

# Nutrition Information Panel data — user manual

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## Acknowledgment

The information contained in this database reflects the input of many individuals and organisations, including analytical chemists, nutrition scientists and software developers from the Crown Research Institutes (formerly DSIR and MAF), analysts from other government agencies and universities, and funding agencies including the NZ Food Safety Authority and the Ministry of Health.

# 1 Introduction

This manual is designed for use with the New Zealand Food Composition Data for Nutrition Information Panels website. Nutrition Information Panels (NIP) are required by law (the [Australian New Zealand Food Standards Code, volume 2, standard 1.2.8](#) ) on the packaging of foods for sale in New Zealand and Australia. Panels include the energy (kilojoule and/or calorie), protein, fat (total fat and saturated fat), carbohydrate (total carbohydrate and sugars) and sodium content of the food. In addition, other relevant nutrients may be listed (e.g. fibre, potassium, calcium, iron). The nutrients are displayed in a standard format, providing amount per serve and per 100 g (or 100 ml if liquid) of the food.

This website is exclusively intended to be used to provide information that can be used to produce an NIP and nutrient calculation for your food products. The database contains information on 2470 foods and provides an assessment of seven core nutrients plus fibre values on each of them. You can use this information in a number of ways.

You can use the nutrient information by finding an exact match for your products, e.g. nutrient information for a cake or for chocolate chip cookies.

OR

You can manually calculate the nutrient composition of your products using the nutrient information for individual ingredients given on this website. In order to calculate an NIP for your products you need:

- a list of ingredients in the product,
- the amount of ingredients (edible portion),
- \*the weight of a product before processing (boiling or baking or steaming),
- \*the weight of the product after processing.

\*Information on weight is required to account for moisture gains/losses during cooking

This manual provides information on:

1. the website,
2. food names and properties,
3. nutrient data,
4. common standard measures and density data,
5. source codes,
6. nutrient codes.

If you find the recipe calculation process too complex and wish to contract it out to experts in this area, you can contact private consultants or us. For additional information contact:

**Dr Lucy Lesperance –Research leader NZFCD Nutrition Scientist**

Tel: +64 6 355 6149

Email: [foodcomp@crop.cri.nz](mailto:foodcomp@crop.cri.nz)

## 1.1 How do NIPs differ from other nutrient data products?

The energy values for foods in this NIP data user manual are calculated using the energy factors outlined in [standard 1.2.8 of the Australian New Zealand Food Standards code, volume 2](#) . These energy factors are different from the ones used in existing New Zealand Food Composition Database products. The NIP energy values include the energy from fibre as well. So the energy values in the NIP data files are quite different from the existing FOODfiles, concise tables, FoodWorks, and Serve-NZ.

The information given on this website cannot be downloaded, but you can save separate data pages when you want to produce an NIP.

## 2 NZ Food Composition Data for Nutrition Information Panels website

This website allows you to search for nutrient information on specific foods. Search the database using a keyword (to match part of the name of a food), e.g. egg for egg, chicken, boiled or a specific food identifier, e.g. L18 for apple, combined cultivars. The results are displayed in the "Search Results" page. This page contains the core nutrient information for a food. You can find further information about a food on the "Additional Information" page. To reach it click on the relevant food name in the "Search Results" page. The "Additional Information" includes the Food Description, Common Standard Measures, Density and Ingredients for the selected food.

For more information about using the website, see "Using the Website" on the website.

## 3 Food components

### 3.1 Database components

Seven core components: energy (kJ), protein, fat, saturated fat, carbohydrates, total sugars and sodium are required in mandatory NIPs on most packaged foods as per the [Australia New Zealand Food Standards Code \(FSC\), volume 2, standard 1.2.8](#) . The seven components are included in this website along with dietary fibre (using AOAC), which is required to calculate total energy in a food.

A summary of the components, their tagnames, units of measure and a brief description, including method of analysis, is given in Table 1.

Table 1: Nutrition Information Panel components.

Component	INFOODS Tagname	Units/ 100 g e.p.	Description/synonym/method
Energy	ENERC	kJ	Energy, calculated (see Table 4 for factors)
Protein	PROCNT	g	Protein, calculated from total nitrogen, except where noted in Appendix I; FAO/WHO conversion factors
Total fat	FAT	g	Total fat/total lipid; several methods depending on food matrix
SFA	FASAT	g	Sum of individual saturated fatty acids; GC of methyl esters
Carbohydrate, available	CHOAVL	g	Available carbohydrate; sum of mono-, di- and oligosaccharides, starch and glycogen; or enzymic digestion and colorimetry
Total available sugars	SUGAR	g	Sum of individual mono- and disaccharides; GC or HPLC
Sodium	NA	mg	Sodium; wet ashing, ICAPS-AES
Dietary fibre	FIBTG	g	Fibre, total dietary, determined gravimetrically by the AOAC total dietary fibre method

### 3.2 Food identifiers

Each food is uniquely identified by an alphanumeric food identifier: one letter denoting a major food category (see Table 2) followed by one to three digits. The food identifier links all other information about a food item. The food identifier is the record key that links to food names and properties, nutrient data, common standard measures and density data.

