values are per 100g Edible Portion (EP)

Step 5: Type in the amount of the ingredient you use in your product in the box *Ingredient Amount*.

You can type in a weight (grams or kilograms) or, for semi-solid/liquid ingredients, you can type in either a weight (grams or kilograms) or volume (millilitres or litres).

If you need to convert household measures (e.g. 1 small apple, ½ cup plain flour) to a gram weight, see the AUSNUT 2007 Measures File, available from the FSANZ website (www.foodstandards.gov.au).

You must enter an amount. It must be a positive numerical value. Make sure you select the right units.

ABOUT EDIBLE PORTION

The ingredient quantity must be entered in terms of its *edible portion*. See [Appendix 7](#) if you need to calculate the edible portion of a quantity of food ‘as purchased’.

If you enter a volume (millilitres or litres), the *Specific Gravity* field will be displayed, with a default of 1.00. A message will appear with a link to a list of specific gravities. You can also access this list from [Appendix 6](#) of this document. For more information about specific gravities, see *About* box on page 22.

[Appendix 6](#) also shows you how to calculate a specific gravity value for your ingredient using a simple formula.

- Step 6:** Select a specific gravity and type this in the *Specific Gravity* box.
- Step 7:** Click on the button 'Create' to add your custom ingredient to the current ingredients list for your product. **Clicking 'Create' also saves your custom ingredient for future use in other recipes. The number of custom ingredients that can be stored depends on your browser version.** You will return to the Recipe Screen.

Back in the Recipe Screen, your ingredient appears in the current ingredients list with a (C) for 'custom' and the pre-NIP values have been updated.

- Step 8:** If you have made a mistake, you can remove the custom ingredient from the current ingredients list. Click on it to yellow highlight it, and then click on the 'Remove ingredient' button. It will be removed from this recipe only and not from your web browser's storage.

You can edit the custom ingredient amount only, **keeping the same units of measurement.** Click on it to yellow highlight it, and then click on the 'Edit ingredient amount' button. The Ingredient Profile Screen will be displayed. When you have made the changes to the ingredient amount, click on the 'Update' button.

- Step 9:** Repeat Steps 1-8 for any other new custom ingredients.

When you have finished adding ingredients, go to Section 6.2.4 Checking your current ingredients list.

6.2.3 Selecting stored custom ingredients

If you have previously created custom ingredients, you can retrieve and use these in other recipes using the Select Stored Custom Ingredient Screen.

To retrieve a stored custom ingredient:

- Step 1:** In the Recipe Screen, click on the 'Add ingredient' button, and then select the Select Stored Custom Ingredient Tab.
- Step 2:** Locate your ingredient in the custom ingredients selection list. Your ingredients are presented in alphabetical order.

Add ingredient 20.00g Supplier X pastry (C)

Find ingredient | **Create custom ingredient** | Select stored custom ingredient

Food name	Energy
Supplier X pastry	1590

Cancel NOTE: All nutrient values are per 100g Edible Portion (EP)

- Step 3:** To see all of the custom ingredients, use the vertical scroll bar on the right.
- Step 4:** To see a description, click on the record so that it is yellow highlighted.
- Step 5:** To select a record, double-click on it **or** click on it so that it is yellow highlighted and hit the 'Select' button.

In this case, the custom ingredient 'Supplier X pastry' has been selected.

The record you selected is shown in the Ingredient Profile Screen. It shows the ingredient name and description, together with all of the nutrient values. **You are unable to change any of the information** on this screen apart from the ingredient *Amount* you use to make your product, **keeping the same units of measurement.**

Add ingredient Pre-NIP v

If nutrient values need to be changed, click "Back" then use "Copy ingredient" function.

Ingredient:

Description:

Energy: kJ

Protein: g

Fat, total: g

Fat, saturated: g

Carbohydrate: g

Sugars: g

Sodium: mg

Add ingredient amount

Amount:

< Back NOTE: All nutrient values are per 100g Edible Portion (EP) Add >

Step 6: Type in the amount of the ingredient you use in your product in the box *Amount*. You need to keep the same units of measurement applied to the ingredient when it was first created.

For volumes, the specific gravity value you typed in when the ingredient was first created is displayed. This value cannot be altered. For more information about specific gravities, see *About* box on page 22.

You must enter an amount. It must be a positive numerical value. Make sure you select the right units.

Step 7: Click on the button 'Add' to add your custom ingredient to the current ingredients list for your product. You will return to the Recipe Screen.

Back in the Recipe Screen, your ingredient appears in the current ingredients list with a (C) for 'custom' and the pre-NIP values have been updated.

Step 8: If you have made a mistake, you can remove the custom ingredient from the current ingredients list. Click on it to yellow highlight it, and then click on the 'Remove ingredient' button. It will be removed from this recipe only and not from your web browser's storage.

You can edit the custom ingredient amount, **keeping the same units of measurement**. Click on it to yellow highlight it, and then click on the 'Edit ingredient amount' button. The Ingredient Profile Screen will be displayed. When you have made the changes to the ingredient amount, click on the 'Update' button.

Step 9: Repeat Steps 1-8 for any other stored custom ingredients.

When you have finished adding ingredients, go to Section 6.2.4 Checking your current ingredients list.

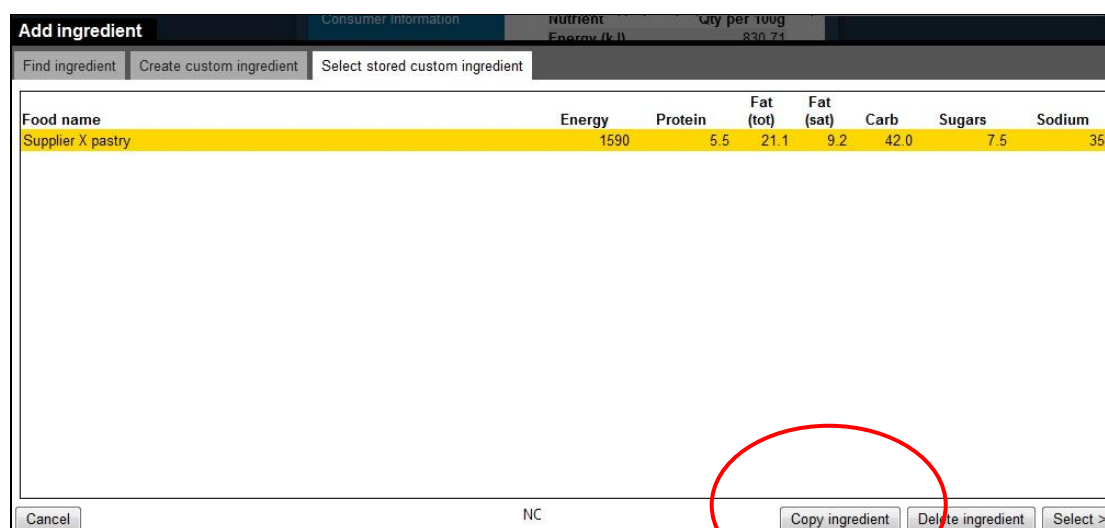
Copying stored custom ingredients

In the Select Stored Custom Ingredient Screen, you also have the option of copying a stored custom ingredient. This is useful when you are entering lots of custom ingredients that are only slightly different.

To copy a custom ingredient:

Step 1: Locate the ingredient you wish to copy in the custom ingredients selection list.

- Step 2:** To see all of the custom ingredients, use the vertical scroll bar on the right.
- Step 3:** To see a description, click on the record so that it is yellow highlighted.
- Step 4:** To select a record to copy, click on it so that it is yellow highlighted and hit the 'Copy ingredient' button. The Ingredient Profile Screen will be displayed, with all nutrient values open for editing.



Food name	Energy	Protein	Fat (tot)	Fat (sat)	Carb	Sugars	Sodium
Supplier X pastry	1590	5.5	21.1	9.2	42.0	7.5	358

Buttons: Cancel, NC, Copy ingredient, Delete ingredient, Select >

- Step 5:** The *Ingredient Name* box has been left blank on purpose, to encourage you to type in a **unique** name for your copied custom ingredient.
- Step 6:** Now, go through Steps 3 – 8 of Section 6.2.2 Creating custom ingredients, changing nutrient values as necessary.

When you have finished adding ingredients, go to Section 6.2.4 Checking your current ingredients list.

Deleting stored custom ingredients

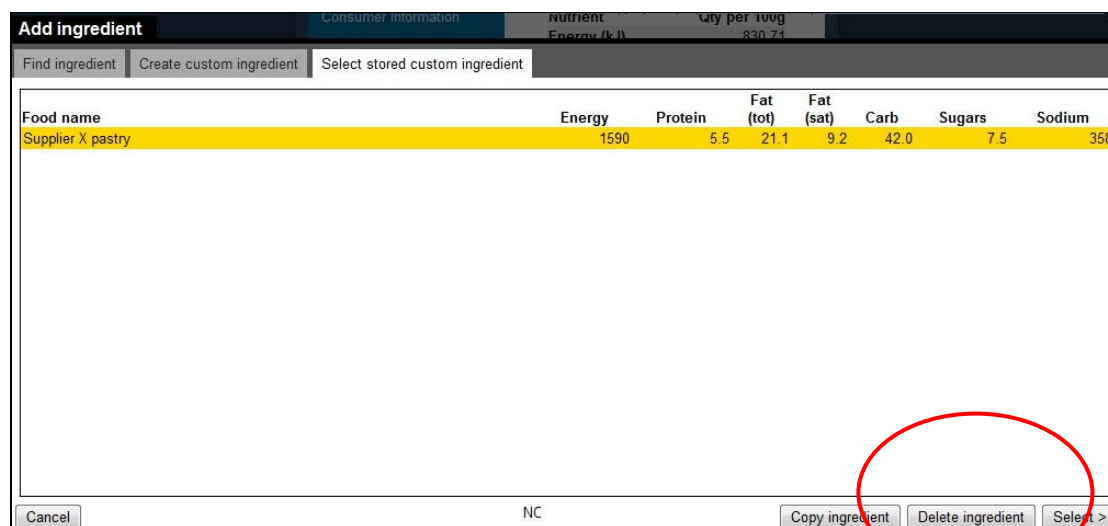
In the Select Stored Custom Ingredient Screen, you also have the option of deleting a stored custom ingredient. This is useful for managing your custom ingredients list, and for removing old custom ingredients that may no longer be correct.

To delete a custom ingredient:

- Step 1:** Follow Steps 1-3 above for copying.

Step 2: To select a record to delete, click on it so that it is yellow highlighted and hit the 'Delete ingredient' button. The custom ingredient will be deleted from your stored custom ingredients list. **However, it will remain in all of its existing recipes.**

Note that you can only create, copy and delete custom ingredients via the 'Add ingredient' button on the Recipe Screen.



Food name	Energy	Protein	Fat (tot)	Fat (sat)	Carb	Sugars	Sodium
Supplier X pastry	1590	5.5	21.1	9.2	42.0	7.5	358

6.2.4 Checking your current ingredients list

Before moving on, go back to the Recipe Screen and check your ingredient selections and quantities.

If you have made a mistake, follow the instructions given above for editing or removing ingredients from your current ingredients list.

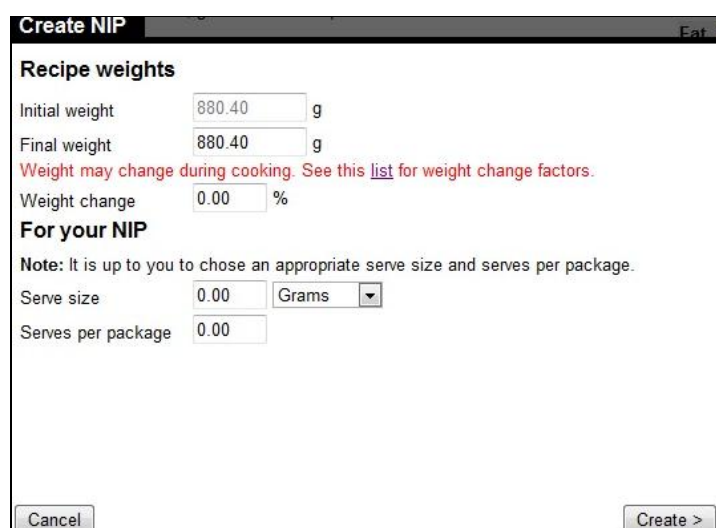
6.2.5 Clearing all your ingredients from your current ingredients list

It is possible to clear all ingredients from your current ingredients list in one step. To do this, go to the Recipe Screen and hit the 'Clear All' button. You will be asked if you are sure you want to remove all ingredients from your recipe. Hit 'OK' to proceed.

6.3 Creating a nutrition information panel

Once you have finished adding ingredients, and you have checked your current ingredients list, click on the 'Create NIP' button at the bottom right of the Recipe Screen.

The Create NIP Screen shows recipe weights, which might need to be altered, and has fields for the serve size and serves per package.



Create NIP

Recipe weights

Initial weight g

Final weight g

Weight may change during cooking. See this [list](#) for weight change factors.

Weight change %

For your NIP

Note: It is up to you to chose an appropriate serve size and serves per package.

Serve size Grams

Serves per package

Cancel Create >

6.3.1 Weights

The *Initial Weight* (or raw weight) is the total weight of your ingoing ingredients. Any liquid ingredients that you have entered as a volume (millilitres or litres) have been automatically converted to gram weights by the NPC, to get the *Initial Weight*.

When you first enter the Create NIP Screen, the *Final Weight* (or cooked weight) will be the same as the *Initial Weight*. If your product is uncooked (or if you have chosen cooked ingredients), then the *Initial Weight* and *Final Weight* can stay the same.

If you cook your product, you will probably need to change the *Final Weight*. This is because the cooking process may change the recipe's initial weight, due to gains and/or losses in both water and/or fat. However, the NPC assumes that any weight change is due exclusively to water.

There are two ways to change the *Final Weight*. You can weigh your batch of cooked product and type the weight into the *Final Weight* box. Or, you can type in a weight change factor in the *Weight Change* box.

You don't have to put a value in both. Putting a value in one will auto-fill the other.

Method 1 – Type a final weight in the *Final Weight* box

Step 1a: Weigh your batch of food once it is cooked. Type the cooked weight (in grams) in the *Final Weight* box. Make sure it looks sensible compared to *Initial Weight*. For example, you could expect most baked products to lose weight.

The NPC will auto-fill a weight change factor in the *Weight Change* box based on the *Final Weight* you have inserted.

Note that the Final Weight is **not** the same as the Serve Size. It is the weight of the batch of cooked food you have made using the ingredients in your recipe.

Method 2 – Type a weight change factor in the *Weight Change* box

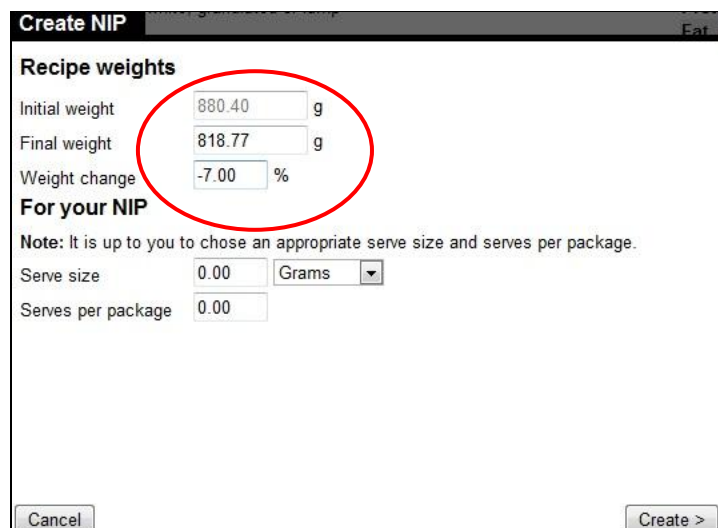
If it is too hard to work out the cooked weight of your product, then you can enter a weight change factor in the *Weight Change* box.

Step 1b: Click on the link that appears on this screen, to take you to a list of weight change factors. You can also access this list from [Appendix 5](#) of this document. Select a weight change factor and type it in the *Weight Change* box.

The NPC will auto-fill a final weight in the *Final Weight* box based on the weight change factor you have inserted.

[Appendix 5](#) contains weight change factors for a range of foods and processing methods. It also shows you how to calculate a weight change factor using a simple formula.

In the case of the berry pie, the weight change factor is -7% as the pie loses moisture during baking.

A screenshot of a web form titled 'Create NIP'. The form has a dark header with 'Create NIP' on the left and 'Eat' on the right. Below the header is a section titled 'Recipe weights' containing three input fields: 'Initial weight' with the value '880.40' and unit 'g', 'Final weight' with the value '818.77' and unit 'g', and 'Weight change' with the value '-7.00' and unit '%'. These three fields are circled in red. Below this section is another section titled 'For your NIP' which includes a note: 'Note: It is up to you to chose an appropriate serve size and serves per package.' This section contains two input fields: 'Serve size' with the value '0.00' and a dropdown menu set to 'Grams', and 'Serves per package' with the value '0.00'. At the bottom of the form are two buttons: 'Cancel' on the left and 'Create >' on the right.

ABOUT WEIGHT CHANGE FACTORS

The cooking process may change the recipe's initial weight, due to gains and/or losses in both water and/or fat. Weight change factors may be either negative (e.g. where a food loses moisture during cooking) or positive (e.g. where a dried legume gains moisture during boiling).

Note that the values we have given are indicative only. Therefore, it is better to use Method 1. Calculate your recipe weight before and after cooking.

Always check your weight change factor. Make sure that you do not enter a negative weight change factor that results in a loss that is greater than what is actually present in the uncooked food. If you do this, the sum of the protein, fat and carbohydrate may end up being more than 100 g per each 100 g portion of the cooked food.

See Section 11.3 Other processing practices for further information regarding the effect of moisture changes on the nutrient composition of foods.

6.3.2 Serve size and serves per package

It is up to you to select the *Serve Size* and *Serves per Package*. These should be worked out based on the total weight of your pack. For example:

Total weight of your pack	100 g
Serve Size (you think half a pack is a reasonable serve size)	50 g
Serves per Package (100 g divided by 50 g)	2

Serve size

The NPC displays a default serve size of 0.00 grams.

Step 2: Select a serve size and type this in the *Serve Size* box.

Step 3: Select a weight (grams or kilograms) or volume (millilitres or litres). If you select a volume, go to Step 4. Otherwise, go to Step 5 to type in the number of *Serves per Package*.

The serving size for the berry pie we have selected is 60 g.

