



**2003/04 NEW ZEALAND TOTAL DIET SURVEY**

**ANALYTICAL RESULTS – Q4**

**16 November 2004**

Prepared as part of a New Zealand Food Safety Authority  
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by

Dr R W Vannoort

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ANALYTICAL RESULTS – Q4**

**16 November 2004**

Dr F. Thomson-Carter  
Acting Food Safety Programme Manager

Dr R W Vannoort  
Project Leader

B M Thomson  
Peer Reviewer

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## GLOSSARY OF TERMS AND ABBREVIATIONS

### *Agricultural Compound*

is a generic term for any substance or mixture of substances, or biological compounds, used or intended for use in the direct management of plants or animals or to be applied to the land or water on or in which the plants or animals are managed, for the purposes of:-

- managing pests, including vertebrate pests; or
- managing, promoting or regulating plant or animal productivity and performance or reproduction; or
- fulfilling special nutritional requirements; or
- the manipulation, capture or immobilisation of animals; or
- diagnosing the condition of animals; or
- preventing or treating the condition of animals; or
- enhancing the effectiveness of an agricultural compound used for the treatment of plants and animals; or
- marking animals

and includes any pesticide, veterinary medicine, any substance, mixture of substances, or biological compound used for post-harvest pest control or disinfestation of raw primary produce.

### *FSANZ*

Food Standards Australia New Zealand

### *FSC*

The Food Standards Code.

### *Codex*

Codex Alimentarius Commission. Publication of the joint FAO/WHO Codex Alimentarius Commission which sets standards on acceptable levels of chemical components in foods.

### *CRM*

Certified Reference Material or Standard Reference Material. A material tested by a wide range of international laboratories, to reach consensus on the levels of analytical components which it contains.

### *LOD*

Limit of Detection. This may be defined as the minimum concentration of the component in a dietary sample that can just be qualitatively detected, but not quantitatively determined, under a pre-established set of analytical conditions.

### *LOQ*

Limit of Quantitation. This is the minimum concentration of a component that can be determined quantitatively with acceptable accuracy and consistency. It often approximates to a value of approximately three times the limit of detection.

### *LOR*

Limit of Reporting. This is the minimum concentration of a component that can be reported with confidence. The limit of reporting is also referred to as the 'limit of determination' or 'limit of quantitation'.

<i>ML</i>	Maximum Level. This means the maximum level of a specified contaminant which is permitted to be present in a nominated food, unless otherwise specified, in milligrams of the contaminant per kilogram of the food (mg/kg). MLs relevant to food consumed in NZ are set by FSANZ or Codex.
<i>MR</i>	Multi-residue. A pesticide residue analytical technique developed to detect and quantify the widest achievable range of pesticide types.
<i>MRL</i>	Maximum Residue Limit. This is the maximum concentration of a agricultural compound residue legally permitted (or recognised as acceptable) in or on a food (agricultural commodity or animal feed). MRLs for foodstuffs in New Zealand are set out in the New Zealand Food Standards 2002 and associated amendments, FSC standard 1.4.2 or Codex. MRLs are the maximum considered to result from the use of the agricultural compound according to Good Agricultural Practice (GAP) and which is toxicologically acceptable.
<i>NZFSA</i>	New Zealand Food Safety Authority
<i>NZTDS</i>	New Zealand Total Diet Survey.
<i>Pesticides</i>	is a generic term for any substance intended for preventing, destroying, attracting, repelling, or controlling any pest including unwanted species of plants or animals, during the production, storage, transportation, distribution, and processing of food, agricultural commodity, or animal feed. The term includes fungicides, herbicides, insecticide, and chemicals which may be administered to animals for the control of ectoparasites. It includes substances applied to crops either before or after harvest to protect the commodity from deterioration during storage and transport.
<i>Pesticide residue</i>	is any specified substance in food, agricultural commodity, or animal feed resulting from the use of a pesticide (from known, unknown or unavoidable sources). Includes any derivatives of a pesticide, such as conversion products, metabolites, reaction products, and impurities considered to be of toxicological significance.
<i>Q1, Q2, etc.</i>	Quarter 1, quarter 2, etc. of the New Zealand Total Diet Survey sampling programme.