Table 2: Food categories.

Category	Food group
A	Bakery products
B	Beverages, alcoholic
C	Beverages, non-alcoholic
D	Breakfast cereals
E	Cereals and pseudo-cereals
F	Dairy
G	Eggs
H	Fast foods
J	Fats and oils
K	Finfish
L	Fruit
M	Meat
N	Meat products
O	Supplements and therapeutic food
P	Miscellaneous
Q	Nuts and seeds
R	Recipes
S	Sauces and condiments
T	Shellfish
U	Snack foods
V	Soups
W	Sugar, confectionery and sweet spreads
X	Vegetables

### 3.3 Component tagnames

Each component is uniquely identified by a food component tagname. Tagnames are compiled by an expert committee under the auspices of INFOODS, and represent unique food components. The tagname incorporates the component entity, the method of analysis where this is specific to the result (e.g. dietary fibre methodologies), and the default unit of measure. The tagnames used in this website are described in Table 1, e.g. CHOAVL stands for available carbohydrate.

### 3.4 Nutrient data

The "Search Results" screen contains a set of eight nutrients (e.g. energy, protein) for all the foods the database can match to your search.

Table 3: Results of a search for G3, the food identifier for egg, chicken, boiled.

Food ID	Name	ENERC		PROCNT		SUGAR		NA	
		kJ	g	g	g	g	mg	g	
G3	<a href="#">Egg,chicken,boiled</a>	637	13.0	11.1	3.08	0.3	0.3	165	0.0

The items in the example above have the following meaning:

G3 is the FOOD IDENTIFIER for egg, chicken, boiled,

ENERC kJ represents energy in kilojoules and 153 is the energy value in this food,

PROCNT is the TAGNAME for protein, along with the units of measure (e.g. kJ, g, mg),

13.03 is the MEAN VALUE of protein in this food.

See Appendix 1 for a detailed description of nutrient data.

### 3.5 Zero values

A zero value indicates a value is either below the limit of detection or cannot be detected. The numerical limit for detection levels is available on request.

## 4 Energy contribution

Energy is expressed in units of kilojoules (kJ). All values are calculated from the energy-producing components in a food using conversion factors listed in Table 5, as prescribed in the [Australia New Zealand Food Standards code, volume 2, standard 1.2.8](#).

Table 4: Energy conversion factors.

Food components	Energy factor (kJ/g)
Alcohol	29
Carbohydrate (excluding unavailable carbohydrate)	17
Unavailable carbohydrate (including dietary fibre)	8
Fat	37
Protein	17
Erythritol	1
Glycerol	18
Isomalt	11
Lactitol	11
Maltitol	16
Mannitol	9
Organic acids	13
Polydextrose	5
Sorbitol*	14
Xylitol	14

\*An average of a calculated range determined with or without ingestion of other foods.

Average energy content may also be expressed as calories. The conversion factor is one calorie for each 4.18 kilojoules.

For all entries, the protein value is based on the total nitrogen multiplied by a factor related to the amino acid composition of the food. Conversion factors for mixed foods containing more than one protein source were derived using the proportion of each source with its appropriate conversion factor.

Available carbohydrate is the sum of the individual mono- and disaccharides and starch, and is expressed as the weight of the carbohydrate.

The dietary fibre data represent the total dietary fibre in the foods, as determined by the prescribed methods of analysis for the determination of total dietary fibre.

Food component	Method of analysis
Total dietary fibre	Section 985.29 of the AOAC, 17 <sup>th</sup> edition (2000) or Section 991.43 of the AOAC, 17 <sup>th</sup> edition (2000).

## 5 Food description

The “Additional Information” page contains the food description, i.e. all the names and descriptions of a selected food. To view “Additional Information” for a food item, click on the food name in the “Search Results” page.

Each food is uniquely described in the following way:

Food ID	K20
Short Name	Eel,Short-finned,raw,migratory
Generic	EEL
Kind	SHORT-FINNED
Strain	
Part	flesh and skin
Process	raw
Grade	
Maturity	migratory
Message	
Source data	c,bur,zw,zw,zr,zr,zr,p

Some descriptions are long and complicated so a set of abbreviations has been developed (Appendix 2).