Volume serve sizes

Paragraph 5(1)(b) of Standard 1.2.8 requires that the average quantity of a beverage or other liquid food in a serving must be expressed in **millilitres** in your nutrition information panel.

In other words, nutrient values in the nutrition information panel should be presented per 100 mLs and per serve size in mLs.

It is easy to meet these requirements using the NPC. At Step 3 above select a serve size in millilitres or litres. When you do this the *Specific Gravity* field will be displayed with a default of 1.00. A message will appear with a link to a list of specific gravities. You can also access this list from [Appendix 6](#) of this document. For more information about specific gravities, see *About* box on page 22.

[Appendix 6](#) also shows you how to calculate a specific gravity value for your product using a simple formula.

Step 4: Select a specific gravity and type this in the *Specific Gravity* box.

The specific gravity value is used to convert the nutrient values present in a 100 g portion of a liquid food to 100 mL, for inclusion on your nutrition information panel. The NPC does this automatically by multiplying the specific gravity by the quantities in 100 g.

Serves per package

The last thing you need to do is select the serves per pack. The NPC displays 0.00 serves per package as the default.

Step 5: Select the serves per package and type this in the *Serves per Package* box.

The number of serves per package for the berry pie is four.

Nothing further needs to be done. The NPC automatically calculates the nutrient composition per 100 g (or per 100 mL) of your product, adjusting for any weight changes on cooking and for serving sizes.

Create NIP

Recipe weights

Initial weight: 880.40 g
 Final weight: 818.77 g
 Weight change: -7.00 %

For your NIP

Note: It is up to you to choose an appropriate serve size and serves per package.

Serve size: 60 Grams
 Serves per package: 4

Cancel Create >

6.4 Printing/ saving the nutrition information panel

Once you have finished entering weights and servings, click on the 'Create' button. A screen view of your nutrition information panel together with a list of all of your ingredients, quantities used, and nutrient values per 100 g will be generated.

Recipe: Berry Pie

Berry Pie

Total ingredient (raw) weight: 880.40 g
 Total (cooked) weight: 818.77 g
 Weight change: -7.00 %

NUTRITION INFORMATION	
Servings per package:	4.00
Serving size:	60.00 g
	Average Quantity per Serving
	Average Quantity per 100 g
Energy	536 kJ 893 kJ
Protein	1.8 g 3.0 g
Fat, total	5.2 g 8.7 g
- saturated	2.3 g 3.8 g
Carbohydrate	16.5 g 27.5 g
- sugars	8.1 g 13.4 g
Sodium	87 mg 145 mg

Ingredient name: Pastry, shortcrust, commercial, raw
 02E40082
 Amount: 330.00 g

Energy: 1596 kJ Fat, total: 21.1 g Carbohydrate: 42.0 g Sodium: 358 mg
 Protein: 5.5 g Fat saturated: 9.2 g Sugars: 7.5 g

Ingredient name: Raspberry, fresh, raw
 06A10069
 Amount: 500.00 g

< Back Close Print Download PDF

You have two options. You can print a hard copy of this screen by selecting the 'Print' button. Or, you can save an electronic PDF version of this screen by selecting the 'Download PDF' button. The PDF output can be edited in Photoshop™ or Illustrator™.

Once you have printed/ saved your nutrition information panel, you have two options.

The 'Close' button will take you back to the Recipe Screen. From here, use the 'Save and Close' button at the bottom left to save the recipe to your web browser's storage and exit the NPC. **The number of recipes that can be stored depends on your browser version.**

The 'Back' button will take you back to the Create NIP screen, where you can edit weights or servings.

The NPC follows certain conventions for rounding significant figures and for the number of decimal places used. These are outlined in [Appendix 8](#).

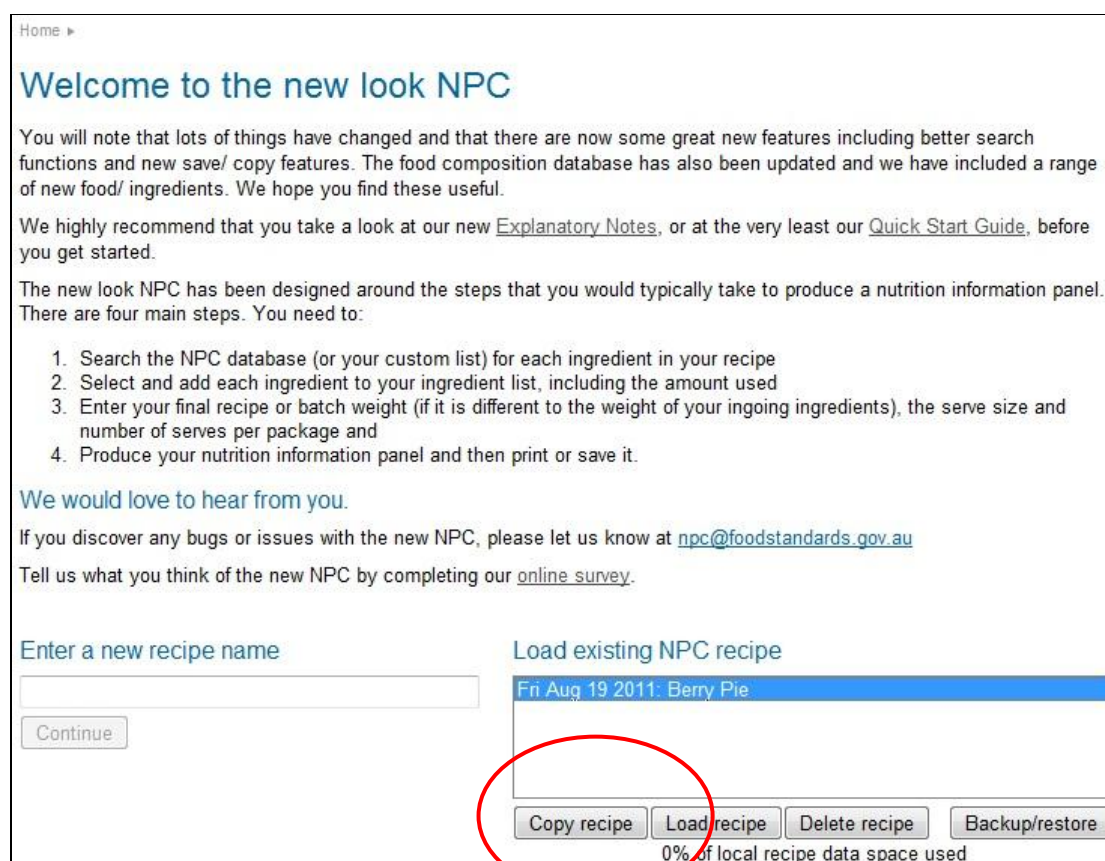
[Return to Table of Contents](#)

7. COPYING AN EXISTING RECIPE

BACK AT THE WELCOME SCREEN, you can also copy an existing recipe, with a unique recipe name. This is useful when you are entering lots of recipes that are only slightly different.

To copy an existing recipe:

- Step 1:** Scroll through the list of existing NPC recipes until you find the one you wish to copy. Recipes are listed in date order. If there are more than five, use the vertical scroll bar on the right.
- Step 2:** To select a recipe to copy, click on it so that it is highlighted and hit the 'Copy recipe' button.



Home »

Welcome to the new look NPC

You will note that lots of things have changed and that there are now some great new features including better search functions and new save/ copy features. The food composition database has also been updated and we have included a range of new food/ ingredients. We hope you find these useful.

We highly recommend that you take a look at our new [Explanatory Notes](#), or at the very least our [Quick Start Guide](#), before you get started.

The new look NPC has been designed around the steps that you would typically take to produce a nutrition information panel. There are four main steps. You need to:

1. Search the NPC database (or your custom list) for each ingredient in your recipe
2. Select and add each ingredient to your ingredient list, including the amount used
3. Enter your final recipe or batch weight (if it is different to the weight of your ingoing ingredients), the serve size and number of serves per package and
4. Produce your nutrition information panel and then print or save it.

We would love to hear from you.

If you discover any bugs or issues with the new NPC, please let us know at npc@foodstandards.gov.au

Tell us what you think of the new NPC by completing our [online survey](#).

Enter a new recipe name

Continue

Load existing NPC recipe

Fri Aug 19 2011: Berry Pie

Copy recipe Load recipe Delete recipe Backup/restore

0% of local recipe data space used

Step 3: A user prompt box is displayed on the screen, asking you to enter a unique title for this recipe. Enter a unique name and hit the 'OK' button. The new recipe will appear at the bottom of your list of existing NPC recipes.

Step 4: Now, see Steps 1 – 4 of Section 8 Loading an existing recipe.

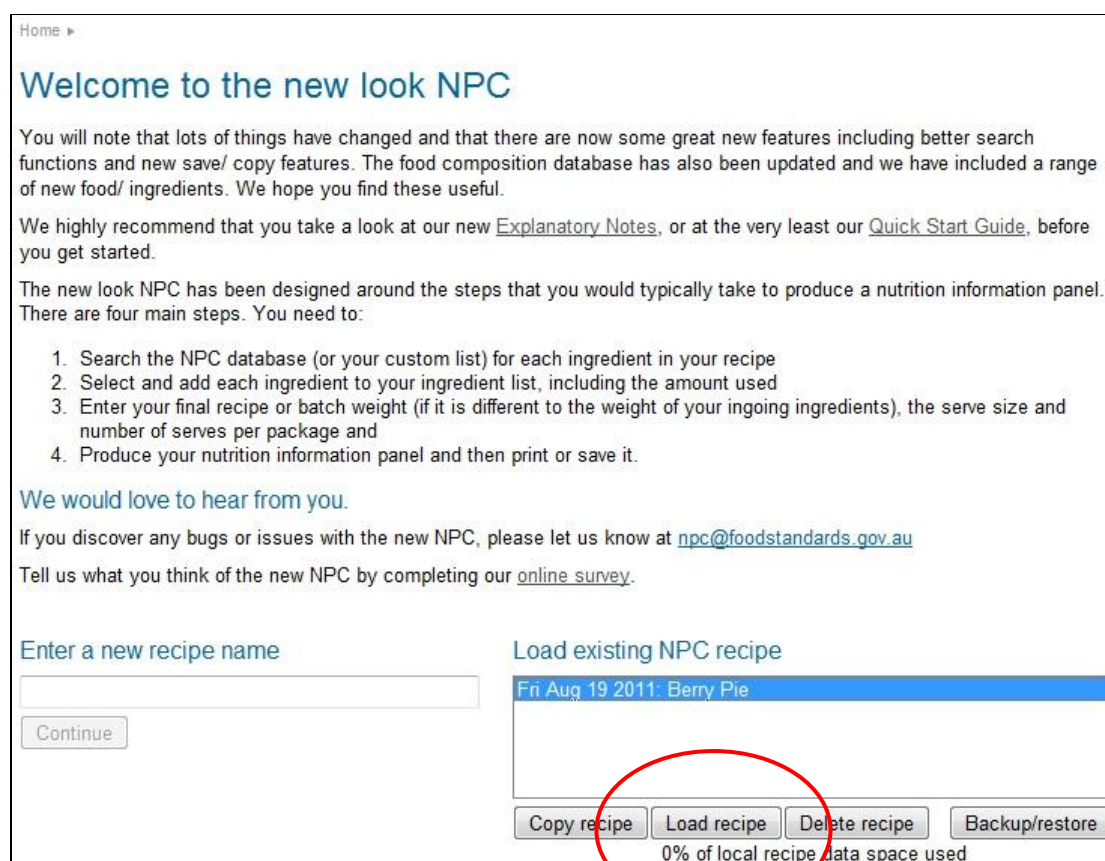
[Return to Table of Contents](#)

8. LOADING AN EXISTING RECIPE

BACK AT THE WELCOME SCREEN, you can load an existing recipe. This is useful if you wish to review your data, modify ingredients, revise weights and servings, or simply re-print more copies of the nutrition information panel.

To load an existing recipe:

- Step 1:** Scroll through the list of existing NPC recipes until you find the one you wish to load. Recipes are listed in date order. If there are more than five, use the vertical scroll bar on the right.
- Step 2:** To select a recipe to load, click on it so that it is highlighted and hit the 'Load recipe' button.



Home »

Welcome to the new look NPC

You will note that lots of things have changed and that there are now some great new features including better search functions and new save/ copy features. The food composition database has also been updated and we have included a range of new food/ ingredients. We hope you find these useful.

We highly recommend that you take a look at our new [Explanatory Notes](#), or at the very least our [Quick Start Guide](#), before you get started.

The new look NPC has been designed around the steps that you would typically take to produce a nutrition information panel. There are four main steps. You need to:

1. Search the NPC database (or your custom list) for each ingredient in your recipe
2. Select and add each ingredient to your ingredient list, including the amount used
3. Enter your final recipe or batch weight (if it is different to the weight of your ingoing ingredients), the serve size and number of serves per package and
4. Produce your nutrition information panel and then print or save it.

We would love to hear from you.

If you discover any bugs or issues with the new NPC, please let us know at npc@foodstandards.gov.au

Tell us what you think of the new NPC by completing our [online survey](#).

Enter a new recipe name

Load existing NPC recipe

Fri Aug 19 2011: Berry Pie

0% of local recipe data space used

Step 3: The Recipe Screen will be displayed. It contains all of your ingredients in the current ingredients list.

Step 4: Now, see Section 6 for how to add, remove and edit ingredients, to revise weights and servings and to print/ save copies of your nutrition information panel.

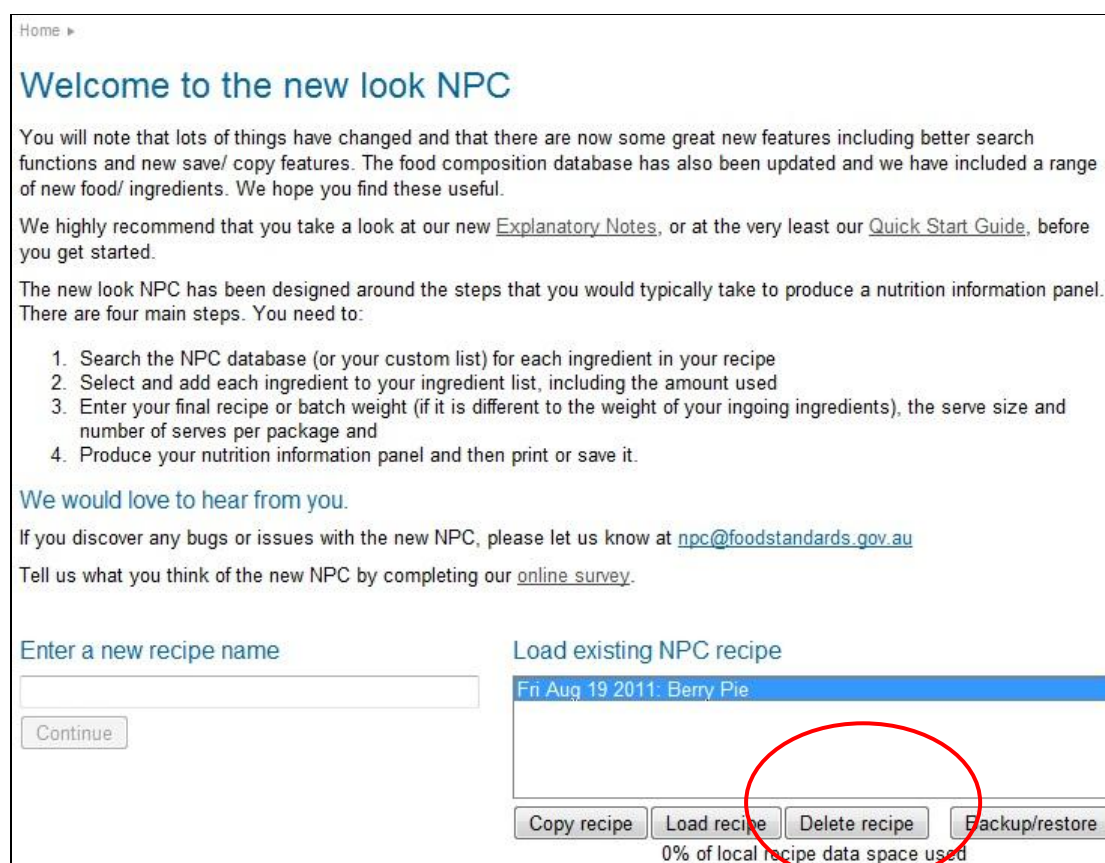
[Return to Table of Contents](#)

9. DELETING AN EXISTING RECIPE

BACK AT THE WELCOME SCREEN, you can delete an existing recipe. This is useful for managing your recipe database and for removing old recipes that may no longer be correct.

To delete a recipe:

- Step 1:** Scroll through the list of existing NPC recipes until you find the one you wish to delete. Recipes are listed in date order. If there are more than five, use the vertical scroll bar on the right.
- Step 2:** To select a recipe to delete, click on it so that it is highlighted and hit the 'Delete recipe' button.



Home »

Welcome to the new look NPC

You will note that lots of things have changed and that there are now some great new features including better search functions and new save/ copy features. The food composition database has also been updated and we have included a range of new food/ ingredients. We hope you find these useful.

We highly recommend that you take a look at our new [Explanatory Notes](#), or at the very least our [Quick Start Guide](#), before you get started.

The new look NPC has been designed around the steps that you would typically take to produce a nutrition information panel. There are four main steps. You need to:

1. Search the NPC database (or your custom list) for each ingredient in your recipe
2. Select and add each ingredient to your ingredient list, including the amount used
3. Enter your final recipe or batch weight (if it is different to the weight of your ingoing ingredients), the serve size and number of serves per package and
4. Produce your nutrition information panel and then print or save it.

We would love to hear from you.

If you discover any bugs or issues with the new NPC, please let us know at npc@foodstandards.gov.au

Tell us what you think of the new NPC by completing our [online survey](#).

Enter a new recipe name

Load existing NPC recipe

Fri Aug 19 2011: Berry Pie

0% of local recipe data space used

Think carefully before deleting. The recipe will be deleted **permanently** from your list of existing NPC recipes and can **no longer be retrieved**.

[Return to Table of Contents](#)

10. BACKUP/ RESTORING RECIPES AND CUSTOM INGREDIENTS

BACK AT THE WELCOME SCREEN, you can backup/ restore your recipes and custom ingredients. This function will backup/ restore **all** recipes and custom ingredients in one batch.

Before we explain why the backup/ restore function is useful, it is important to note the following.