## **1 INTRODUCTION**

This report presents the analytical results from the fourth of four quarterly sampling periods to be carried out during the 2003/04 New Zealand Total Diet Survey (NZTDS). The purpose of producing this report at this stage is to make the data on the concentrations of agricultural compound residues, contaminant elements and nutrient elements, in the NZTDS foods analyzed, available to interested parties in a timely manner.

Background to the current survey is provided in Appendix 1. The Food List is detailed in Appendix 2.

## **2 SAMPLING METHODS**

### **2.1 Quarter 4 (Q4) sampling**

The sampling carried out in Q4 was for national foods (term defined in Appendix 1). Q4 sampling was carried out on six successive Mondays, with different foods being sampled each week.

**Locations for national food sampling:** Christchurch

**Dates for Q4 sampling:** Mondays 17, 24, 31 May and 8, 14, 21 June 2004

### **2.2 Retail Outlets**

Wherever possible, the purchasing of any particular food has been carried out over a range of retail outlets representing the buying habits of the majority of the community. This inevitably meant that the bulk of purchases are made at supermarkets, however, corner stores, delicatessens, butchers and green grocers have been included where appropriate.

### **2.3 Range of brands/Use by dates/Batch numbers**

Where applicable, the brands to be purchased were specified. These were based on data for the most commonly purchased brands. Where the brands were not specified to the same degree, then a range of available brands, including generic, were purchased. A range of use by dates or batch numbers within each brand were included to increase the range of products being sampled.

Where imported and domestic lines were available for a particular food, the purchasing officer selected a mixture. Imports which are boutique or specialised lines were avoided.

### **2.4 Sampling - National Foods**

These instructions apply to the sampling of National (N) foods for any one (seasonal) sampling. Each food will be sampled at two different times of year (seasons).

All national foods involved purchase of an average of four units of each of up to four different brands of each food. The four brands allowed a greater range of each product to be

represented in the sampling. Within each brand, sampling officers were encouraged to purchase different batches/use by dates. On average, 16 samples of each food arrived at the food preparation laboratory. Samples within each of the four different brands were composited in all cases by the food preparation laboratory. For almost all national foods, the different brands were analysed individually for all analytes; but for a few food/analyte combinations, the four different brands were composited to form a single seasonal composite.

### 3 ANALYTE LIST

#### 3.1 Agricultural Compounds

Testing of foods in the 2003/04 NZTDS was undertaken for pesticides, dithiocarbamate and acid herbicide compounds by way of three separate screens. The multi-residue (MR) pesticide screen includes organochlorine pesticides, organophosphorus pesticides, pyrethroids, fungicides, and a number of other pesticides not included in these groups.