For details on food descriptions see Appendix 1.

Note: Missing facets are represented by a blank field in a table next to the facet name.

## 6 Source codes

Some values in these tables have been presumed or derived from other data sources rather than analysed. This process has been necessary to obtain a complete set of eight nutrients per food. The source data field indicates the country of origin, and/or the quality of the value (Table 5).

Table 5: Source codes.

Code*	Meaning
z	New Zealand analytical data
a	Australian Food Composition Data
b	British Food Composition Database
u	USDA Food Composition Data
spc	South Pacific Island Food Composition Data
c	Computer calculated after data entry
d	Derived from any of several published sources
g	Guess
p	Presumed; used only with value of zero
r	Value derived from a related food
w	Value derived from sample with unknown dry matter/water; may not be directly related to water value presented
x	No confidence in selected value
z	New Zealand analytical data
o	Overseas data

\* Combinations of source codes frequently occur, most commonly in records that represent recipe calculations.

In the "Additional Information" page, the "Source data" field contains specific source information for each component in the selected food. The information is presented as a list of codes separated by commas. The commas delineate the source information for each component. The information is always presented in the following order – energy,protein,fat,saturated fatty acids,carbohydrates,total sugars,sodium,fibre. For recipe food items the source information for a specific component may be a composite of several source codes. The format and examples for both non-recipe and recipe food items are:

Example for non-recipe food items:

G3 Chicken, egg, boiled

Source data c,z,z,z,a,a,z,p

The items in this example mean:

Source 'c' is for kilojoules

Source 'z' is for protein

Source 'z' is for fat

Source 'z' is for saturated fatty acids

Source 'a' is for carbohydrates

Source 'a' is for total sugars

Source 'z' is for sodium

Source 'p' is for fibre

Example for recipe food items:

A54 Bagels, plain

Source data c,abzc,abzc,abzcg,abzcr,abzcr,bzcgr,a

The items in this example mean:

Source 'c' is for kilojoules

Source 'abzc' is for protein

Source 'abzc' is for fat

Source 'abzcg' is for saturated fatty acids

Source 'abzcr' is for carbohydrates

Source 'abzcr' is for total sugars

Source 'bzcgr' is for sodium

Source 'a' is for fibre

# 7 Common standard measure

## 7.1 Common standard measure and density data

The common standard measure (CSM) of most foods is given and, where applicable, density data are calculated using the CSM. To view the CSM and density data, select a food item in the "Search Results" page and click on the food name. It will take you to the "Additional Information" page where the Information on CSM and density data of foods is given in the "Common Standard Measures and Density" section of the page.

The website contains the data for CSM and density for most foods. There may be up to two CSMs for any particular food. The density data are presented for most foods. The format is:

Food ID	Portion Description	Portion weight in grams	Density
F33	1 cup	258	1.03

Food ID	Portion Description	Portion weight in grams	Density
A18	1 medium slice (12.4*10.7*1.0cm)	29	0.23
A18	1 thick slice (11.1*10.4*1.3cm)	37	0.23

The second example above has the following meaning:

A18 is the food identifier for BREAD, WHITE, SLICED

A18 has two CSMs:

1 medium slice weighs 29 g

1 thick slice weighs 37 g

The weight specified in the "weight (g)" field can be used as a percent scaling factor to convert the component mean values in the NIP data on the website to component mean values per CSM. See Appendix 1 for a detailed description of CSM.

## 7.2 Units of measurement

Table 6 defines all the units of measure used to express CSMs in the website.

Table 6: Units of measurement.

Units	Meaning
-------	---------

cm	Centimetres
diam	Diameter
g	Grams
kg/l	Kilograms per litre
kJ	Kilojoules
mg	Milligrams
ml	Millilitres
c	cup (250 millilitres)
tsp	teaspoon (5 millilitres)
tbsp	tablespoon (15 millilitres)

## 8 Recipes data

Using this website you can look at the ingredients for 281 recipes. To view ingredients, select a food item in the "Search Results" page and click on the food name. It will take you to the "Additional Information" page where, if a food is made up of ingredients, you will find a list at the bottom of the page.

### 8.1 Limitation of ingredients data

For some recipes, ingredients are not specified. However, the information on these ingredients is available on request.

Some recipes in the NIP data have ingredients information, but no corresponding record IDs are supplied for the ingredients because these recipes are obtained from external sources.