You are responsible for your data storage. Data you enter for your product is stored within your web browser's storage. This is to optimise the confidentiality of your product information. Certain actions such as uninstalling your web browser, updating your web browser version or deleting files from your browsing history may result in the deletion of your product information.

So, before you perform any of the above actions, you should download and backup your recipes and custom ingredients and save them to another location. Once you have finished, you can restore your recipes and custom ingredients back into your web browser's storage for access via the NPC.

The backup/ restore functions also come in handy if you want to:

1. Download recipes and custom ingredients from one PC to another (e.g. from your home PC to your laptop)
2. Share recipes and custom ingredients with a friend and
3. Store old recipes and custom ingredients that are no longer used in another location, freeing up web browser storage for the NPC.

To download and backup recipes and custom ingredients:

Step 1: Hit the 'Backup/ Restore' button. You will be prompted to download all your recipes and custom ingredients in a location of your choice. Data will be saved as a *.txt* file with the name *export-YYYYMMDD-HrMin*.

To restore recipes and custom ingredients:

Step 1: Hit the 'Backup/Restore' button. You will be prompted to browse for the *export* file you wish to re-import. Once you have selected the file it will appear in the import field. Hit the 'Restore backup of recipes and custom ingredients' button.

Caution: the restore function will overwrite any recipes or custom ingredients stored in your browser.

Home ▶

Welcome to the new look NPC

You will note that lots of things have changed and that there are now some great new features including better search functions and new save/ copy features. The food composition database has also been updated and we have included a range of new food/ ingredients. We hope you find these useful.

We highly recommend that you take a look at our new [Explanatory Notes](#), or at the very least our [Quick Start Guide](#), before you get started.

The new look NPC has been designed around the steps that you would typically take to produce a nutrition information panel. There are four main steps. You need to:

1. Search the NPC database (or your custom list) for each ingredient in your recipe
2. Select and add each ingredient to your ingredient list, including the amount used
3. Enter your final recipe or batch weight (if it is different to the weight of your ingoing ingredients), the serve size and number of serves per package and
4. Produce your nutrition information panel and then print or save it.

We would love to hear from you.

If you discover any bugs or issues with the new NPC, please let us know at npc@foodstandards.gov.au

Tell us what you think of the new NPC by completing our [online survey](#).

Enter a new recipe name

Load existing NPC recipe

Fri Aug 19 2011: Berry Pie

0% of local recipe data space used

[Return to Table of Contents](#)

11. NUTRITION INFORMATION PANELS FOR FOODS THAT REQUIRE BOILING, FRYING OR OTHER PROCESSING

IF YOU EXERCISE SKILL, CARE AND JUDGEMENT when using the NPC, you can expect it to produce representative average nutrient values under most conditions.

However, the NPC has limitations when the preparation of your food involves **boiling** or **frying**, especially where the water or oil is not completely absorbed by the food. Sections 11.1 and 11.2 provide advice on how you can get around these limitations to use the NPC to obtain a representative nutrition information panel.

The NPC also has limitations when the preparation of your food involves **baking** with yeast (fermentation), **fermentation** (with other bacteria e.g. yoghurt) and certain other processes. These are covered in Section 11.3.

11.1 Calculating a nutrition information panel for boiled foods

Boiling dry foods such as rice, pasta and dried legumes will result in a net weight gain because they absorb water.

There are two methods to calculate a nutrition information panel that will take into account the absorbed water. You can use nutrient data for the boiled/cooked ingredient. This is the preferred method. Or, you can use nutrient data for the uncooked ingredient. Each method is described in more detail below.

Steaming a raw food may also result in a weight gain due to absorbed water. The weight gain during steaming may not be the same as the weight gain that occurs during boiling.

11.1.1 Selecting the boiled/cooked ingredient

If you select the **boiled/cooked** ingredient:

Step 1: Enter its **cooked weight** and add it to your current ingredients list.

Step 2: At the Create NIP Screen, do not enter a weight change factor.

This is the preferred method. The results you get using this method will probably be better than those you would get using the second method. However, you should note that the extent of the water absorption is dependent on your particular processing conditions, for example, the size of the cooking container and whether or not a covering was used.

Adding a boiled/cooked ingredient to a recipe requiring further cooking

You can also use this method when an ingredient must be boiled/cooked before it is added to a recipe requiring further cooking. A lasagne is a good example of this. In this case, the boiled/cooked ingredient would be the pasta, which is then added to the lasagne and baked. In this case you would:

- Step 1:** Select the cooked pasta, enter its **cooked weight** and add it to your current ingredients list.
- Step 2:** Select the other ingredients that go in your lasagne, and add them to your current ingredients list.
- Step 3:** At the Create NIP Screen, enter a weight change factor for the **cooked lasagne** (see [Appendix 5](#) of this document), **or**
- Weigh the cooked batch of lasagne and type this value (in grams) in the *Final Weight* box.

11.1.2 Selecting the uncooked ingredient

This method may be useful if you cannot find a suitable cooked version on the NPC.

If you select the **uncooked** ingredient:

- Step 1:** Enter its **uncooked weight** and add it to your current ingredients list.
- Do not** select the boiling water as a second ingredient.
- Step 2:** At the Create NIP Screen, enter a weight change factor for the **boiled** food (see [Appendix 5](#) of this document). For example, for boiled pasta, the weight change factor of 131% would be chosen. So, a 500 g portion of uncooked pasta would end up weighing 1155 g upon cooking, **or**
- Weigh the boiled ingredient and type this value (in grams) in the *Final Weight* box.

Adding an uncooked ingredient to a recipe requiring further cooking

You can also use this method when an ingredient must be boiled/cooked before it is added to a recipe requiring further cooking. Using the lasagne example, if the NPC did not have the right boiled pasta, you would:

- Step 1:** Follow steps 1 and 2 above.

Step 2: Create a nutrition information panel for this boiled pasta and print it.

You can now produce a nutrition information panel for your lasagne, using the data you have just printed for a 100 g quantity of boiled pasta as a **custom ingredient**.

Step 3: At the Welcome Screen, start a new recipe for your lasagne. Type in the name of your recipe in the box *Enter a new recipe name* e.g. *'Lasagne made with specialty pasta'*.

Step 4: In the Recipe Screen, click on the 'Add ingredient' button, and then select the Create Custom Ingredient Tab. Type the name of your boiled pasta in the box *Ingredient Name* e.g. *'Specialty pasta, boiled'*.

Step 5: Type a description of your custom ingredient in the box *Description*.

Step 6: Type in the values you have per 100 g EP for ENERGY (kJ), PROTEIN, TOTAL FAT, SATURATED FAT, CARBOHYDRATE, SUGARS and SODIUM, which you have just printed off for your boiled pasta, in the boxes provided.

Step 7: Type in the cooked weight of your pasta in the box *Ingredient Amount*.

Step 8: Click on the button 'Create' to add your boiled pasta to the current ingredients list for your lasagne.

Step 9: Select the other ingredients that go in your lasagne, and add them to your current ingredients list. Then proceed through the other steps to calculate your nutrition information panel.

ABOUT ADDING SALT TO THE COOKING WATER

Most of the boiled/cooked ingredients included in the NPC are without added salt. If your recipe requires that you add salt to the cooking water, it is important to note that not all of this salt will end up in your food.

Salt (or sodium chloride) is made up of 39.3% sodium and 60.7% chloride. Salt is typically added to the cooking water to make up a 0.5% salt solution¹³. A 0.5% salt solution **increases** the **sodium** content of a cooked food by **approximately 80 mg per 100 g**. This is assuming your food started off unsalted.

So how much **salt** do you need to add to your current ingredients list to get the desired **sodium** increase of 80 mg per 100 g of boiled food, for your nutrition information panel?

The trick is to work out how much sodium chloride contains 80 mg of sodium.

If there are 39.337 mg of sodium in 100 mg of sodium chloride, then by doing a simple cross-multiplication, there will be 80 mg of sodium in **203** mg of sodium chloride.

Therefore, when using the NPC you will:

1. Select the boiled ingredient from the NPC database and add it to your current ingredients list (See Section 11.1.1) and
2. Select and add 203 mg of salt (or 0.2 g) of salt to the current ingredients list **for every 100 g** of your boiled food.

11.2 Calculating a nutrition information panel for fried foods

Frying foods such as potato chips and meat will result in a weight change due to loss of water and absorption of cooking fat/oil. The NPC cannot calculate a nutrition information panel for fried foods without you doing some manual adjustments to the values, because it cannot determine how much cooking fat used in the recipe for frying will be absorbed by a particular food.

Given the NPC's limitations, the preferred method of producing a nutrition information panel for a fried food is to have the nutrient content of your fried food determined by laboratory analysis. We strongly recommend that you make use of this option wherever possible.

If a laboratory analysis is not possible, you can use the NPC but you must be prepared to do some manual adjustments to the values to obtain a representative nutrition information panel.

11.2.1 Using the NPC to calculate a nutrition information panel for fried foods

We recommend that you consider using this method only if a laboratory analysis is not possible.

This method requires that you select the **uncooked** ingredient and the cooking fat as two separate ingredients, and then use the technique outlined below to manipulate the NPC to produce a representative nutrition information panel. It assumes a good level of familiarity with the NPC and access to Australian food composition tables from the FSANZ website.

- This technique helps get around the problem that not all of the cooking fat used in the recipe for frying will be absorbed by the food.
- This technique requires you to **compare** the *total* fat contents of the raw and fried versions of your food. The difference between the raw and fried fat contents is then used to manipulate ingredient quantities to obtain representative values for the other nutrients and, in particular, saturated fat.
- This technique is based on the *total* fat content and then the other nutrients i.e. saturated fat, follow on from this.
- To use this technique, you must know the weight of your finished product.

To explain the technique, we are using an example of regular chips fried in peanut oil. The weight of the finished product is 250 g.

Step 1: Find a weight change factor.

Choose a weight change factor from [Appendix 5](#) of this document that describes your fried food.

In this example, the weight change factor for fried chips is **–27.0%**.

Step 2: Work out the weight of ingoing ingredients.

Manually calculate the **initial** weight of the ingoing ingredients to obtain the final weight of the cooked chips of 250 g using the weight change factor you just found and the following formula:

$$\frac{\text{Final weight} \times 100}{100 - \text{weight change factor}} = \text{Initial weight of ingoing ingredients}$$

where:

$$\frac{250 \times 100}{100 - 27} = 343 \text{ g of ingoing ingredients}$$

These calculations show that to obtain a final weight of the cooked chips of 250 g, 343 g of raw potatoes and oil were required. **At this stage, we do not know what proportion of each makes up the finished product. This is what we are trying to find out.**

Step 3: Add the ingredients.

In the Recipe Screen, click on the 'Add ingredient' button and search for the **uncooked** potato ingredient. Add this to your current ingredients list with a temporary, but sensible ingoing weight (in this case say 300 g), which you will later change. Note down the *total* fat content.

Step 4: Now search for the frying fat used. Add this to your current ingredients list with a temporary ingoing weight (in this case say 43 g, to make up the total ingoing weight of 343 g), which you will later change.

In this example, you would select the raw ingredients 'POTATO, SEBAGO, PEELED, RAW' (FOOD ID 13A11490), with a *total* fat of 0.2 g and 'OIL, PEANUT' (FOOD ID 04C10061).

Step 5: Look for a similar cooked product.

You now need to access either NUTTAB 2010 or AUSNUT 2007 databases via the FSANZ homepage to search for a fried version of the food. Note down its *total* fat content per 100 g.

In this example, an appropriate fried version would be 'POTATO CHIPS, REGULAR, DEEP FRIED, MONOUNSATURATED OIL, FROM TAKE-AWAY OUTLET, SALTED' (FOOD ID 13A11633), from NUTTAB 2010. This chip is fried using monounsaturated oil as the frying medium, and is appropriate because peanut is also a monounsaturated oil. The *total* fat content is 12.3 g per 100 g.

The ingoing quantities of potatoes and oil must now be manipulated to reflect a *total* fat content of 12.3 g per 100 g, as shown in the nutrition information panel.

Step 6: Adjust ingredient amounts.

Using the total weight of the ingoing ingredients (*Initial Weight* box) as a constant (in this case 343 g), **incrementally adjust the ingredient quantities of both ingredients in opposite directions**. The aim is to obtain a *total* fat value of 12.3 g per 100 g in the nutrition information panel.

In this example, you started with 300 g of raw potato and 43 g of peanut oil. Now edit each ingredient amount in turn, in opposite directions.

Do this by clicking on each ingredient to yellow highlight it, and then click on the 'Edit ingredient amount' button. The Ingredient Profile Screen will be displayed again. Make small changes to the ingredient amounts **making sure the total weight stays the same** (in this case 343 g.) When you have made the changes to each ingredient, click on the 'Update' button.

Step 7: Enter the weight change factor and check the nutrition information panel.

When you return to the Recipe Screen, click on the 'Create NIP' button. Double-check you have the correct *Initial Weight* (in this case 343 g). Type in the weight change factor you found at Step 1 in the *Weight Change* box (in this case -27.0%). Click on the 'Create' button. (You will also have to enter serving information before you can 'Create').

Now check the nutrition information panel you have produced to see if you are getting closer the desired *total* fat content (in this case, 12.3 g).

Step 8: Repeat Steps 6 and 7.

You will need to repeat Steps 6 and 7 a number of times until you find the correct ingredient amounts to achieve the desired *total* fat content.

In this example of 343 g of ingoing ingredients, you started with 300 g of raw potato and 43 g of peanut oil. By repeating Steps 6 and 7 as necessary, you will find that you need 312.5 g of raw potato and 30.5 g of peanut oil to produce 250 g of cooked chips with a *total* fat content of approximately 12.3 g per 100 g (as shown in the nutrition information panel).

This example highlights how frying foods such as potato chips can result in a substantial weight change due to the loss of water and absorption of cooking fat/oil.

11.3 Other processing practices

There are many processing practices apart from boiling and frying that may result in changes to the nutrient composition of the finished product¹⁴. These include (but are not limited to) baking, fermenting, soaking, washing, rinsing, draining and even the trimming of fat from meats. The NPC is not able to adjust nutrient values to account for any changes in composition to the raw ingredient that may occur as a result of these practices. Such changes may be highly variable depending on the specific product and the particular processing method employed.

Baking

Baking may affect carbohydrate (and thus energy) levels. During baking, some of the starch in the food (e.g. baked potatoes) may be converted into a form of unavailable carbohydrate¹ known as 'resistant starch'. This may result in a slight reduction of the available carbohydrate (and thus energy) in the finished product.

Also during baking, carbohydrates may participate in a range of browning reactions, leading again to a slight reduction in available carbohydrate and/or sugars (and thus energy) in the finished product.

Fermentation

Fermentation may also have an effect on carbohydrate (and thus energy) levels. The final carbohydrate content of the fermented product depends on the extent of fermentation. Fermentation generally involves the conversion of sugars (which are a carbohydrate component) into gases, alcohols and/or acids, often carbon dioxide and organic acids such as lactic acid.

Fermentation takes place in the production of yeasted baked goods (resulting in the conversion of starch to resistant starch or sucrose, the conversion of sucrose to glucose, or the conversion of glucose to carbon dioxide), sour dough breads, wines and beers, sauerkrauts and other fermented vegetables, yogurts, cheeses, and other fermented dairy goods.

The NPC includes nutrient values for many of the abovementioned fermented foods. If one of your ingredients is a fermented food, using the already fermented (rather than the raw/unfermented) version from the NPC is probably a better option. Having said this, it is important to note that the final carbohydrate content of the fermented product depends on the extent of fermentation. Thus, NPC values may not always adequately represent your product.

All things considered, you can expect to obtain better results selecting the fermented version rather than the unfermented version from the NPC.

Moisture gains and losses

Moisture gains/losses are another major influence on the nutrient composition of foods. We have already discussed boiling as a process which often results in a weight gain due to the absorption of water.

If your food undergoes a moisture gain or loss due to other types of processing, weigh your batch of food after cooking is complete, and insert this value in the box *Final Weight*. If it is too hard to work out the cooked weight of your product, then you can enter an appropriate weight change factor in the box *Weight Change*.

[Appendix 5](#) of this document contains a list of weight change factors. **Note that the**

¹ Carbohydrates that resist digestion in the small intestine

factors in [Appendix 5](#) are indicative only, and are provided solely as a guide. It is better to calculate your own.

Soaking, washing, rinsing and draining

The nutrient composition of foods may also be affected by soaking, washing, rinsing and draining. For example, for cereal foods such as pasta and rice, the carbohydrate (and thus the energy) contents may be affected by soaking before cooking or rinsing after cooking.

Some ingredients may be supplied packed in brine (e.g. vine leaves) or salt (e.g. capers) and may need to be washed or rinsed before use in a recipe. In this instance, the extent of washing or rinsing may affect the amount of sodium (a component of salt or sodium chloride) remaining.

Draining brine or oil from canned and bottled products, such as canned fish, can also affect the final nutrient values of your product, depending on how much of this fluid is drained off.

In any of the situations described above, it is important to note that NPC values may not always adequately represent your product.

Trimming of fats

Any changes you make to the amount of fat trimmed off meat carcasses or cuts, including poultry, may have an impact on the fat content of your final product.

We recommend that you take great care when selecting trimmed meat cuts from the NPC, to choose the one that best reflects your ingredient.

[Return to Table of Contents](#)

12. CAN'T FIND THE INGREDIENT ON THE NPC?

IF YOU CAN'T FIND THE INGREDIENT, start by checking the spelling and trying again. Also check for alternative spellings (e.g. 'kumquat' versus 'cumquat') and alternative names (e.g. pumpkin seeds are also known as 'pepita'). The *About* box on page 20 contains a number of handy tips that may help you find the ingredient you are looking for on the NPC.

Still can't find it?

The NPC database 2011 contains the most up-to-date and relevant data available at the time of release, sourced from several previously published Australian food composition databases including the NUTTAB (**NUT**rient **TAB**les) (mainly NUTTAB 2010) and AUSNUT (**AU**Stralian food and **NUT**rient database) (mainly AUSNUT 2007) databases. NUTTAB is Australia's reference nutrient database. AUSNUT is a survey database. It contains nutrient values for foods consumed during national nutrition surveys.

Neither of these databases have been designed for the purposes of calculating nutrition information panels. As such, the NPC database **does not have** an extensive range of raw/unprocessed ingredients, meat cuts devoid of separable fat and products that are used exclusively by the food industry (ingredients, food additives or processing aids e.g. enzymes).

What has FSANZ done to help?