**Table 1 Multi-residue pesticide screen in the 2003/04 New Zealand Total Diet Survey**

Acephate	Chlorpyrifos-methyl	Diphenamid	Fluvalinate-DL
Acetochlor	Chlorthal-dimethyl	Diphenylamine	Fluvalinate-D
Alachlor	Chlzolinate	Disulfoton	Folpet
Aldrin	Clomazone	Endosulfan, a-	Furalaxyl
Atrazine	Coumaphos	Endosulfan, b-	Furathiocarb
Azaconazole	Cyanazine	Endosulfan-sulphate	Halxyfop-methyl
Azinphos-methyl	Cyfluthrin	Endrin	HCB
Azoxystrobin	Cyhalothrin-g	EPN	Heptachlor
Benalaxyl	Cyhalothrin-l	Epoxiconazole	Heptachlor endo epoxide
Bendiocarb	Cypermethrin	EPTC	Heptachlor exo epoxide
Benodanil	Cyproconazole	Esfenvalerate	Heptenophos
BHC – a	Cyprodinil	Ethiofencarb	Hexaconazole
BHC – b	DDD, 4,4'	Ethion	Hexazinone
Bifenthrin	DDD, 2,4'	Ethoxyquin	Indoxacarb
Binapacryl	DDE, 4,4'	Etridiazole	Iodophenphos
Bitertanol	DDE, 2,4'	Etrimphos	Iprodione
Bromacil	DDT, 2,4'	Famphur	Isazophos
Bromophos-ethyl	DDT, 4,4'	Fenarimol	Isofenphos
Bromophos-methyl	Deltamethrin	Fenchlorphos	Isoproturon
Bromopropylate	Demeton-s-methyl	Fenitrothion	Kresoxim-methyl
Bupirimate	Diazinon	Fenoxycarb	Lindane
Buprofezin	Dichlobenil	Fenpiclonil	Linuron
Captan	Dichlofenthion	Fenpropathrin	Malathion
Carbaryl	Dichlofluanid	Fenpropimorph	Metalaxyl
Carbofuran	Dichlorvos	Fensulfothion	Methacrifos
Chlordane-cis	Dicloran	Fenthion	Methidathion
Chlordane-trans	Dicofol	Fenvalerate	Methiocarb
Chlorfenvinphos	Dicrotophos	Fipronil	Metolachlor
Chlorfluazuron	Dieldrin	Flamprop-methyl	Metribuzin
Chloridazon	Difenoconazole-cis	Fluazifop-butyl	Mevinphos
Chlornitrofen	Difenoconazole-trans	Fluazinam	Monocrotophos
Chlorobenzilate	Diflufenican	Fludioxonil	Napropamide
Chlorothalonil	Dimethenamid	Fluometuron	Nitrofen
Chlorpropham	Dimethoate	Flusilazole	Nitrothal-isopropyl
Chlorpyrifos	Dimethomorph	Flutriafol	Norflurazon

Omethoate	Phosmet	Propoxur	Terbutryn
Oxadiazon	Phosphamidon-a	Propyzamide	Tetrachlorvinphos
Oxadixyl	Phosphamidon-b	Prothiophos	Tetradifon
Oxyfluorfen	Piperonyl butoxide	Pyrazophos	Thiometon
Paclobutrazol	Pirimicarb	Pyrimethanil	Tolclofos-methyl
Parathion(-ethyl)	Pirimiphos-methyl	Pyriproxyfen	Tolyfluanid
Parathion-methyl	Prochloraz	Quintozene	Tralkoxydim
Penconazole	Procymidone	Quizalofop-ethyl	Triademefon
Pencycuron	Prometryn	Sethoxydim	Triademenol
Pendimethalin	Propachlor	Simazine	Triallate
Permethrin-cis	Propargite 1+2	Tebuconazole	Triazophos
Permethrin-trans	Propazine	Tebufenpyrad	Trifloxystrobin
Phorate	Propetamphos	Terbacil	Trifluralin
Phorate sulphoxide	Propham	Terbufos	Vinclozolin
Phorate sulphone	Propiconazole-cis	Trebumeton	
Phosalone	Propiconazole-trans	Terbuthylazine	

All foods included in the survey are analysed by the multi-residue pesticide method.

The dithiocarbamate (DTC) pesticides require a separate screen and this analysis covers, but does not distinguish between:

Dithane	Mancozeb	Nabam	Zinab
Ferbam	Maneb	Thiram	Ziram

Analysis for dithiocarbamate fungicides is carried out on fruit and vegetable products only.

The acid herbicides (AH) screen also requires a separate screen and this analysis covers :-

2,4 -D	Chlorsulphuron	MCPA	Picloram
2,4-DB	Clopyralid	MCPB	Trialfuron
2,4,5 -T	Cymoxanil	Mecoprop -P	Triclopyr
Bentazone	Dicamba	Metamitron	
Bromoxynil	Dichlorprop	Metsulfuron	

Only selected foods are analysed for acid herbicides.