## Appendix I Descriptions of nutrient data, food description and common standard measure

### Description of nutrient data

Field	Name	Field type		Max. length	Notes
1	FOOD IDENTIFIER	Alphanumeric case	Upper	4	The Food Identifier code
2	TAGNAMES	Alphanumeric	Upper case	10	The Component Identifier
3	VALUE	Mixture of: Real		7	Mean value

### Details on food description

Field	Name	Field type	Max. length	Required (R) or Optional (O) Notes
1	FOOD IDENTIFIER	Alphanumeric Upper case	4	(R) The Food Identifier code; first character alphabetic, representing food group, remaining characters sequential numbers.
2	SHORTNAME	Mixed case	32	(R) Summary of the most important of the food name facets. Use this field as the "name" of the food in printed tables and computer packages. Each shortname is unique.
3	GENERIC	Upper case	50	(R) Food descriptor facet, most general of food descriptors.
4	KIND	Upper case	50	(O) More specific descriptor.

5	STRAIN	Mixed case	50	(O) More specific descriptor; may include brand and trade names where a single product is represented by the food record.
6	PART	Mixed case	100	(O) Portion of the food represented by the data.
7	PROCESS	Mixed case	50	(O) State, condition, treatment, cooking, etc.
8	GRADE	Mixed case	50	(O) Usually defined by food standards.
9	MATURITY	Mixed case	50	(O) Age or stage of development.
10	MESSAGE	Mixed case	200	(O) Additional food information; may incl. brand and trade names where the food record represents a composite of more than one product.
11	SOURCE CODE	Mixed case	8	(R) Data sourced for recipe calculation may contain multiple source codes for recipe

#### Description of common standard measure

Field	Name	Field type	Max. length	Notes
1	FOOD IDENTIFIER	Alphanumeric Mixed case	4	The Food Identifier code
2	CSM PORTION	Alphanumeric Mixed case	40	The amount and description of the part represented
3	CSM WEIGHT	Numeric, Real > 0	5	The weight of the food part in grams
4	DENSITY	Numeric, Measured or Calculated	5	kg/l Not always present

## Appendix II Abbreviations used in the NIP data files

The NIP data files contains abbreviated details for food descriptions because of space constraints. The following key explains the terminology used in the NIP database.

Abbreviation	Meaning	Abbreviation	Meaning	Family
Add	Added	McD	McDonald's Restaurant	
App	Apple	μ	micrograms	
Art	Artificial	mcm	multiple cooking method	
Asst	Assorted	mxd	mixed	
Bkd	baked	mg	milligrams	
Bfast	breakfast	micw	microwave	
Bisc	biscuit	ml	millilitres	
Blkcur	blackcurrant	MUFA	sum of the monounsaturated fatty acids	
Boil	boiled	No.	Number	
Bpepper	bellpepper	NZ	New Zealand	
brdmkg	breadmaking	o/mango	orange mango	
caff	caffeine	pashfruit	passionfruit	
Chic	chicken	P'Hut	Pizza Hut	
Choc	chocolate	polyunsat	polyunsaturated	
Ckd	cooked	prep	prepared	
Cm	centimetres	ppkd	prepacked	
Cnd	canned	PUFA	sum of the polyunsaturated fatty acids	
coat	coat, coated	rstd	roasted	
comb	combined	s	skin	
comm.	commercial	sl	sliced	
comp	composite	sberry	strawberry	
conc	concentrated	sds	seeds	
cond	condensed	sep	separable	
crm	creamed	SFA	sum of the saturated fatty acids	
crh	crunch	S.I.	South Island	
diam	diameter	str-frd	stir-fried	
diff	different	stng	strong	
drd	dried	stw	stew, stewed	
drnd	drain, drained	subcut	subcutaneous	
drip	dripping	spmkt	supermarket	
exqu	exquisamint	syp	syrupe	
f	fat	T	trace amount	
fashd	fashioned	tmt	tomato	
fl	flesh	trad	traditional	
flvr	flavour(s), flavoured	trm	trimmed/trim	
fr	fresh	UHT	Ultra High Temp.	
frt	fruit	U. TBY	Uncle Toby	
g	gram	unckd	uncooked	
G-Circle	Golden Circle	unsl	Un sliced/unslice	
gar	garlic	unsw	unsweetened	
grn	green	U.N.I.	Upper North Island	
hmade	homemade	veg	vegetables	
inst	instant	w/	with	
jui	juice	w/o	without	
kcal	kilocalories	whtml	wheatmeal	

kg/l	kilograms per litre	whmeal	wholemeal
kJ	kilojoules	whgrn	wholegrain
l	lean	whml	wholemeal
L.N.I.	Lower North Island	wht	white
mash	mashed	ygt	yoghurt