In response to user feedback, nutrient data for 84 previously unpublished foods/ingredients have been added to the NPC database. These include some common food additives that are sources of sodium. Please note that despite our best attempts to provide new data, it is not possible to meet everyone's data needs, especially in relation to ingredients used exclusively by the food industry, which may often be individually formulated to meet your specific requirements.

What do I do?

If your ingredient is not on the NPC, you can:

1. Have the nutrient content of your food determined by laboratory analysis. **We strongly recommend that you make use of this option wherever possible** or
2. Try obtaining nutrient data from your ingredient supplier or from an online search. While food industry ingredients are unlikely to be presented in national food composition databases, household ingredients may be. The ingredient data can then be added to your current ingredients list as a custom ingredient and saved within your web browser's storage for future use.

It's up to you.

The final decision on how to deal with missing ingredients is yours. When making your decision, you might wish to bear in mind that some ingredients (such as food additives and food processing ingredients), which are added in minute quantities to your recipe, may have a negligible impact on the final nutrition information panel values. This is with the exception of sodium containing food additives.

On the other hand, ingredients that are added in large quantities or that are nutrient dense (such as oil) may have a significant impact on the final nutrition information panel values.

If you obtain data from other sources, it is up to you to decide on the appropriateness of these data for your nutrition information panel. In particular, you need to assess whether the data meet the requirements of Standard 1.2.8 Nutrition Information Requirements of the *Code*. See *About* box on page 24.

[Return to Table of Contents](#)

13. THE NPC DATABASE 2011

THE NPC DATABASE 2011 COMPRISES NUTRIENT DATA for 2520 foods/ ingredients, sourced from FSANZ's food composition databases NUTTAB and AUSNUT. This section provides detailed information about each of the data fields. But first is a discussion about the limitations of food composition data.

13.1 Limitations of food composition data

There are a number of limitations inherent with all food composition data, including those in the NPC.

Food composition data are mostly estimates that attempt to provide representative data. Foods, being biological materials, vary greatly in their natural nutrient composition. For primary produce, the variability in nutrient composition may be due to different methods of plant and animal husbandry, storage, transport and marketing. Processed foods, despite being subject to quality control during production, also vary in nutrient composition because of differences in the composition of ingredients and changes in formulation and production.

In addition to these natural variations, nutrient data may differ significantly in quality. This depends largely on how they were compiled. For example, data may be determined from laboratory analyses of the food. These are generally considered to be of high quality. On occasion, data may simply be estimates worked out using similar foods or another form of the same food, e.g. values for boiled peas are used for steamed peas. Data for some foods known as 'recipe' foods may be calculated using an average recipe for the food, as commonly prepared in Australia, based on the individual ingredients and correcting for preparation factors.

It is important to note that most of the food composition data on the NPC were not developed for the purpose of calculating nutrition information panels.

You should be aware that given these limitations, the results generated by the NPC may not be as representative as nutrient data obtained from a laboratory analysis of your product.

13.2 Food IDs, categories and descriptions

13.2.1 Identification codes (ID)

Each food on the NPC database has a unique 8-character FOOD ID, typically based on the identification system initiated in the series *Composition of Foods, Australia (COFA¹⁵)*. The code consists of a 4-character food group code followed by a 4-digit

number. Further details regarding the food grouping system used in Australian food composition databases are given in [Appendix 2](#).

13.2.2 Food names (FOOD NAME)

Foods have been given a common FOOD NAME which is used to describe the product. The food name aims to provide a detailed description of the food and captures the most commonly available form of a food and, where relevant, the exceptions to the commonly available form of the food and preparation. For example, sugar sweetened soft drinks are simply referred to as 'soft drinks' whereas the intense-sweetened versions are referred to as 'soft drink, intense sweetened'.

Very few foods are named with reference to a specific brand. The use of brand names has been avoided wherever possible. This is because the formulation of branded products changes over time and nutrient levels at the time of analysis may not reflect those in a particular brand some years later. In the few cases where a specific brand is mentioned, this is generally intended to provide guidance for the user in situations where there are a number of products available which may appear similar, but have differing nutrient composition. The values reported should be regarded as reflecting the average composition of that class of food. Very few food records come from analyses of a single brand only. The exceptions include Vegemite™ and Milo™ and several breakfast cereals.

In some cases you might find it difficult to identify an appropriate food/ ingredient by the food name alone (e.g. *'Paste, curry, Indian style, commercial'*). In addition, many have more than one common name (e.g. baking soda, bicarbonate of soda, sodium bicarbonate). Therefore, a DESCRIPTION has also been provided for all foods to aid identification.

13.2.3 Food descriptions (DESCRIPTION)

Clicking on a food in the ingredient selection list brings up its description. The DESCRIPTION field provides more detail about the food/ ingredient, including its appearance, texture, production and preparation. For processed foods, the major ingredients and food additives used are provided, where known.

The DESCRIPTION field is particularly useful for certain foods/ ingredients that might be difficult to identify by the FOOD NAME alone. The additional details provided in the DESCRIPTION assist users in identifying the appropriate record for their needs.

As an example, the FOOD NAME *'Paste, curry, Indian style, commercial'*, benefits from the additional details provided in the DESCRIPTION *'Indian style green curry paste sauce. Ingredients may include green chilli, lemon grass, garlic, salt, galangal, shrimp paste, kaffir lime, shallots and spices'*.

Where applicable, the DESCRIPTION may include alternative names. For example, the alternative name for pumpkin seeds '*pepita*' has been given.

13.3 Nutrients

13.3.1 Nutrient parameters

Nutrient values per 100 g edible portion are provided for energy and the six nutrients that must be declared on a nutrition information panel. The parameters for these nutrients are provided below, including the name of each nutrient (as shown on the ingredient selection list), nutrient category, measurement unit and number of decimal places to which each value is expressed.

Field name	Nutrient name	Nutrient category	Unit	Decimal places
Energy	ENERGY	PROXIMATE	kJ	0
Protein	PROTEIN	PROXIMATE	g	1
Fat (tot)	FAT, TOTAL	PROXIMATE	g	1
Fat (sat)	FAT, SATURATED – CALCULATED	FATTY ACID	g	1
Carb	AVAILABLE CARBOHYDRATE – CALCULATED	PROXIMATE	g	1
Sugars	TOTAL SUGARS – CALCULATED	PROXIMATE	g	1
Sodium	SODIUM	MINERAL	mg	0

The 100 g reference quantity is used consistently for all foods including fluids. However, for most semi-solid/liquid ingredients, you can type in the ingredient amount as either a weight (grams or kilograms) or volume (millilitres or litres). The NPC will automatically convert the volume of a liquid ingredient to a gram weight by multiplying the volume (in mL) by the specific gravity of the liquid ingredient.

13.3.2 Additional information about some nutrient values

Carbohydrate (CARB)

Clause 1 of Standard 1.2.8 defines CARBOHYDRATE as:

- (a) carbohydrate by difference - calculated by subtracting from 100, the average quantity expressed as a percentage of water, protein, fat, dietary fibre, ash, alcohol, and if quantified or added to the food, any other unavailable carbohydrate and the substances listed in column 1 of Table 2 to subclause 2(2) or

- (b) available carbohydrate - calculated by summing the average quantity of total available sugars and starch, and if quantified or added to the food, any available oligosaccharides, glycogen and maltodextrins.

This means that carbohydrate can be calculated in two different ways for inclusion in a nutrition information panel. Each method is described in more detail below.

Carbohydrate by difference method

The first method of calculating carbohydrate, as carbohydrate *by difference*, uses proximate composition data (water, protein, fat, dietary fibre, ash and alcohol) expressed per 100 g food.

This method assumes that these proximates plus carbohydrate will add up to 100 g. Therefore, a carbohydrate *by difference* value is obtained simply by *subtracting* these proximates from 100. The assumption here is that the remaining component is comprised entirely of carbohydrate. The equation used is:

CARBOHYDRATE BY DIFFERENCE (g)

$$= 100 - [\text{water (g)} + \text{protein (g)} + \text{fat (g)} + \text{dietary fibre (g)} + \text{ash (g)} + \text{alcohol (g)} + \text{(if quantified or added to the food) organic acids (g)} + \text{sugar alcohols (g)} + \text{polydextrose (g)}]$$

However, there are some limitations with this method. To use this method, data for *all* of the other abovementioned proximates must be available. In addition, this method assumes that there are no errors in the analyses of these proximates.

Anomalies in carbohydrate values for some foods may result. For example, we could end up with:

1. some foods having negative carbohydrate *by difference* values
2. some foods having a total analysed sugars value that is greater than the carbohydrate *by difference* or
3. some foods having a carbohydrate *by difference* value that looks extremely odd or different, compared with actual available carbohydrate value for similar foods.

These anomalies may occur because of:

1. the presence of other food components apart from the abovementioned proximates, such as organic acids and other miscellaneous organic components. By default, these are all counted in as carbohydrate as well and

2. the combined error of the individual analyses for the other proximates. The sum of proximates may actually range between 97 g and 103 g and still be considered acceptable.

Such anomalies tend to occur in a limited number of foods only. These are characterised by a low starch content, such as some fish, meat, meat dishes, cheese, milk, eggs and oils.

Available carbohydrate calculated by summing

The second method of calculating carbohydrate, as *available* carbohydrate, *sums* the average quantity of the carbohydrate components present in the food including total available sugars and starch, and if quantified, any available oligosaccharides, glycogen and maltodextrins.

All of the carbohydrate data presented in the NPC database have been calculated using this method - as *available* carbohydrate. This method is considered to be more exact than the carbohydrate *by difference* method, and it will not result in the anomalies outlined above for carbohydrate *by difference*. The equation used is:

AVAILABLE CARBOHYDRATE CALCULATED BY SUMMING (g)

= total sugars (g) + starch (g) + available oligosaccharides (g) + glycogen (g) + dextrins (g) + maltodextrins (g)

Requirements of the Code

Standard 1.2.8 has some additional requirements regarding the individual declarations of certain substances such as sugar alcohols.

As mentioned above, carbohydrate data presented in the NPC database have been calculated as available carbohydrate, as defined in clause 1 of Standard 1.2.8. When available carbohydrate values are used in a nutrition information panel, subclause 5(6B) of Standard 1.2.8 requires that the panel include individual declarations of any of the substances listed in column 1 of Table 2 to subclause 2(2) where they are present, either singly or in combination, in the final food in an amount of no less than 5 g/ 100 g, where they have been quantified or added to the food. (*In subclause (6B), the reference to substances in Table 2 does not include organic acids.*)

You need to ensure your compliance with these requirements for individual declarations. The NPC is not able to generate results that will meet these requirements.

ABOUT AVAILABLE CARBOHYDRATE VALUES PRESENTED IN AUSTRALIAN FOOD COMPOSITION DATABASES

Different Australian food composition databases use different equations to derive available carbohydrate values.

In NUTTAB 2010, two values are provided for available carbohydrate, calculated using two different equations. One value is calculated using the same equation as that given above. This is consistent with the definition of available carbohydrate in Standard 1.2.8, whereby the equation does not include any carbohydrate components listed in Table 2 to subclause 2(2).

The other NUTTAB 2010 available carbohydrate value, as well as the AUSNUT 2007 available carbohydrate value has been calculated using an equation which also includes sugar alcohols:

AVAILABLE CARBOHYDRATE WITH SUGAR ALCOHOLS CALCULATED BY SUMMING (g)(NUTTAB 2010/AUSNUT 2007)

= total sugars (g) + starch (g) + available oligosaccharides (g) + glycogen (g) + dextrans (g) + maltodextrins (g) + **sugar alcohols (g)**

Please note that by including other carbohydrate components listed in Table 2 to subclause 2(2) (e.g. sugar alcohols) in this equation, this equation for calculating available carbohydrate is **not** consistent with the requirements of Standard 1.2.8. Carbohydrate values in NUTTAB 2010 and AUSNUT 2007 calculated using this equation are **not** appropriate for nutrition labelling.

All NUTTAB and AUSNUT foods included in the NPC database have had their available carbohydrate values recalculated (where necessary) to be consistent with the definition of available carbohydrate in Standard 1.2.8. Due to the differences in the equations, available carbohydrate values for some foods in the NPC may differ slightly from those reported in NUTTAB 2010 and AUSNUT 2007 databases, even though the foods have the same FOOD ID.

Effect of processing on carbohydrate levels

There are many processing practices that may affect carbohydrate (and thus energy) levels. These include baking, fermenting, soaking, washing and rinsing. It is important to note that NPC values may not always adequately represent your product, due to such processing practices. Refer to Section 11.3 Other processing practices for further information regarding this issue.

Energy (ENERGY)

ENERGY is expressed in kilojoules (kJ) where one kilocalorie is equal to approximately 4.2 kilojoules. It is calculated from amounts of protein, fat, *available* carbohydrate (as defined above), dietary fibre, alcohol and organic acids, using the energy factors listed in column 2 of Tables 1 and 2 to subclause 2(2) of Standard 1.2.8:

ENERGY (kJ)

= protein (g)*17 + total fat (g)*37 + carbohydrate (g)*17 + dietary fibre (g)*8 + alcohol (g)*29 + organic acids (g)*13

ABOUT ENERGY VALUES PRESENTED IN AUSTRALIAN FOOD COMPOSITION DATABASES

Different Australian food composition databases have used different equations to derive energy values. Differences are primarily due to the:

1. use of different energy factors for *available* carbohydrate and
2. inclusion/exclusion of certain other energy yielding substances and the energy factors applied to these.

In the NPC database, a single energy factor for *available* carbohydrate of 17 kJ/g has been used. This is consistent with the energy factors listed in column 2 of Table 1 to subclause 2(2). In addition, the NPC energy equation does not include an energy contribution from any substances listed in Table 2 to subclause 2(2) except for organic acids. Organic acids have been given a single energy factor of 13 kJ/g, in line with Table 2 to subclause 2(2).

In contrast, in NUTTAB 2010, separate energy factors have been used for the various carbohydrate components that contribute to the total *available* carbohydrate such as total sugars (16 kJ/g) and starch (17 kJ/g). In addition, the NUTTAB 2010 energy equation **does** include an energy contribution from certain substances listed in Table 2 to subclause 2(2); not only organic acids but several sugar alcohols as well (16 kJ/g). Separate energy factors for organic acids have been applied.

ENERGY (kJ) (NUTTAB 2010)

= protein (g)*17 + total fat (g)*37 + sugars (g)*16 + other available carbohydrates (starch + dextrin + maltodextrin + raffinose + stachyose + other undifferentiated oligosaccharides + glycogen)(g)*17 + dietary fibre (g)*8 + alcohol (g)*29 + organic acids (citric/malic/quinic acids)(g)*10 + (lactic/acetic acids)(g)*15 + **sugar alcohols (sorbitol/mannitol/glycerol)(g)*16**

The AUSNUT 2007 energy equation is similar to that used in NUTTAB 2010, with separate energy factors for the various carbohydrate components that contribute to the total *available* carbohydrate and energy contributions from certain substances listed in Table 2 to subclause 2(2); not only organic acids but several sugar alcohols as well (16 kJ/g). Again, separate energy factors for organic acids have been applied.

ENERGY (kJ) (AUSNUT 2007)

= protein (g)*17 + total fat (g)*37 + total sugars (g)*16 + starch (g)*17 + dextrin (g)*17 + maltodextrin (g)*17 + glycogen (g)*17 + dietary fibre (g)*8 + alcohol (g)*29 + lactic/acetic acids (g)*15 + malic/quinic/citric acids (g)*10 + **sorbitol/mannitol (g)*16**

Please note the energy factors used in NUTTAB 2010 and AUSNUT 2007 equations are **not** consistent with those specified in Standard 1.2.8 for the calculation of energy, and therefore

NUTTAB 2010 and AUSNUT 2007 energy values are **not** appropriate for use in nutrition labelling.

All NUTTAB and AUSNUT foods included in the NPC database have had their energy values recalculated to be consistent with the requirements of Standard 1.2.8. Due to the differences in energy equations, energy values for some foods in the NPC may differ slightly from those reported in NUTTAB 2010 and AUSNUT 2007 databases, even though the foods have the same FOOD ID. For example, foods with a high level of total sugars may have energy values approximately 3% greater than those reported in AUSNUT 2007.

Requirements of the Code

Standard 1.2.8 has some additional requirements regarding the individual declarations of certain substances such as sugar alcohols. If any of substances listed in column 1 of Table 2 to subclause 2(2) are present, either singly or in combination, in the final food in an amount of no less than 5 g/ 100 g, where they have been quantified or added to the food, you need to ensure that the panel includes individual declarations of these, and that their contribution to total energy is taken into account by application of the specific energy factors given in column 2 of Table 2 to subclause 2(2).

You need to ensure your compliance with these requirements for individual declarations. Although the NPC is not able to generate results that will meet the requirements for individual declarations, it does include nutrient data for substances listed in Table 2 to subclause 2(2), to assist in the calculation of total energy.

Saturated fat (FAT (SAT))

Data on saturated fat have been provided. These data should be used with caution, particularly for the small range of multi ingredient foods such as breads and biscuits, noting that the *saturated* fat content of a food may vary considerably depending on the type of fat used in its production. **If there is any doubt about the suitability of the NPC data for your needs, then we recommend that you have the nutrient content of your food determined by laboratory analysis.**

Sodium (SODIUM)

Data on sodium have been provided. Again, these data should be used with caution, particularly for the small range of multi-ingredient foods such as breads, biscuits and soup mixes. This is because the sodium content of your finished food is greatly influenced by the amount of salt used in your recipe as well as well as high sodium ingredients such as soy sauce. **Again if there is any doubt, we recommend that you have the nutrient content of your food determined by laboratory analysis.**

[Return to Table of Contents](#)

14. REFERENCES

1. Brand Miller J, James KW and Maggiore P. (1993) Tables of Composition of Australian Aboriginal Foods. Canberra: Aboriginal Studies Press.
2. United States Department of Agriculture National Nutrient Databank for Standard Reference. (2006) Release 19. www.nal.usda.gov/fnic/foodcomp/search
3. United States Department of Agriculture National Nutrient Databank for Standard Reference. (2010) Release 23. www.nal.usda.gov/fnic/foodcomp/search
4. Athar N, McLaughlin J and Taylor G. (2003) The Concise New Zealand Food Composition Tables. 6th edition. Palmerston North: New Zealand Institute of Plant and Food Research and The New Zealand Ministry of Health.
5. New Zealand Institute of Plant and Food Research (2009) The Concise New Zealand Food Composition Tables. 8th edition. Palmerston North: New Zealand Institute of Plant and Food Research and The New Zealand Ministry of Health, <http://www.plantandfoo.co.nz>.
6. Danish Food Composition Databank. (Version 7.01, 2009) National Food Institute. Technical University of Denmark. www.foodcomp.dk/v7/fcdb.
7. Food Standards Australia New Zealand. (2011) NUTTAB 2010 – Australian Food Composition Tables. Canberra: Food Standards Australia New Zealand.
8. Food Standards Australia New Zealand. (2008) AUSNUT 2007 – Australian Food, Supplement and Nutrient Database for Estimation of Population Nutrient Intakes. Canberra: Food Standards Australia New Zealand.
9. Food Standards Australia New Zealand. (June 2011, Amendment 123) Australia New Zealand Food Standards Code. www.foodstandards.gov.au.
10. Food Standards Australia New Zealand. (2011) User Guide to Standard 1.2.8 - Nutrition Information Requirements. www.foodstandards.gov.au.
11. Food Standards Australia New Zealand. (2007) NUTTAB 2006 – Australian Food Composition Tables. Canberra: Food Standards Australia New Zealand.
12. Australia New Zealand Food Authority. (2004) AUSNUT Special Edition (3) (Australian Food and Nutrient Database for Nutrition Labelling – Release 3). Canberra: Australia New Zealand Food Authority.
13. Chan W et al. 1991. Ministry of Agriculture Fisheries and Food. Vegetables, Herbs and Spices: The Fifth Supplement to McCance and Widdowson's The Composition of Foods (4th edition). Royal Society of Chemistry/MAFF. Cambridge.