### 3.2 Elements

Eight elements are included for analysis in the 2003/04 NZTDS. The table below lists the elements, the analytical methodologies used and the foods which were analysed. It should be noted that Q4 involved analysis of national foods.

**Table 2 Elements analysed for in the 2003/04 New Zealand Total Diet Survey**

<b>Element</b>	<b>Method of Analysis</b>	<b>Foods to be analysed</b>
Arsenic (As)	ICP-MS	All, except fats & oils
Cadmium (Cd)	ICP-MS	All
Iodine (I)	ICP-MS	All
Iron (Fe)	ICP-OES	All
Lead (Pb)	ICP-MS	All
Mercury(Hg)	ICP-MS	All, except grains and high fat foods
Selenium (Se)	ICP-MS	All, except fats & oils
Sodium	ICP-OES	All

ICP-MS = inductively-coupled plasma mass spectrometry

ICP-OES = inductively-coupled plasma optical emission spectrometry

## **4 ANALYTICAL RESULTS**

### **4.1 Analytical Quality Control**

Trace analyses of a wide range of complex analytes in a variety of complex matrices is an exacting science. A summary of the quality control procedures employed to provide confidence in the methodology and robustness of results is given in Appendix 3.

### **4.2 Elements**

For the elements analysed, results are reported per analyte for all foods analysed in this quarter. For some elements, not all foods sampled in Q4 have been analysed. These cases are those in which existing information suggests there is little likelihood of the element being detected using the current analytical methodologies eg mercury in chocolate biscuits.

All elemental results reported are on a 'foods as consumed' basis. Moisture contents of the foods have also been separately determined, but are not detailed in this report.

Elements are naturally occurring and ubiquitous in our environment. As such, if the concentration of a certain element in a food is 'not detected', it is highly likely that it is present, but at levels less than the limit of detection. For this reason, international convention for 'not detected' results for elements is to report them as 'less than the limit of detection'. For example, arsenic in wheatbix is not detected, with a limit of detection of 0.010 mg/kg. This is reported as <0.010 mg/kg.



#### 4.2.1 Arsenic (total)

**Table 3 Total arsenic content (mg/kg) of foods in Q4 of 2003/04 NZTDS**

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	0.002	0.003	0.003	0.007
Apricot, canned	< 0.002	< 0.002	< 0.002	< 0.002
Banana	< 0.002	< 0.002	< 0.002	< 0.002
Beans	< 0.002	< 0.002	< 0.002	< 0.002
Beans, baked, canned	< 0.002	< 0.002	< 0.002	< 0.002
Beer	< 0.001	< 0.001	< 0.001	< 0.001
Beetroot, canned	< 0.002	< 0.002	< 0.002	< 0.002
Biscuit, chocolate	< 0.010	< 0.010	< 0.010	< 0.010
Biscuit, cracker	< 0.010	< 0.010	< 0.010	< 0.010
Biscuits, plain sweet	< 0.010	< 0.010	< 0.010	< 0.010
Bran flake cereal, mixed	0.050	< 0.010	0.020	< 0.010
Caffeinated beverage	< 0.001	< 0.001	< 0.001	< 0.001
Carbonated drink	< 0.001	< 0.001	< 0.001	< 0.001
Cheese	< 0.010	< 0.010	< 0.010	< 0.010
Chicken	0.015	0.012	0.006	0.007
Chocolate beverage	0.001	< 0.001	< 0.001	< 0.001
Chocolate, plain milk	< 0.010	< 0.010	< 0.010	< 0.010
Coffee, instant	< 0.001	< 0.001	< 0.001	< 0.001
Confectionery	< 0.010	< 0.010	< 0.010	< 0.010
Corn, canned	< 0.002	0.002	< 0.002	< 0.002
Cornflakes	< 0.010	< 0.010	< 0.010	< 0.010
Dairy dessert	< 0.002	< 0.002	< 0.002	< 0.002
Fish fingers	0.740	0.435	1.490	0.555
Fish, canned	0.342	0.475	0.679	0.996
Fruit drink	< 0.001	< 0.001	< 0.001	< 0.001
Honey	< 0.010	< 0.010	< 0.010	< 0.010
Icecream	< 0.002	< 0.002	< 0.002	< 0.002
Infant & Follow on formula	< 0.001	< 0.001	< 0.001	< 0.001
Infant weaning food, cereal based	0.021	0.019	0.017	0.004
Infant weaning food, custard/fruit dish	0.070	0.006	0.011	0.012
Infant weaning food, savoury	0.042	< 0.002	0.007	0.012
Jam	< 0.010	< 0.010	< 0.010	< 0.010
Margarine	< 0.010	< 0.010	< 0.010	< 0.010
Muesli	0.010	< 0.010	< 0.010	< 0.010
Noodles, instant	< 0.002	0.007	< 0.002	0.005
Oats, rolled	0.004	< 0.002	< 0.002	0.003
Oil	< 0.010	< 0.010	< 0.010	< 0.010
Orange juice	< 0.001	< 0.001	< 0.001	< 0.001