14. United States Department of Agriculture Table of Nutrient Retention Factors. (2003) Release 5. www.nal.usda.gov/fnic/foodcomp/Data/index.html#retention
15. National Food Authority. 1989-95. Composition of Foods, Australia, volumes 1-7. Canberra: Australian Government Publishing Service.
16. Australia New Zealand Food Authority. (1999) AUSNUT - Australian Food and Nutrient Database 1999 [compact disc]. Canberra: Australia New Zealand Food Authority.
17. Joint FAO/WHO Expert Committee on Food Additives (JECFA). (2008) www.fao.org/ag/agn/jecfa-additives
18. O'Neil MJ (Editor). (2006) The Merck Index: An Encyclopaedia of Chemicals, Drugs, and Biologicals. 14th edition. Merck and Co. Inc. USA.
19. Bergstroem L. (1985) Nutrient Losses and Gains in the Preparation of Foods. Eurofoods. Sweden.
20. Bognár A. (2002) Tables of Weight Yield of Food and Retention Factors of Food Constituents for the Calculation of Nutrition Composition of Cooked Foods (Dishes). Bundesforschungsanstalt für Ernährung. Karlsruhe.
21. Chan W et al. (1991b) Ministry of Agriculture Fisheries and Food. Vegetables, Herbs and Spices: The Fifth Supplement to McCance and Widdowson's The Composition of Foods. 4th edition. Royal Society of Chemistry/MAFF. Cambridge.
22. Chan W et al. (1994) Ministry of Agriculture Fisheries and Food. Miscellaneous Foods: The Fourth Supplement to McCance and Widdowson's The Composition of Foods. 5th edition. Royal Society of Chemistry/MAFF. Cambridge.
23. Chan W et al. (1996) Ministry of Agriculture Fisheries and Food. Meat Products and Dishes: The Sixth Supplement to McCance and Widdowson's The Composition of Foods. 5th edition. Royal Society of Chemistry/MAFF. Cambridge.
24. Holland B et al. (1988) Ministry of Agriculture Fisheries and Food. Cereal and Cereal Products: The Third Supplement to McCance and Widdowson's The Composition of Foods. 4th edition. Royal Society of Chemistry/MAFF. Cambridge.
25. Holland B et al. (1989) Ministry of Agriculture Fisheries and Food. Milk Products and Eggs: The Fourth Supplement to McCance and Widdowson's The Composition of Foods. 4th edition. Royal Society of Chemistry/MAFF. Cambridge.
26. Holland B et al. (1991) Ministry of Agriculture Fisheries and Food. McCance and Widdowson's The Composition of Foods. 5th edition. Royal Society of Chemistry/MAFF. Cambridge.

27. Holland B et al. (1993) Ministry of Agriculture Fisheries and Food. Fish and Fish Products: The Third Supplement to McCance and Widdowson's The Composition of Foods. 5th edition. Royal Society of Chemistry/MAFF. Cambridge.
28. Mathews RH and Garrison YJ. (1975) Food Yields Summarized by Different Stages of Preparation. US Department of Agriculture.
29. Australian Nutrient Databank. (1980) National Food Authority. Canberra.
30. US Department of Agriculture. (1976-1990) Composition of Foods: Raw, Processed, Prepared. Agriculture Handbook Number 8. Sections 1-21. Washington DC.

Appendix 1. Producing the NPC database 2011

The NPC database 2011 contains the most up-to-date and relevant data available at the time of release, sourced from several previously published Australian food composition databases including NUTTAB (**NUT**rient **TAB**les) (mainly NUTTAB 2010⁷) and AUSNUT (**AU**Stralian food and **NUT**rient database) (mainly AUSNUT 2007⁸).

NUTTAB

NUTTAB is Australia's reference nutrient database. The latest edition available on the FSANZ website is NUTTAB 2010. NUTTAB 2010 is published as an online searchable database and as electronic database files. Additional, separate data files are provided for Indigenous foods, vitamin D, amino acids, and trans fatty acids. The complete NUTTAB database (including the separate data files) contains food composition data for 2668 foods and includes nutrient data for up to 245 nutrients.

The complete electronic database comprises six core files including three nutrient files provided in different formats, and a food file, recipe file and retention factor file.

AUSNUT

AUSNUT is a survey specific nutrient database. It contains nutrient values for foods consumed during national nutrition surveys. The latest edition available on the FSANZ website is AUSNUT 2007, which was used for estimating nutrient intakes from food, beverages and dietary supplements consumed as part of the National Children's Nutrition and Physical Activity Survey. The AUSNUT 2007 database contains 37 nutrient values for 4225 foods, beverages and dietary supplements consumed during the survey.

AUSNUT 2007 is available in two formats. Four core files including a nutrient file, dietary supplements nutrient file, food file and measures file can be accessed directly from the FSANZ website. This version is suitable for users who want to look up specific food, nutrient and measure information quickly.

The alternative format comprises nine files including a nutrient file, dietary supplements nutrient file, food file, measures file, recipe file, retention factor file, brand match file, food table definitions file and AUSNUT 2007 – AUSNUT 1999¹⁶ matching file. This version is suitable for users who want to upload information directly into specialised databases or spreadsheets for manipulation.

Modifications made to produce the NPC database 2011

A number of changes have been made to NUTTAB and AUSNUT data to produce the NPC database appropriate for nutrition labelling. Modifications are summarised in the table below and, where appropriate, are explained in further detail in the sections that follow.

MODIFICATION	NUTTAB 2010	AUSNUT 2007	NPC database 2011
Number of records	Nutrient values for 2668 foods.	Nutrient values for 4225 foods.	Nutrient values for 2520 foods including: 36 NUTTAB 2006 foods 779 NUTTAB 2010 foods 433 AUSNUT SE foods 1188 AUSNUT 2007 foods 84 new foods, ingredients and additives.
FOOD IDs	Foods are identified by a FOOD ID.	Foods are identified by a FOOD ID and an 8-digit survey ID used in the Survey.	Foods are identified by a FOOD ID. There is no 8-digit survey ID.
Food descriptions	Food descriptions are provided for all foods.	Food descriptions are provided for all foods.	Food descriptions are provided for all foods but have been revised to be consistent within the NPC database.
No. of nutrients	Nutrient values for up to 245 nutrients. Complete presentation is not required.	Nutrient values for 37 nutrients. Complete presentation is required.	Nutrient values for energy and the six mandatory nutrients. Complete presentation is required.
Available carbohydrate	Two values are provided for available carbohydrate. Both are calculated by summing. One value also includes sugar alcohols in the calculation.	Available carbohydrate values are calculated by summing. Sugar alcohols are included in the equation.	Available carbohydrate values are calculated by summing total available sugars and starch (including glycogen) and, if quantified, available oligosaccharides, dextrins and maltodextrins.
Total energy	One value for total energy is provided. This value is calculated from amounts of protein, fat, total sugars, starch (including glycogen) dietary fibre and alcohol, together with amounts of available oligosaccharides, dextrins, maltodextrins, organic acids and sugar alcohols , where known.	Two values for total energy are provided. One value is calculated from amounts of protein, fat, total sugars, starch (including glycogen) and alcohol, together with amounts of available oligosaccharides, dextrins, maltodextrins, organic acids and sugar alcohols , where known. The other value also includes the estimated energy contribution from dietary fibre.	One value for total energy is provided. This value is calculated from amounts of protein, fat, <i>available</i> carbohydrate (total sugars, starch, available oligosaccharides, dextrins and maltodextrins), dietary fibre, alcohol and organic acids.
Range of foods	The range of foods and nutrient data presented is dependent on what analytical data is available.	The range of foods and food naming conventions are designed for dietary intake estimation.	The range of foods and food naming conventions has been revised where necessary for nutrition labelling purposes and to aid identification.

New foods and ingredients

NUTTAB is Australia's reference nutrient database. AUSNUT is a survey database. It contains nutrient values for foods consumed during national nutrition surveys. It should be noted that neither of these databases have been designed for the purposes of producing nutrition information panels. You may find data are lacking on certain foods/ ingredients that are relevant to you such as some raw/unprocessed ingredients, meat cuts devoid of separable fat, and food processing ingredients that are used exclusively by the food industry.

To address these data gaps, and in response to user feedback, nutrient data for 84 previously unpublished foods/ ingredients have been included in the NPC database. The data have been compiled using a variety of sources including food composition tables from other countries, scientific literature, ingredient specification sheets and food labels. The new food records include:

- Thirty new records for food processing aids and additives, including sugar alcohols and organic acids. Eighteen of these were sodium containing food additives. Data on additives were compiled primarily using the Joint FAO/WHO Expert Committee on Food Additives (JECFA) website¹⁷ and The Merck Index¹⁸.

These data are provided to assist those businesses that may have difficulty in obtaining the information directly from their ingredient manufacturers/ suppliers.

- Twenty-three new records for commercially significant indigenous foods, compiled primarily using Brand Miller¹ as a reference.
- Twelve new records for various flours, including gluten free and other specialty flours.
- Eleven new records for beef, lamb, pork, mutton, veal and chicken comprising cuts represented in terms of their percentage of chemical lean.
- Eight new records for miscellaneous food items including kiwano, pork blood, rosemary, wakame, egg white powder, palmolein, and unpeeled lemon, in response to user requests.

Omitted foods

Only a proportion of the foods presented in the NUTTAB and AUSNUT databases were selected as appropriate for including in the NPC database. Foods/ingredients included tend to be core ingredients used in the preparation of recipes such as flour, sugar, milk and pasta and products that are used exclusively by the food industry (ingredients, food additives or processing aids e.g. enzymes).

There are very few multi-ingredient foods in the NPC database, and these are mainly restricted to certain plain breads, muffins, biscuits and cakes, sausages and deli meats, snack foods, toppings and soup powders. This is to encourage you to produce your nutrition information panel by building a recipe using nutrient data on core ingredients (e.g. flour, eggs, milk, cocoa etc.), rather than by taking shortcuts and producing a nutrition information panel using the nutrient data for a finished food (e.g. chocolate cake). In the vast majority of cases this recipe approach is likely to give you more accurate nutrient values.

Apart from the obvious multi-ingredient foods (such as chocolate coated muesli bars, baked cheesecakes, sausage rolls etc.) and complete dishes (such as lamb moussaka, tandoori chicken etc.), omitted foods also include:

- Meat/ fish etc. that have been fried (including those that have been floured/ crumbed and then fried, apart from crumbed fish fingers that were baked with no added fat) – this is because any variations in the type and amount of frying fat used can have a significant impact on the fat and saturated fat content
- Foods that have been cooked with added fats – again, this is because any variations in the type and amount of fat used can have a significant impact on the fat and saturated fat content
- Foods that have been cooked/ boiled with salt added to the cooking water – this is because any variations in the amount of salt added can have a significant impact on the sodium content
- Foods that have been cooked/ stewed with added sugar – this is because any variations in the amount of sugar added can have a significant impact on the sugars and thus carbohydrate content
- Fortified foods (with the exception of foods fortified with dietary fibre and protein), where an unfortified equivalent exists – this is because fortification practices generally apply to the micronutrient composition (i.e. vitamin and mineral) composition of the food, which is not relevant to the production of nutrition information panels using the NPC. Foods fortified with dietary fibre and protein have been retained because the total energy content of the food will be higher, compared with the unfortified version. The food names for the unfortified versions have been revised where necessary so that the food is generally applicable for both fortified and unfortified items and
- Any foods for which any characteristic is 'unspecified' (e.g. '*Cream, not further specified*') – this form of describing foods is used in survey databases like AUSNUT to cover situations where the survey respondent was unable to

provide a comprehensive description of the food. While useful for surveys, these foods are inappropriate for use in nutrition labelling.

Revision of food names and descriptions

Many FOOD NAMES and DESCRIPTIONS have been revised for inclusion in the NPC database. The vast majority of these have been revised to include further details, to aid in the identification of appropriate foods/ingredients, and so that all foods are named and described consistently within the NPC database. For example, the NUTTAB 2010 food '*Blueberry, canned in syrup*' was revised to include further details to aid identification i.e. '*Blueberry, canned in syrup, **undrained***'.

Appendix 2. Guide to the food grouping system used in Australian food composition databases

Food group	Food sub-groups	Includes codes beginning with:
Additives and food ingredients	Herbs, seasonings and spices	10E1, 10F4, 10F6
	Home ingredients	10F3, 10F6, 13B2, 14B1
Beverages	Alcoholic	01A1, 01A2, 01A3
	Non-alcoholic	01A2, 01B1, 01B2, 01B3
Cereals & cereal products	Breakfast cereals	02A1, 02D1, 02D2
	Flours, grains and starches	02A1, 02A2, 02F4, 10F6, 13A2
	Bread and bread products	02B1, 02B2, 02E2, 02F3, 02F4
	Biscuits	02C1, 02C2
	Cakes, slices and other battered products	02E1, 02E2, 02E3, 02E5
	Pastries, pies and tarts	02E4, 02E5, 02E6
	Hamburgers, pizza and other takeaway products	02E6, 02F1, 02F3
	Noodles and pasta	02A1, 02F4, 10A1
	Condiments	Dressings, pastes and sauces
Spreads		10F4, 11B1
Dairy	Milk	09A1, 09A2, 09A3
	Cream	09A5
	Cheese	09B1, 09B2, 09B3
	Yoghurts and dairy desserts	09C1, 09C2, 09D1, 09D2
	Ice cream and edible ice products	09D1, 12D1
Dairy and meat alternatives	Nil	08G1, 09A1, 13B2
Edible fats & oils	Edible oil spreads	04A1, 04B1, 04B2
	Fats and oils	04C1, 04D1
Eggs	Nil	03A1 (eggs), 03A2 (egg substitutes), 03B1 (egg dishes)



Food group	Food sub-groups	Includes codes beginning with:
Fruit	Nil	06A (berries), 06B (citrus), 06C (stone fruit), 06D (other fruit), 06E (mixed fruit products), 12B1
Indigenous Foods	Plant foods	15A1
	Animals, insects and insect products	15A2, 15A4
Legumes	Nil	13A2, 13B2
Meat and meat products	Beef	08A1
	Lamb	08A2
	Mutton	08A2
	Pork	08A3
	Veal	08A4
	Game and other meat	08B1, 08C2
	Poultry	08C1, 08C2, 08E1
	Offal	08D1
	Processed meats	08E2, 08E3, 08E4, 08F1, 13B1
Nuts and seeds	Nil	11A1, 11B1
Restaurant foods	Asian foods	02E6, 02F4, 03B1, 05A1, 05D1, 05D2, 08F1, 10C1, 13B1, 13B2
	Mediterranean foods	02E6, 02F4, 03B1, 08E2, 08F1, 13B1, 13B2
Seafood and seafood products	Fish	05A1
	Crustacea & molluscs	05C1
	Processed fish, crustacea and molluscs	05A1, 05C1, 05D1, 05D2
Snack foods	Nil	02A1, 10D1, 12C1
Soups	Nil	10C1



Food group	Food sub-groups	Includes codes beginning with:
Sugar, confectionery and sweet spreads	Sugars and sweeteners	12A1, 14A1
	Spreads and toppings	10A1, 10B1, 12B1
	Chocolate based	12C1
	Sugar based	02E5, 11B1, 12C1, 12D1
Vegetables	Nil	10B1, 13A1, 13B1

Appendix 3. Format of a nutrition information panel

Clause 5 of Standard 1.2.8 sets out the particulars which must be included in a NIP. Clause 5 also specifies that the NIP must be set out in the following format.

NUTRITION INFORMATION		
Servings per package: (insert number of servings)		
Serving size: g (or mL or other units as appropriate)		
	Average Quantity per Serving	Average Quantity per 100 g (or 100 mL)
Energy	kJ (Cal)	kJ (Cal)
Protein	g	g
Fat, total	g	g
- saturated	g	g
Carbohydrate	g	g
sugars	g	g
Sodium	mg (mmol)	mg (mmol)
(insert any other nutrient or biologically active substance to be declared)	g, mg, µg (or other units as appropriate)	g, mg, µg (or other units as appropriate)

Appendix 4. The Australian Food Composition Program

Food Standards Australia New Zealand (FSANZ) is home to the Australian Food Composition Program.

The program is managed by a small team of nutritionists. Our main responsibility is to generate, compile and publish high quality Australian reference data on the nutrient composition of foods.

A bit of history

The Australian Food Composition Program was established in 1979 at the then Commonwealth Department of Health. Until that time, Australia's nutrient composition tables contained a large proportion of overseas data and, as such, did not adequately represent the composition of Australian foods.

With the establishment of the Australian Food Composition Program, Australia was able to generate and publish nutrient data focussing on a range of fresh and manufactured foods available for consumption in our country.

The program transferred to FSANZ (then known as the National Food Authority and later the Australia New Zealand Food Authority) in 1991.

Our program work cycle

There are three main components to our work.

1. Generating nutrient data

Most of our data are generated by lab analysis. Lab analysis is expensive and checking and compiling results is resource intensive. So, when planning an analytical program, we take great care to select:

- Foods that make a significant contribution to the national diet and/or are major sources of nutrients in Australians' diets (for example, milk)
- Foods for which only limited or out-dated data are available (for example, canned flavoured tuna & soy-based yoghurt) and
- Foods about which there is an identified information need (for example, vitamin D in chicken eggs).

Apart from conducting our own analytical programs, there are other ways we can generate the data we need. For example, we might:

- Borrow the data from overseas food composition tables
- Request the data directly from the food industry

- Source data directly from food labels
- Impute data from similar foods or
- Calculate data using a recipe approach.

2. Data evaluation, storage and compilation

All raw data undergo a critical assessment prior to their acceptance. The assessment process involves assessing the raw data for consistency within samples and also comparing the data against existing sources or against the scientific literature, to determine its accuracy and reliability. Data are uploaded into our central data repository where they are stored and compiled, ready for publication.

3. Publication

The food composition data we produce are currently published in two types of food composition databases: NUTTAB and AUSNUT.

NUTTAB (**NUT**rient **TAB**les for use in Australia) is Australia's reference nutrient database. It contains a wide range of foods and nutrients. The nutrients reported in NUTTAB will vary between foods, according to the data we currently have available.

AUSNUT (**AU**Stralian Food and **NUT**rient Database) is our survey specific nutrient database. Below is a summary of the differences between NUTTAB and AUSNUT.

NUTTAB	AUSNUT
Reference database	Survey database
Foods and nutrients vary according to data available	Foods and nutrients vary according to survey requirements
Primarily analysed data	Derivation of data varies
Incomplete nutrient dataset for each food	Complete nutrient dataset for each food

How our data are used within FSANZ

Food composition data are used by FSANZ to:

- undertake dietary intake/exposure assessments (in association with consumption data) which feed into our risk assessment processes
- assist with FSANZ work on monitoring fortification and
- generate specialised datasets for food standards development work and to monitor post implementation.

How our data are used more widely

Looking more widely, our food composition data are used extensively by public health professionals, academia, industry and consumers for research on diet and disease, education, nutrition labelling (mainly via the NPC), and to assist with making healthy food choices.

Appendix 5. Weight change factors

Weight changes and the nutrition information panel

The cooking process may change the weight of the recipe's ingoing ingredients, due to gains and/or losses in both water and/or fat. This means that the nutrient values for the raw product will not equal the nutrient values for the cooked product. You need to take this weight change into account when producing a nutrition information panel.

About weight changes

Weight change factors can be either negative (e.g. where a food loses moisture during cooking) or positive (e.g. where a dried legume absorbs water during boiling).

Weight changes in cooking can be influenced by a number of factors. For example, the degree of change can depend on the type of processing equipment used. Even the absence of a saucepan lid can have a big impact on the weight of a cooked food like a stew, due to evaporation of water. The degree of weight change can also depend on the surface area of the food, the processing time, and the cooking temperatures.

About the weight change factors listed here

To assist you, a table of weight change factors has been provided below. These weight change factors have been drawn from numerous local and overseas sources^{13,19, 20, 21, 22, 23, 24, 25, 26, 27, 28}. Values are not provided for some food groups due to the great variability within these groups.

These weight change factors are indicative of the net weight changes that occur in cooking. The majority of changes result from the loss or gain of water. But for foods including meats and fried foods, there may also be a loss or gain of fat. However, the NPC assumes that any weight change is due exclusively to water.

You should note that these weight change factors are based on domestic food measures and cooking situations. As such, you should use these factors with caution because they do not account for industrial processes, where foods are processed in bulk amounts or where they are only partially hydrated.

The weight change factors listed here are indicative only, and are provided solely as a guide. It is better to calculate your own weight change factor using the following equation:

$$\frac{\text{Weight of cooked food} - \text{Weight of raw food}}{\text{Weight of raw food}} \times 100$$

As an example, assume that you start with 100 g of the raw food X. After cooking it weighs 300 g. The weight change factor can be calculated as follows:

$$\frac{300 - 100}{100} \times 100 = 200\%$$

A weight change factor of 200% does **not** indicate that the food has doubled its weight. Rather, the food has gained twice its original weight on cooking i.e. it has **tripled** in weight.

You don't have to calculate a weight change factor. Simply make a note of your own recipe weights for before and after cooking and type the final weight into the NPC.

Food group ID	Food group name	Food description	Preparation method	Weight change factor
02	CEREALS AND CEREAL PRODUCTS			
02A1	Flours, grains and starches			
02A1	Grains, rice	Rice, grain	Boiled, Stewed, Pressure cooker stewed, Microwave stewed	170
02A1	Grains, rice	Rice, flavoured	Simmered	170
02A1	Grains, cornmeal	Cornmeal (polenta)	Simmered	557
02A1	Grains, cornmeal	Cornmeal (polenta), prepared	Simmered	-5
02A1	Grains, other than rice	Millet	Boiled, Stewed, Pressure cooker stewed, Microwave stewed	140
02A1	Grains, other than rice	Spelt	Boiled, Stewed, Pressure cooker stewed, Microwave stewed	80
02A1	Grains, other than rice	Other grains including barley, buckwheat, oat flakes, amaranth, quinoa and wheat	Boiled, Stewed, Pressure cooker stewed, Microwave stewed	200
02A1	Noodles and pasta			
02A1	Pasta	Dried pasta, white or wholewheat, including spaghetti, macaroni, fusilli, tagliatelle, penne, shells, twists, spirals, etc.	Boiled	131
02A1	Pasta	Fresh pasta, unfilled	Boiled	76
02A1	Pasta	Previously cooked pasta	Heated	-5
02A1	Noodles	Noodles, including Asian style, egg noodles etc.	Boiled	156
02A1	Noodles	Previously cooked noodles including Asian style, egg noodles etc.	Heated	-5
02B1	Bread and bread products			
02B1	Breads and bread rolls	Breads and bread rolls, white	Baked, from raw ingredients	-9
02B1	Breads and bread rolls	Breads and bread rolls, white	Toasted, Grilled	-15
02B1	Breads and bread rolls	Breads and bread rolls, mixed grain	Baked, from raw ingredients	-9
02B1	Breads and bread rolls	Breads and bread rolls, mixed grain	Toasted, Grilled	-15
02B1	Breads and bread rolls	Breads and bread rolls, wholemeal	Baked, from raw ingredients	-9

Food group ID	Food group name	Food description	Preparation method	Weight change factor
02B1	Breads and bread rolls	Breads and bread rolls, wholemeal	Toasted, Grilled	-15
02B1	Breads and bread rolls	Breads and bread rolls, rye	Baked, from raw ingredients	-9
02B1	Breads and bread rolls	Breads and bread rolls, rye	Toasted, Grilled	-15
02B1	Breads and bread rolls	Breads and bread rolls, fibre-increased	Baked, from raw ingredients	-9
02B1	Breads and bread rolls	Breads and bread rolls, fibre-increased	Toasted, Grilled	-15
02B1	Savoury filled or topped breads and bread rolls	Garlic bread, foccacia, bread with cheese, bacon, vegetables, fruit etc.	Baked, from raw ingredients	-9
02B1	Savoury filled or topped breads and bread rolls	Garlic bread, foccacia, bread with cheese, bacon, vegetables, fruit etc.	Toasted, Grilled	-10
02B1	Savoury filled or topped breads and bread rolls	Garlic bread, foccacia, bread with cheese, bacon, vegetables, fruit etc.	Pan-fried	-19
02B1/ 02F4	Tortilla, taco shells and corn bread	Tortillas	Pan-fried, from raw ingredients	-18
02B1	Flat breads	Puri, traditional South Asian food, white or brown	Deep-fried	-19
02B2	English-style muffins and crumpets			
02B2	English-style muffins	English-style muffins	Baked, from raw ingredients	-13
02B2	English-style muffins	English-style muffins	Toasted, Grilled	-14
02B2	Crumpets	Crumpets	Baked, from raw ingredients	-10
02B2	Crumpets	Crumpets	Toasted, Grilled	-10
02C1/ 02C2	Biscuits			
02C1	Biscuits, savoury	Biscuits, savoury, plain, low to moderate fat (<6%)	Baked, from raw ingredients	-13
02C1	Rice and corn crackers and cakes, savoury	Rice cakes	Baked, from raw ingredients	-11
02C2	Biscuits, sweet	Biscuits, sweet, plain or flavoured, including short bread	Baked, from raw ingredients	-13
02C2	Biscuits, sweet	Biscuits, sweet, plain, with fruit or nuts	Baked, from raw ingredients	-7
02C2	Biscuits, sweet	Biscuits, sweet, fruit-filled or fancy	Baked, from raw ingredients	-7
02C2	Biscuits, sweet	Biscuits, sweet, cream-filled	Baked, from raw ingredients	-9
02C2	Biscuits, sweet	Biscuits, sweet, chocolate chip, homemade	Baked, from raw ingredients	-7
02C1/ 02C2	Biscuits, savoury and sweet	Short crust biscuit, flaky biscuit	Baked, from raw ingredients	-20
02D1	Breakfast cereals, ready to eat			
02D1	Breakfast cereal, bran	Breakfast cereal, bran	Baked, from raw ingredients	-11
02D1	Breakfast cereal, mixed grain	Breakfast cereal, mixed grain	Baked, from raw ingredients	-11
02D1	Breakfast cereal, muesli	Breakfast cereal, mixed grain, with fruit and/or nuts, including muesli	Toasted	-11

Food group ID	Food group name	Food description	Preparation method	Weight change factor
02D2	Breakfast cereals, cooked			
02D2	Breakfast cereal, cooked	Breakfast cereal, hot porridge type, made from oats, including plain, flavoured and added fruit varieties, prepared	Simmered, Boiled	-16
02D2	Breakfast cereal, cooked	Rice porridge (congee), prepared	Simmered	-16
02D2	Breakfast cereal, cooked	Breakfast cereal, hot porridge type, made from cooked grains other than rice, prepared	Simmered	-13
02E1	Cakes, cake mixes, slices, muffins, cake-type desserts			
02E1	Cakes	Cakes with fruit	Baked, from raw ingredients	-6
02E1	Cakes	Cakes with no fruit	Baked, from raw ingredients	-11
02E1	Cake mixes	Cake mixes	Baked, from cake mix	-13
02E1	Cake-type muffins and mixes	Cake-type muffins and mixes	Baked, from raw ingredients	-9
02E1	Cake-type desserts	Cake-type desserts including semolina or rice pudding, prepared	Boiled, Stewed, Pressure cooker stewed, Microwave stewed	-7
02E1	Cake-type desserts	Cake-type desserts, including puddings	Steamed, from raw ingredients	1
02E1	Slices	Cake type slices and biscuits	Baked, from raw ingredients	-8
02E1	Other desserts containing cereal	Sweet rice pudding, zarda, traditional South Asian, Pakistani food	Boiled, Stewed in milk	-1
02E2	Buns and scones			
02E2	Sweet breads, buns and scrolls	Buns and yeast-based products	Baked, from raw ingredients	-14
02E2	Scones and rock cakes	Scones	Baked, from raw ingredients	-20
02E3	Batter-based products			
02E3	Doughnuts	Doughnuts, yeast type	Deep-fried, from raw ingredients	6
02E3	Doughnuts	Doughnuts, cake type	Baked, from raw ingredients	-4
02E3	Pancakes and crepes	Pancakes and crepes, sweet, savoury or stuffed	Fried	-11
02E3	Drop scones and pikelets	Drop scones and pikelets	Grilled, from raw ingredients	-16
02E3	Batters and batter puddings	Yorkshire Pudding	Baked, from raw ingredients	-16
02E3	Waffles	Waffles, from raw ingredients	Contact fried	-22
02E4	Pastries, pies and tarts			
02E4	Pastries	Pastry, croissant, puff pastry with butter	Baked, from raw ingredients	-20
02E4	Pastries	Vol au vent case	Baked, from raw ingredients	-20
02E5	Sweet pastry products			
02E5	Sweet pastry products, single crust	Tarts and flans	Baked, from raw ingredients	-7
02E5	Sweet pastry products, double crust	Pies, slices and danishes	Baked, from raw ingredients	-7
02E6	Savoury pastry products			
02E6	Savoury pastry products	Chiko-type rolls, dim sims and spring rolls	Boiled or steamed, from raw	30
02E6	Savoury pastry products	Chiko-type rolls, dim sims and spring rolls	Deep-fried	-14

Food group ID	Food group name	Food description	Preparation method	Weight change factor
02E6	Savoury pastry products	Chiko-type rolls, dim sims and spring rolls	Pan-fried	-18
02E6	Savoury pastry products, single crust	Quiches, tarts and flans	Baked, from raw ingredients	-14
02E6	Savoury pastry products, doubled crust	Pies, rolls, samosas and envelopes	Baked, from raw ingredients, Fried	-15
02F	Mixed dishes where cereal is the major ingredient			
02F1	Pizza	Bread, pizza base, thick	Baked, from raw ingredients	-16
02F1	Pizza	Bread, pizza base, thin	Baked, from raw ingredients	-15
02F2	Sandwiches and filled rolls	Sandwiches	Grilled	-18
02F4	Savoury dumplings	Savoury dumplings	Steamed	39
02F4	Savoury pasta/noodle and sauce dishes	Ravioli	Boiled	18
02F4	Savoury pasta/noodle and sauce dishes	Lasagne, savoury pasta and sauce dishes, noodle stew with beef, etc	Baked, Stewed	-19
02F4	Savoury pasta/noodle and sauce dishes	Dehydrated pasta or noodle mixed dish with sauce, meat	Reconstituted according to manufacturer's instructions, baked	586
02F4	Savoury rice-based dishes	Risotto, made from pre-cooked rice	Stewed	-34
03	EGGS			
03A1	Eggs, chicken	Eggs, chicken	Fried, Boiled, Scrambled	-12
03B1	Egg dishes, chicken, savoury	Eggs, chicken, benedict	Scrambled	-2
03B1	Egg dishes, chicken, savoury	Eggs, chicken, omelette	Fried, Baked	-8
03B1	Egg dishes, chicken, savoury	Eggs, chicken, soufflé	Fried, Baked	-8
03B1	Egg dishes, chicken, savoury	Quiche	Baked, from raw ingredients	-21
05	FISH AND FISH PRODUCTS			
05A1	Fin fish			
05A1	Fin fish, fresh or frozen	Whole fish	Microwaved	-21
05A1	Fin fish, fresh or frozen	Whole fish	Earth oven cooking	-27
05A1	Fin fish, fresh or frozen	Whole fish or fillets, floured or non-floured	Fried	-30
05A1	Fin fish, fresh or frozen	Whole, very small fish, floured	Shallow fried	-38
05A1	Fin fish, fresh or frozen	Whole fish or fillets	Baked, Grilled, Barbecued	-24
05A1	Fin fish, fresh or frozen	Fillets	Steamed, Boiled, Poached	-16
05A1	Fin fish, battered or crumbed	Fish finger	Deep Fried, Pan-fried, Baked	-12
05A1	Fin fish, breaded	Whole fish or fillets, breaded	Fried	-19
05A1	Fin fish, breaded	Whole, very small fish, breaded	Fried	-27
05A1	Smoked fish	Smoked fish	Baked, Grilled	-25
05A1	Smoked fish	Smoked fish	Microwaved, Poached, Steamed	-17

Food group ID	Food group name	Food description	Preparation method	Weight change factor
05C1	Crustacea and molluscs			
05C1	Crustacea, fresh or frozen	Prawn, king, garlic, homemade	Poached	-20
05C1	Molluscs	Squid or calamari	Poached	-20
05C1	Crustacea and molluscs, battered or crumbed	Crustacea and molluscs, battered or crumbed	Pan-fried, from raw ingredients	-16
5D1/05D2	Processed fish, crustacea and molluscs			
05D1	Packed Fin Fish	Packed fin fish, drained	Microwaved, Poached, Steamed	-17
05D1	Packed Fin Fish	Packed fin fish, drained	Baked	-24
05D1	Packed Fin Fish	Packed fin fish, drained	Grilled	-26
05D1/05D2	Mixed dishes where fish or seafood is the major ingredient			
05D1	Mixed dishes with fish as the major ingredient	Mixed dishes with fish as the major ingredient, with cereal products, from raw ingredients	Stewed	-16
05D1	Mixed dishes with fish as the major ingredient	Cod fillet, cooked, with sauce	Stewed	-33
05D2	Mixed dishes with crustacea, molluscs or other seafood products as the major ingredient	Includes seafood stir-fries and curries with sauce	Fried, Baked	-17
05D2	Mixed dishes with crustacea, molluscs or other seafood products as the major ingredient	Mixed dishes with crustacea, molluscs or other seafood products as the major ingredient, with cereal products, from raw ingredients	Baked	-18
06	FRUIT			
06C1	Stone fruit			
06C1	Stone fruit	Apricots	Stewed	135
06C1	Stone fruit	Peaches, frozen, unsweetened	Stewed	87
06C1	Stone fruit	Plums	Stewed	151
06C1	Stone fruit	Stone fruit, unspecified	Stewed	122
06D1	Other fruit			
06D1	Apples	Apples	Microwaved	-6
06D1	Apples	Apples, sweetened/unsweetened	Baked	-7
06D1	Apples	Apples, sweetened/unsweetened/intense sweetened	Stewed	89
06D1	Apples	Apple puree, apple jelly	Stewed	-11
06D1	Bananas	Bananas	Baked	-20
06D1	Pears	Pears	Stewed	115
06C1/06D1	Dried or preserved fruit			
06D1	Dried fruit and mixes	Apples, dried, soaked and prepared as per instructions	Boiled	300
06D1	Dried fruit and mixes	Figs, dried	Stewed	49
06D1	Dried fruit and mixes	Pears, dried	Stewed	113