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	0.010	0.002	< 0.002	< 0.002
Peaches, canned	0.002	< 0.002	< 0.002	< 0.002
Peanut butter	0.010	< 0.010	< 0.010	0.020
Peanuts, whole	< 0.010	< 0.010	< 0.010	< 0.010
Peas	< 0.002	< 0.002	< 0.002	< 0.002
Pineapple, canned	< 0.002	< 0.002	< 0.002	< 0.002
Potato crisps	< 0.010	< 0.010	< 0.010	< 0.010
Prunes	0.005	0.003	0.003	0.005
Raisin/sultana	0.022	0.015	0.031	0.024
Rice, white	0.060	0.071	0.103	0.036
Salad dressing	< 0.010	< 0.010	< 0.010	< 0.010
Snack bars	< 0.010	< 0.010	0.020	0.020
Snacks, flavoured	0.010	0.010	< 0.010	< 0.010
Soup, chicken	< 0.002	< 0.002	< 0.002	< 0.002
Soy milk	0.041	0.004	0.003	0.002
Spaghetti in sauce, canned	< 0.002	< 0.002	< 0.002	< 0.002
Sugar	< 0.010	< 0.010	< 0.010	< 0.010
Tea	< 0.001	< 0.001	< 0.001	< 0.001
Tomato sauce	< 0.002	< 0.002	< 0.002	< 0.002
Tomatoes in juice	< 0.002	< 0.002	0.002	< 0.002
Wheatbix	< 0.010	< 0.010	< 0.010	< 0.010
Wine, still red	0.016	0.013	0.004	0.004
Wine, still white	0.005	0.007	0.011	0.007
Yeast extract	0.207	0.066	0.223	0.066
Yoghurt	< 0.002	< 0.002	< 0.002	< 0.002

Limit of detection for (total) arsenic = 0.001 mg/kg (liquids) / 0.002 mg/kg (high moisture, solid samples) / or 0.010 mg/kg (fatty or low moisture solid samples).

Note: Given limited sample numbers, comparisons between brand data are not appropriate.