Food group ID	Food group name	Food description	Preparation method	Weight change factor
06E1	Mixed dishes where fruit is the major ingredient			
06E1	Mixed dishes where fruit is the major ingredient	Mixed dishes where fruit is the major ingredient	Baked, from raw ingredients	-7
08	MEAT, POULTRY AND GAME			
08	Unspecified muscle meat	Unspecified muscle meat	Dry cooked and wet cooked, several methods	-30
08A1/08A4	Beef and veal			
08A1	Beef	Beef	Boiled	-39
08A1	Beef	Beef	Grilled	-30
08A1	Beef	Beef	Roasted	-37
08A1	Beef	Beef, rare	Dry cooked, several methods	-22
08A1	Beef	Beef, medium	Dry cooked, several methods	-22
08A1	Beef	Beef, well done and/or totally trimmed	Stewed	-37
08A1	Beef	Beef, unspecified level of doneness	Stewed	-40
08A1	Beef	Beef, pre-cooked slice	Heated	-10
08A1	Beef	Steak, rare	Pan-fried	-22
08A1	Beef	Steak, medium	Pan-fried	-29
08A1	Beef	Steak, trimmed and/or well done	Dry cooked, several methods	-37
08A1	Beef	Mince, patty	Pan-fried, Baked	-25
08A1	Beef	Mince, patty	Microwaved, Grilled, Boiled	-30
08A1	Beef	Roast, rare	Roasted	-26
08A1	Beef	Roast, medium	Roasted	-31
08A1	Beef	Roast, well done	Roasted	-43
08A1	Beef	Strips, stir fry	Stir fried	-45
08A4	Veal	Veal	Dry cooked, several methods	-30
08A4	Veal	Fillet, trimmed	Pan-fried	-41
08A4	Veal	Escalope, chop	Grilled, Pan-fried	-26
08A2	Lamb and mutton			
08A2	Lamb	Lamb	Boiled	-43
08A2	Lamb	Lamb	Dry cooked and wet cooked, several methods	-30
08A2	Lamb	Lamb	Grilled	-29
08A2	Lamb	Lamb	Stewed	-32
08A2	Lamb	Lamb or mutton	Fried	-33
08A2	Lamb	Lamb or mutton	Microwaved	-28
08A2	Lamb	Lamb or mutton	Roasted, Baked	-29
08A3	Pork			
08A3	Pork	Pork	Stewed, Boiled	-38
08A3	Pork	Steak	Pan-fried	-17
08A3	Pork	Mince, patty	Pan-fried, Grilled, Baked	-25
08A3	Pork	Roast, chop, stir fry strips, diced	Roasted, Baked, Pan-fried, Stir fried, Barbecued	-29
08B1	Game and other carcase meats			
08B1	Goat	Goat	Microwaved	-28
08B1	Goat	Goat	Roasted, Baked	-29
08B1	Game and other carcase meats	Rabbit, whole	Roasted	-12
08C1/08C2	Poultry and other feathered game			
08C1	Chicken	Chicken	Grilled	-27

Food group ID	Food group name	Food description	Preparation method	Weight change factor
08C1	Chicken	Chicken	Microwaved	-22
08C1	Chicken	Chicken	Pan-fried, deep-fried	-31
08C1	Chicken	Chicken	Roasted, Baked	-33
08C1	Chicken	Chicken	Stewed, Steam baked	-25
08C1	Other poultry	Turkey breast or escalope	Deep-fried	-35
08C1	Other poultry	Turkey breast or escalope	Pan-fried	-24
08C1	Other poultry	Turkey, restructured steak	Grilled, Baked	-21
08C1	Other poultry	Turkey, whole, leg	Baked, Roasted	-43
08C2	Feathered game	Ostrich, fillet, sirloin or leg	Pan-fried, Baked	-37
08D1	Offal and offal products			
08D1	Heart	Beef	Stewed, Cooked in sauce	-34
08D1	Kidney	Pork	Pan-fried	-30
08D1	Kidney	Pork	Stewed, Cooked in sauce	-49
08D1	Liver	Beef	Stewed, Cooked in sauce	-23
08D1	Liver	Beef, pork or chicken	Pan-fried	-18
08D1	Tongue	Veal	Boiled	-20
08E2	Sausages, frankfurts and saveloys			
08E2	Sausage	Sausage	Boiled	-6
08E2	Sausage	Cooked and canned	Heated by boiling	3
08E2	Sausage	German sausage, Obertlander or Rote style	Pan-fried	-6
08E2	Sausage	German sausage, Rheinische style	Pan-fried	-15
08E2	Sausage	Sausage	Grilled, Pan-fried	-23
08E2	Frankfurts and saveloys	Frankfurts and saveloys	Boiled	-3
08E3	Processed meat			
08E3	Bacon	Bacon	Baked	-66
08E3	Bacon	Bacon	Grilled	-32
08E3	Bacon	Bacon	Microwaved	-36
08E3	Bacon	Bacon	Pan-fried	-40
08E3	Bacon	Bacon, mild cure	Boiled	-20
08E3	Processed delicatessen meat, red	Beef	Smoked, Baked	-34
08E3	Processed delicatessen meat, white	Pork	Smoked, Baked	-34
08E3	Processed delicatessen meat, white	Turkey	Smoked, Baked	-27
08E3	Processed delicatessen meat, white	Meatloaf, from raw ingredients	Baked	-23
08F1	Mixed dishes where beef, lamb and pork is the major ingredient			
08F1	Beef or veal stew, casserole or stir fry, with cereal products	Beef or veal, with cereal products, from raw ingredients	Stewed, Simmered, Stir fried	-14
08F1	Beef or veal stew, casserole or stir fry, with gravy or sauce only	General value for dishes including stews, casseroles & dishes like moussaka or goulash	Stewed, Baked	-41

Food group ID	Food group name	Food description	Preparation method	Weight change factor
08F1	Beef or veal, crumbed, battered, meatloaf or patty type with cereal	Breaded or battered escalope, schnitzel, milanesas, burger, mince with cereal, beef based meat ball, koefte etc.	Grilled, Pan-fried, Deep-fried	-25
08F1	Beef or veal, crumbed, battered, meatloaf or patty type, with vegetable	Beef or veal, crumbed, battered, meatloaf or patty type with vegetable, from raw ingredients	Pan-fried	-20
08F1	Beef or veal, crumbed, battered, meatloaf or patty type, with cereal and vegetable	Beef or veal, crumbed, battered, meatloaf or patty type with cereal and vegetable, from raw ingredients	Pan-fried, Grilled, Baked, Microwaved	-16
08F1	Lamb stew, casserole or stir fry, with cereal products	Lamb, with cereal products, from raw ingredients	Stewed	-16
08F1	Lamb stew, casserole or stir fry, with gravy or sauce only	Lamb kebab, traditional South Asian food	Grilled	-24
08F1	Lamb stew, casserole or stir fry, with gravy or sauce only	Palusami, traditional Fijian mixed food	Earth oven cooked, Steamed	-31
08F1	Lamb stew, casserole or stir fry, with gravy or sauce only	General value for dishes including Irish stew, Lancashire hotpot and pot roast	Stewed, Baked, Stir fried	-31
08F1	Lamb crumbed, battered, meatloaf or patty type with cereal	Lamb, crumbed, battered, meatloaf or patty type with cereal, from raw ingredients	Pan-fried	-25
08F1	Lamb crumbed, battered, meatloaf or patty type with vegetable	Lamb, crumbed, battered, meatloaf or patty type with vegetable, from raw ingredients	Pan-fried	-25
08F1	Lamb crumbed, battered, meatloaf or patty type with cereal and vegetable	Lamb, crumbed, battered, meatloaf or patty type with cereal and vegetable, from raw ingredients	Pan-fried	-25
08F1	Unspecified red meat, mixed dish	Meat, with cereal products, from raw ingredients	Stewed, Simmered, Stir fried	-18
08F1	Unspecified red meat, mixed dish	Meat, with gravy or sauce only, from raw ingredients	Stewed, Simmered, Stir fried	-22
08F1	Mixed dishes where pork, bacon or ham is the major ingredient			
08F1	Pork, bacon, ham stew, casserole, stir fry with cereal products	Pork, bacon, ham, with cereal products, from raw ingredients	Stewed, Simmered, Stir fried	-13
08F1	Pork, bacon, ham stew, casserole, stir fry with gravy or sauce only	Dishes including stews, stir fries, casseroles, kebabs, sweet and sour pork, goulash etc.	Stewed, Simmered, Stir fried	-35

Food group ID	Food group name	Food description	Preparation method	Weight change factor
08F1	Pork, bacon, ham, crumbed, battered, meatloaf or patty type with either cereal and/or vegetable	Chops, escalope, schnitzel (crumbed or battered), pork based meat balls with vegetable and cereal	Pan Fried, Deep-fried	-14
08F1	Pork sausage dishes	Pork sausage dishes, from raw ingredients	Stewed	-15
08F1	Unspecified meat, mixed dish	Burger, mince, meat ball, meat loaf, either unknown composition or beef & pork mixture	Pan Fried, Deep-fried	-16
08F1	Unspecified meat, mixed dish	Burger, mince, meat ball, meat loaf, either unknown composition or beef & pork mixture	Stewed, Baked, Boiled	-20
08F1	Mixed dishes where poultry or game is the major ingredient			
08F1	Poultry or game stew, casserole or stir fry, with cereal products	Poultry or game, with cereal products, from raw ingredients	Stewed, Stir fried	-16
08F1	Poultry or game stew, casserole or stir fry, with gravy or sauce only	Chicken soup pot, canned	Heated	-1
08F1	Poultry or game stew, casserole or stir fry, with gravy or sauce only	Dishes including chicken curries and traditional South Asian foods	Fried, Stir fried, Grilled, Stewed	-19
08F1	Poultry or game, crumbed, battered, meatloaf or patty type with cereal	Breaded chicken or turkey breast, leg or escalope	Pan-fried, Deep-fried	-25
08F1	Poultry or game, crumbed, battered, meatloaf or patty type with cereal	Chicken nuggets, light	Fried	-4
08F1	Poultry or game, crumbed, battered, meatloaf or patty type with cereal	Chicken nuggets, tempura	Fried	-16
09	MILK AND MILK PRODUCTS			
09D2	Dishes where milk is the major ingredient			
09D2	Custard	Custard, regular fat, from powder	Simmered	-15
09D2	Custard	Custard, regular fat, from raw ingredients	Simmered, Baked	-16
09D2	Dairy desserts	Blancmange	Boiled	-5
09D2	Dairy desserts	Milk pudding, rasmalai traditional South Asian milk dessert	Boiled, Baked	-19
09D2	Sweet sauces, milk-based	Sauce, chocolate, homemade	Simmered, from raw ingredients	-5
10	SAVOURY SAUCES, CONDIMENTS, SOUPS AND SNACK FOODS			
10A1	Gravies and savoury sauces			
10A1	Gravy, dry mix	Gravy, from dry mix	Simmered	-14

Food group ID	Food group name	Food description	Preparation method	Weight change factor
10A1	Gravy, prepared	Gravy, from raw ingredients	Simmered	-20
10A1	Pasta and simmer sauces, tomato-based	Pasta sauce, tomato-based (no meat), from raw ingredients	Simmered	-17
10A1	Pasta and simmer sauces, oil-cream- or cheese-based	Savoury sauces including white sauce, cheese sauce, bearnaise sauce, hollandaise sauce etc., homemade	Simmered	-14
10A1	Savoury sauces, dry mix	Savoury sauces, from dry mix	Simmered	-14
10A1	Savoury sauces	Savoury sauces, including tomato sauce, from raw ingredients	Simmered	-17
10A1	Savoury sauces	Savoury sauce, with onion, from meat-based stews and casseroles, from raw ingredients	Simmered	-17
10A1	Savoury sauces	Savoury pasta and sauce dishes	Casserole, from raw ingredients	-9
10A1	Simmer sauces	Simmer sauces, from raw ingredients	Simmered	-18
10C1	Soup (prepared, ready to eat)			
10C1	Soup, containing chicken	Soup, containing chicken, from raw ingredients	Simmered	-19
10C1	Soup, containing fish or seafood	Soup, containing fish or seafood, from raw ingredients	Simmered	-15
10C1	Soup, containing meat (beef, lamb or ham)	Soup, containing shoulder or brisket, from raw ingredients	Simmered, Boiled	-21
10C1	Soup, tomato-based	Soup, tomato-based, from raw ingredients	Simmered	-19
10C1	Soup, pumpkin-based	Soup, pumpkin, homemade	Simmered	-15
10C1	Soup, other vegetable-based	Soup, vegetable-based, including leek, carrots etc.	Simmered	-19
10C1	Soup (dry mix, reconstituted)			
10C1	Soup, instant, dry mix	Soup, containing chicken, instant dry mix	Reconstituted with water, simmered	781
10C1	Soup, instant, dry mix	Soup, containing fish or seafood, instant dry mix	Reconstituted with water, simmered	615
10C1	Soup, instant, dry mix	Soup, containing meat (beef, lamb or ham), instant dry mix	Reconstituted with water, boiled or simmered	514
10C1	Soup, instant, dry mix	Soup, tomato-based, instant dry mix	Reconstituted with water, simmered	781
10C1	Soup, dry mix	Soup, tomato-based, from dry mix	Simmered	-19
10C1	Soup, instant, dry mix	Soup, pumpkin-based, instant dry mix	Reconstituted with water, simmered	865
10C1	Soup, instant, dry mix	Soup, vegetable-based, instant dry mix	Reconstituted with water, simmered	1081
10C1	Soup, dry mix	Soup, vegetable-based, from dry mix	Simmered	-19
10C1	Soup, dry mix	Soup, cottage cheese with barley, dry mix	Reconstituted with water, simmered	616
10C1	Soup, canned, condensed			
10C1	Soup, ready to eat, canned or microwaveable	Soup, containing chicken, canned, ready to eat	Heated	-1

Food group ID	Food group name	Food description	Preparation method	Weight change factor
10C1	Soup, ready to eat, canned or microwaveable	Soup, containing fish or seafood, canned, ready to eat	Heated	-1
10C1	Soup, ready to eat, canned or microwaveable	Soup, containing meat (beef, lamb or ham), canned, ready to eat	Heated	-1
10C1	Soup, ready to eat, canned or microwaveable	Soup, tomato-based, canned, ready to eat	Heated	-1
10C1	Soup, ready to eat, canned or microwaveable	Soup, pumpkin-based, canned, ready to eat	Heated	-1
10C1	Soup, ready to eat, canned or microwaveable	Soup, vegetable-based, canned, ready to eat	Heated	-1
10D1	Potato snacks			
10D1	Potato crisps	Potato crisps, slices coated with oil	Baked	-36
10D1	Corn snacks			
10D1	Corn chips	Corn chips	Baked	-17
10D1	Popcorn	Corn, popped in oil	Popped	-10
11	SEEDS AND NUTS			
11A1	Seeds and seed products			
11A1	Seeds	Seeds	Dry roasted	-6
11A1	Seeds	Seeds	Fat roasted	-2
11B1	Nuts and nut products			
11B1	Nuts	Peanuts	Dry roasted	-2
11B1	Nuts	Peanuts	Fat roasted	-2
12	SUGAR PRODUCTS AND DISHES			
12A1	Sugar, honey and toppings			
12A1	Toppings, sweet	Toppings, sweet, from raw ingredients	Boiled	-14
12A1	Preserves and sweet spreads			
12A1	Jams and conserves	Jams and conserves, from raw ingredients	Boiled, Simmered	-14
12A1	Spreads, sweet, fruit flavoured	Lemon butter, homemade	Simmered, from raw ingredients	-10
12A1	Spreads, sweet, other flavours	Spreads, sweet, from raw ingredients	Boiled	-14
12A1	Dishes and products where sugar is the major ingredient			
12A1	Sugar-based desserts	Sugar-based desserts including meringue etc. from raw ingredients	Baked	-25
12A1	Frostings and icings	Frostings and icings with added fat, from raw ingredients	Boiled	-14
12C1	Chocolate and chocolate-based confectionery			
12C1	Chocolate	Chocolate, from raw ingredients	Simmered	-23
12C1	Chocolate-based confectionery	Chocolate-based confectionery, from raw ingredients	Simmered	-23
12C1	Carob and carob- or yoghurt-based confectionery	Carob and carob- or yoghurt-based confectionery, from raw ingredients	Simmered	-23

Food group ID	Food group name	Food description	Preparation method	Weight change factor
12C1	Other confectionery			
12C1	Lollies and other confectionery	Lollies and other confectionery, from raw ingredients	Boiled	-19
13	VEGETABLES			
13A1	Potatoes			
13A1	Potatoes	Potatoes, with or without peel	Boiled, Steamed	-2
13A1	Potatoes	Potatoes, mashed	Boiled then mashed	-2
13A1	Potato dishes	Potato stew prepared from dry mix	Prepared as per manufacturer's instructions, heated	684
13A1	Potato dishes	Potato gnocchi, potato dumpling etc.	Boiled	7
13A1	Potato dishes	Potato dishes, with potato as the major ingredient, plus sauce, from raw ingredients	Baked	-12
13A1	Potato dishes	Potato dishes, with potato as the major ingredient, plus sauce, from raw ingredients	Pan-fried	-18
13A1	Potato dishes	Potato bake, scalloped potatoes etc.	Baked	-27
13A1	Potato products	Potato products with fat, including wedges, chips, croquettes etc.	Fried, Baked	-32
13A1	Potato products	Potato products, battered or crumbed, from raw ingredients	Baked	-39
13A1	Potato products	Potatoes, chips, hot, fries (8cm x 0.6cm x 0.6cm)	Baked	-30
13A1	Potato products	Potatoes, chips, hot, fries (8cm x 0.6cm x 0.6cm)	Deep-fried	-46
13A1	Potato products	Potatoes, chips, hot, fries (8cm x 0.6cm x 0.6cm)	Pan-fried	-27
13A1	Potato products	Potatoes, chips, hot, regular (6cm x 1cm x 1cm)	Baked	-24
13A1	Potato products	Potatoes, chips, hot, regular (6cm x 1cm x 1cm)	Deep-fried	-32
13A1	Cabbage, cauliflower and similar brassica vegetables			
13A1	Cabbage, cauliflower and similar brassica vegetables	Brussels sprouts	Boiled	6
13A1	Cabbage, cauliflower and similar brassica vegetables	Brussels sprouts	Steamed	5
13A1	Cabbage, cauliflower and similar brassica vegetables	Brassica vegetables	Microwaved	-15
13A1	Cabbage, cauliflower and similar brassica vegetables	Brassica vegetables	Stewed	-2

Food group ID	Food group name	Food description	Preparation method	Weight change factor
13A1	Cabbage, cauliflower and similar brassica vegetables	Brassica vegetables other than green cabbage and brussels sprouts, including savoy cabbage, white cabbage, red cabbage, kohlrabi and sauerkraut	Boiled, Steamed	-4
13A1	Cabbage, cauliflower and similar brassica vegetables	Cabbage and bok choy	Stir fried	-30
13A1	Carrot and similar root vegetables			
13A1	Carrot and similar root vegetables	Canned product	Stewed	-3
13A1	Carrot and similar root vegetables	Sweet potato	Boiled	5
13A1	Carrot and similar root vegetables	Sweet potato	Fried, Baked	-20
13A1	Carrot and similar root vegetables	Sweet potato	Steamed	-5
13A1	Carrot and similar root vegetables	Root vegetables other than sweet potato	Boiled, Baked, Stewed	-8
13A1	Carrot and similar root vegetables	Root vegetables other than sweet potato	Steamed, Microwaved	-12
13A1	Leaf and stalk vegetables			
13A1	Leaf and stalk vegetables	Leafy vegetables including spinach etc.	Boiled, Steamed, Pressure cooked, Microwaved, Stewed	-14
13A1	Leaf and stalk vegetables	Stalk vegetables including asparagus, celery, rhubarb, dill etc.	Boiled, Steamed, Pressure cooked, Microwaved, Stewed	-2
13A1	Leaf and stalk vegetables	Stalk vegetables including celery	Stir fried	-18
13A1	Tomatoes			
13A1	Tomato	Tomato	Boiled, Grilled	-20
13A1	Tomato	Tomato	Stewed	-10
13A1	Other fruiting vegetables			
13A1	Squash and zucchini	Zucchini, squash and choko	Boiled, Stewed	-20
13A1	Squash and zucchini	Zucchini, floured or battered	Fried, Shallow Fried, Stir fried	-40
13A1	Other fruiting vegetables	Eggplant	Grilled	-40
13A1	Other fruiting vegetables	Eggplant, green pepper, floured or battered	Shallow fried	-25
13A1	Other fruiting vegetables	Other fruiting vegetables including eggplant	Boiled, Microwaved, Stewed	-8
13A1	Other fruiting vegetables	Pumpkin	Baked	-15
13A1	Other fruiting vegetables	Pumpkin	Boiled	-4
13A1	Other vegetables and vegetable combinations			
13A1	Mixtures of two or more vegetables	Mixtures of two or more vegetables including cubed carrots and swedes, cut green beans, peas and corn	Boiled	-11
13A1	Mixtures of two or more vegetables	Mixture of two or more vegetables, canned	Heated	-5
13A1	Other vegetables	Cassava	Boiled	11
13A1	Other vegetables	Cassava	Earth oven cooked	-11
13A1	Other vegetables	Corn on cob	Boiled	-1
13A1	Other vegetables	Corn, kernels	Boiled, Steamed	-4

Food group ID	Food group name	Food description	Preparation method	Weight change factor
13A1	Other vegetables	Onion (cooked transparent), leek and garlic	Boiled, Baked, Pan Fried, Stewed	-13
13A1	Other vegetables	Onion (cooked brown)	Pan Fried	-44
13A1	Other vegetables	Other vegetables other than corn and mushrooms	Boiled, Steamed	-5
13A1	Other vegetables	Mushrooms, fresh, frozen or canned	Boiled, Pan-fried, Grilled	-33
13A1	Other vegetables	Mushrooms, dried, re-hydrated	Stewed, Grilled	-16
13A1	Other vegetables	Taro	Boiled	22
13A1	Other vegetables	Taro	Earth oven cooked	-17
13A2	Legumes and pulses			
13A2	Beans	Green beans and broad beans, fresh, frozen and canned	Boiled, Steamed, Microwaved, Heated	-7
13A2	Beans	Mung bean sprout, horse gram sprouts and other sprouts	Pressure cooker stewed, Microwave stewed	37
13A2	Mature legumes and pulses	Chickpea, common beans, split peas, whole lentils etc. dried	Boiled, Microwave stewed, Stewed	183
13A2	Peas and edible-podded peas	Chickpea and other sprouts	Pressure cooker stewed, Microwave stewed	16
13A2	Peas and edible-podded peas	Peas and edible-podded peas, fresh, frozen and canned	Boiled, Steamed, Microwaved, Heated	-9
13A2	Peas and edible-podded peas	Snowpeas	Stir fried	-20
13B1	Mixed dishes where vegetable is the major ingredient			
13B1	Vegetables and sauce	Frozen, ready to eat vegetarian meal	Heated on stove, Heated in microwave oven	0
13B1	Vegetables and sauce	Frozen, ready to eat vegetarian meal	Heated in oven	-7
13B1	Vegetables and sauce	Vegetables, canned, Pichelsteiner style	Heated	-1
13B1	Vegetables and sauce	Vegetable bake, casserole, chilli or curry	Baked, Stewed	-21
13B1	Vegetables and sauce only, from meat-based stews and casseroles	Vegetable stew with beef, from raw ingredients	Boiled, Pressure cooked	-13
13B1	Stuffed vegetable dishes	Stuffed vegetables and vegetable dishes, from raw ingredients	Pan-fried	-20
13B1	Stuffed vegetable dishes	Stuffed vegetables and vegetable dishes, from raw ingredients	Baked	-21
13B2	Legume and pulse products and dishes			
13B2	Dishes where mature legumes are the major ingredient	Canned products	Boiled, Pressure cooked	-1
13B2	Dishes where mature legumes are the major ingredient	Dishes including chilli con carne, bean stew, lentil stew with bacon, green peas stew etc.	Boiled, Pressure cooked, Fried, Baked, Grilled	-10
13B2	Dishes where mature legumes are the major ingredient	Dried products	As per manufacturer's instructions, boiled	350



Food group ID	Food group name	Food description	Preparation method	Weight change factor
13B2	Dishes where mature legumes are the major ingredient	Tofu	Pan-fried	-27

Appendix 6. Specific gravities of a selection of beverages and other liquid foods

If you have a liquid ingredient, the specific gravity value is used to convert the volume of this liquid ingredient to a gram weight. The NPC does this automatically by multiplying the volume (in mL) by the specific gravity of the liquid ingredient. It needs to do this to calculate a nutrition information panel correctly.

Specific gravity and the nutrition information panel

Paragraph 5(1)(b) of Standard 1.2.8 requires that the average quantity of a beverage or other liquid food in a serving must be expressed in millilitres in your nutrition information panel. A specific gravity value is required to convert the nutrient values present in a 100 g portion of a liquid food to 100 mL, for inclusion on your nutrition information panel.

About specific gravities

The specific gravity can vary for a number of reasons. Generally, the specific gravity increases with the amount of solids (e.g. sugars) and decreases with the amount of alcohol and fat present in a liquid, or air present in a whipped ingredient. It can also vary with the temperature of the ingredient. It may be influenced by the packing of the food in the measuring vessel.

About the specific gravities listed here

The specific gravities provided here have been derived from several recognised literature sources^{29, 30} and are exactly the same as those provided in the NPC. These values are indicative only, and are provided solely as a guide. It is better to calculate your own specific gravity value for your recipe using the final weight of your cooked product and its corresponding volume and the following equation:

$$\text{Specific gravity (g/mL)} = \frac{\text{weight of 100mL of food}}{100}$$

Food name	Specific gravity (g/mL)
Alcoholic soda	1.04
Almond milk, with linseed oil & water	0.99
Beer	1.01
Beer, carbohydrate-modified	1
Beverage, alcoholic, bitters	0.94
Beverage, from flavoured beverage base, with water	1.02
Beverage, sports supplement, chocolate flavour, purchased ready to drink	1.06
Brandy	0.96
Buttermilk, cultured	1.04
Cereal beverage (coffee substitute), from powder, without milk	1.01
Cider, apple	1.01
Cider, white (greater than 6% v/v alcohol)	1.02
Coconut, cream	1.01
Coconut, milk	1.01
Coconut, water or juice	1.01
Coffee & chicory essence, concentrate	1.28

Food name	Specific gravity (g/mL)
Coffee, from ground coffee beans	1.01
Coffee, from ground coffee beans, Turkish style, without milk	1.07
Coffee, from instant coffee powder, without milk	1
Cordial base, various	1.22
Cordial base, intense sweetened	1.05
Cream, imitation or mock (non-dairy)	1.01
Cream, regular, thickened or rich	1.01
Cream, sour	1.01
Cream, sour, light or extra light	1.02
Cream, whipped	0.51
Cream, whipped, aerosol	0.25
Dressing, caesar	1.05
Dressing, coleslaw, (fat less than 10%), intense sweetened	1.07
Dressing, coleslaw, reduced fat	1.07
Dressing, coleslaw, regular	1.06
Dressing, French or Italian, no added fat	1.11
Dressing, French or Italian, reduced fat	1.11
Dressing, French or Italian, regular	1.03
Dressing, thousand island, reduced fat	1.03
Dressing, thousand island, regular	1.06
Drink, fruit flavoured, from powdered drink base	1.05
Drink, probiotic, contains milk solids & sugar	1.06
Drink, probiotic, contains milk solids & sugar, reduced sugar, light style	1.04
Fruit drink concentrate, lemon or orange	1.22
Fruit drink, blackcurrant or cranberry juice, intense sweetened	1
Fruit drink, from dry base, recommended dilution	1.05
Fruit drinks, various, recommended dilution	1.04
Fruit, fruit salad or pineapple, canned in heavy syrup, syrup only	1.15
Fruit, fruit salad or pineapple, canned in pineapple juice, juice only	1.05
Fruit, various, canned in intense sweetened liquid, liquid only	1
Fruit, various, canned in light syrup, syrup only	1.1
Fruit, various, canned in pear juice, juice only	1.05
Fruit, various, canned in regular syrup, syrup only	1.13
Gelato, commercial, various flavours	1.34
Gin	0.95
Glucose, liquid or syrup	1.39
Gravy, commercial, prepared	1.01
Honey	1.43
Horseradish cream, commercial	1.06
Ice confection, tofu-based, vanilla flavour	1.04
Ice cream, reduced or low fat	0.55
Ice cream, regular fat	0.56
Ice cream, rich (fat greater than 12.5%)	0.63
Intense sweetener, liquid	1
Juice concentrate, apple or orange	1.2
Juice, apple or grape, sparkling	1.05

Food name	Specific gravity (g/mL)
Juice, apple, super concentrate, used in cooking	1.22
Juice, apple, thickened	1.04
Juice, from concentrate, diluted 1:1	1.11
Juice, from concentrate, diluted weaker than 1:3	1.17
Juice, fruit or vegetable, various	1.05
Liqueur, advocaat	1.09
Liqueur, clear	1.17
Liqueur, cream-based	1.06
Malt extract	1.62
Mayonnaise, low fat	1.08
Mayonnaise, reduced fat	1.05
Mayonnaise, regular fat	0.99
Milk, canned, evaporated, regular or reduced fat	1.07
Milk, canned, evaporated, skim (fat less than 0.5%)	1.08
Milk, canned, sweetened, condensed	1.29
Milk, cow, fluid, reduced fat or skim	1.04
Milk, cow, sheep or goat, fluid, extra creamy or regular fat	1.03
Milk, oat, fluid	1.03
Milk, rice, fluid, calcium & protein enriched	1.06
Mustard, cream-style, condiment	1.17
Mustard, made with dry powder, with added water	1.17
Oil, blend of vegetable oils	0.92
Oil, olive, pure	0.91
Oil, peanut	0.91
Oil, various (not including olive or peanut oil)	0.92
Ouzo	0.96
Paste, curry, Indian style, commercial	1.4
Paste, shrimp, Asian style	1.22
Port (fortified wine)	1.04
Rum	0.96
Saki, rice wine	0.98
Sauce, apple	1.08
Sauce, Asian, for stir fry	1.01
Sauce, barbecue	1.13
Sauce, black bean, Asian	1.29
Sauce, chilli, Asian	1.04
Sauce, cranberry	1.17
Sauce, curry, Asian	1.08
Sauce, fish, Asian	1.22
Sauce, hoi sin, Asian	1.08
Sauce, horseradish	1.17
Sauce, mint	1.05
Sauce, mustard	1.17
Sauce, orange, savoury	1.07
Sauce, oyster, Asian	1.22
Sauce, pasta, cream-based	1.06

Food name	Specific gravity (g/mL)
Sauce, pasta, tomato-based, heated	1.1
Sauce, plum, Asian	1.29
Sauce, satay, Asian	1.07
Sauce, seafood, cocktail	1.25
Sauce, soy	1.05
Sauce, sweet & sour, Asian	1.12
Sauce, tabasco	1.04
Sauce, taco style	1.04
Sauce, tomato	1.04
Sauce, wasabi (horseradish)	1.17
Sauce, worcestershire	1.22
Sherry (fortified wine), dry (sugars content approximately 1%)	0.99
Sherry (fortified wine), sweet (sugars content approximately 11%)	1.03
Soft drink, energy drink	1.07
Soft drink, tonic water	1.03
Soft drink, various, intense sweetened	1
Soft drink, various, sugar sweetened	1.04
Soups, various, condensed, canned	1.09
Soy beverage	1.04
Soy yoghurt	1.04
Sports drink, all flavours	1.04
Stock, beef, chicken, fish or vegetable, liquid	1.02
Syrup, corn, light or dark	1.39
Syrup, golden	1.34
Syrup, grenadine	1.2
Syrup, malted rice	1.39
Syrup, maple, pure	1.33
Syrup, molasses	1.39
Syrup, pancake, maple-flavoured	1.35
Syrup, sugar & water (sugars content approximately 46%)	1.2
Syrup, treacle	1.33
Tea, without milk	1
Tomato paste	1.11
Toppings, various	1.44
Vanilla extract	0.87
Vinegar	1.01
Vodka	0.96
Water	1
Water, carbonated or soda	1
Water, mineral, flavoured, intense sweetened	1
Water, mineral, flavoured, sweetened	1.04
Water, mineral, natural, unflavoured	1
Water, non-sparkling, added sugar & flavour	1.04
Water, sports type	1
Whisky	0.95
Wine & fruit juice blend (wine cooler), all flavours	1.03

Food name	Specific gravity (g/mL)
Wine, fortified, dry	1.01
Wine, green ginger	1.05
Wine, red	0.99
Wine, red or white, reduced alcohol	1
Wine, red or white, sparkling	1
Wine, red, cooked	1.01
Wine, rose	1
Wine, white, cooked	1
Wine, white, dry (sugars content less than 1%)	0.99
Wine, white, medium dry (sugars content approximately 1%)	1
Wine, white, medium sweet (sugars content approximately 2.5%)	1.01
Wine, white, sparkling, de-alcoholised	0.97
Wine, white, sweet dessert	1.05
Yoghurt, frozen, soft serve	1.34
Yoghurt, various	1.04

Appendix 7. Calculating edible portions

Nutrient values presented in the NPC are per 100 g **edible portion** (EP). The EP refers to the component of the food that can be eaten once inedible components have been removed. Such inedible components may include the bones, connective tissue and gristle of meat and poultry, the head, scales, skin and guts of fish, the shells of shellfish, eggs and nuts, and the peel, seeds, stems, cores and outer leaves of fruit and vegetables. It also refers to the component of the food that would normally be eaten (e.g. in a jar of pickled peppers packed in brine, only the pickled peppers would be eaten).

When producing a nutrition information panel, make sure that the quantity of each ingredient in your product is specified in terms of its EP. You only need to calculate the percentage EP (%EP) of a particular food once, and then you can then use this same factor to get the edible component of any nominated quantity of that food 'as purchased' (i.e. including both edible and inedible components).

The following steps (using lamb chops as an example) show you how.

Step 1: Make a note of the weight of the lamb chops before and after trimming any inedible components including bone and gristle.

For example, assume that you start with 200 g of lamb chops. After trimming the edible component weighs only 158 g.

The %EP is calculated as follows:

$$\frac{\text{Weight of edible component}}{\text{Weight of inedible component}} \times 100 = \text{EP}$$

$$\frac{158}{200} \times 100 = \text{EP}$$

$$79\% = \text{EP}$$

Step 2: Having calculated the %EP, it is now possible to calculate the edible component of any nominated quantity of the same food 'as purchased', using the following equation:

$$\%EP \times \text{quantity of 'as purchased' food} = \text{Edible component}$$

For example, assume that you are now interested in calculating the edible portion of 500 g of lamb chops 'as purchased':

$$(79/100) \times 500 \text{ g} = 395 \text{ g}$$

The edible portion (raw) of 500 g of the lamb chops 'as purchased' will be 395 g.

If you need to estimate the **cooked** edible component from a known weight of the raw 'as purchased' food, you need to combine the percentage weight loss (on cooking) with the edible component as a proportion of the cooked food, as follows:

Step 3: Quantity of raw 'as purchased' food x $\frac{(\%EP \text{ of cooked food}) \times (100 - \% \text{ weight loss})}{100}$

= Cooked edible component as a proportion of the raw 'as purchased' food

We will again use the 500 g of raw lamb chops 'as purchased' as an example. We will assume a weight loss factor of -31% and use an EP of the cooked lamb chops of 79%:

$$500 \quad \times \quad \frac{(79/100) \times (100 - 31)}{100} \quad = \quad 273 \text{ g cooked edible component}$$

The cooked edible component of 500 g of lamb chops 'as purchased' will be 273 g.

Appendix 8. Presentation of data in the NPC

Significant figures

Clause 6(1) of Standard 1.2.8 requires that the average energy content and average, or minimum or maximum quantities of nutrients and biologically active substances must be expressed in a nutrition information panel to not more than three significant figures.

A significant figure refers to the digits in a number excluding the zeros after an integral number or before a decimal fraction. For example both 0.0392 and 352000 have three significant figures.

The rules for rounding to three significant figures used by the NPC are:

- If the 4th significant figure is in the range 1 to 4, the 3rd significant figure is **unchanged**, e.g. 21.22 is rounded to 21.2, or 1142 is rounded to 1140, or 105.1 is rounded to 105.
- If the 4th significant figure is in the range 6 to 9, the 3rd significant figure is rounded **up**, e.g. 21.26 is rounded up to 21.3, or 1147 is rounded up to 1150.
- If the 4th significant figure is 5, rounding occurs like this:
 - If the 3rd significant figure is an even number it remains **unchanged** (e.g. 21.25 is rounded to 21.2, or 1145 is rounded to 1140).
 - If the 3rd significant figure is an odd number, it is rounded **up** (e.g. 21.35 is rounded up to 21.4, or 1155 is rounded up to 1160).

Further information about significant figures and rounding of values containing more than three significant figures is presented in the user guide that accompanies Standard 1.2.8.

Number of decimal places

There are a number of conventions as to the number of decimal places that are used to present data in Australian food composition databases. These conventions ensure that we do not assign a level of precision to the data that is unjustified, given the nature of the data.

- For protein, fat, saturated fat, carbohydrate and sugars, values less than 100 g are reported to 1 decimal place (e.g. 99.9, 5.2, 0.3), even if that means that there are fewer than 3 significant figures reported.
- For energy and sodium, decimal places are never used, even if the energy or sodium value is only a single digit. For example, an energy value of 98.1 kJ is

reported as 98 kJ, a sodium value of 17.5 mg is reported as 18 mg, a sodium value of 8.25 mg is reported as 8 mg.