#### 4.2.2 Cadmium

**Table 4 Cadmium content (mg/kg) of foods in Q4 of 2003/04 NZTDS**

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	0.0003	0.0006	< 0.0002	0.0003
Apricot, canned	0.0019	0.0008	0.0013	0.0012
Banana	0.0084	0.0005	< 0.0004	< 0.0004
Beans	0.0009	0.0006	0.0011	< 0.0004
Beans, baked, canned	0.0037	0.0048	0.0050	0.0050
Beer	< 0.0002	0.0002	< 0.0002	< 0.0002
Beetroot, canned	0.0130	0.0137	0.0178	0.0089
Biscuit, chocolate	0.0380	0.0370	0.0230	0.0240
Biscuit, cracker	0.0110	0.0130	0.0140	0.0120
Biscuits, plain sweet	0.0100	0.0150	0.0050	0.0120
Bran flake cereal, mixed	0.0340	0.0110	0.0050	0.0110
Caffeinated beverage	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Carbonated drink	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Cheese	< 0.0020	< 0.0020	< 0.0020	0.0020
Chicken	< 0.0004	0.0020	0.0040	0.0109
Chocolate beverage	0.0040	0.0013	0.0048	0.0071
Chocolate, plain milk	0.0410	0.0230	0.0240	0.0280
Coffee, instant	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Confectionery	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Corn, canned	0.0012	< 0.0004	0.0005	0.0005
Cornflakes	< 0.0020	0.0030	< 0.0020	< 0.0020
Dairy dessert	< 0.0004	0.0016	< 0.0004	< 0.0004
Fish fingers	0.0064	0.0080	0.0052	0.0129
Fish, canned	0.0063	0.0020	0.0133	0.0316
Fruit drink	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Honey	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Icecream	< 0.0004	< 0.0004	< 0.0004	< 0.0004
Infant & Follow on formula	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Infant weaning food, cereal based	0.0007	< 0.0004	0.0026	0.0021
Infant weaning food, custard/fruit dish	0.0007	0.0007	0.0007	0.0009
Infant weaning food, savoury	0.0052	0.0097	0.0039	0.0026
Jam	< 0.0020	< 0.0020	0.0050	< 0.0020
Margarine	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Muesli	0.0160	0.0220	0.0180	0.0090
Noodles, instant	0.0037	0.0054	0.0047	0.0047
Oats, rolled	0.0027	0.0035	0.0032	0.0049
Oil	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Orange juice	< 0.0002	< 0.0002	< 0.0002	< 0.0002

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	0.0305	0.0061	0.0068	0.0126
Peaches, canned	0.0010	0.0010	0.0031	0.0022
Peanut butter	0.0130	0.0200	0.0250	0.0220
Peanuts, whole	0.0340	0.1570	0.0600	0.0940
Peas	0.0017	0.0030	0.0050	0.0031
Pineapple, canned	< 0.0004	0.0006	0.0008	0.0007
Potato crisps	0.0519	0.0422	0.0235	0.0540
Prunes	0.0008	0.0045	0.0009	0.0013
Raisin/sultana	0.0012	0.0010	0.0009	0.0006
Rice, white	0.0020	0.0030	0.0025	0.0051
Salad dressing	< 0.0020	0.0030	0.0050	< 0.0020
Snack bars	0.0050	0.0110	0.0090	0.0180
Snacks, flavoured	< 0.0020	0.0180	< 0.0020	0.0050
Soup, chicken	0.0006	0.0009	0.0005	< 0.0004
Soy milk	0.0062	0.0020	0.0031	0.0008
Spaghetti in sauce, canned	0.0103	0.0079	0.0084	0.0086
Sugar	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Tea	< 0.0002	0.0019	0.0004	< 0.0002
Tomato sauce	0.0083	0.0059	0.0148	0.0072
Tomatoes in juice	0.0111	0.0073	0.0098	0.0105
Wheatbix	0.0280	0.0440	0.0080	0.0570
Wine, still red	0.0005	0.0002	0.0003	0.0002
Wine, still white	0.0004	0.0006	0.0003	< 0.0002
Yeast extract	0.0200	0.0140	0.0180	0.0120
Yoghurt	< 0.0004	< 0.0004	< 0.0004	< 0.0004

Limit of detection for cadmium = 0.0002 mg/kg (liquid) / 0.0004 mg/kg (high moisture) / 0.0020 mg/kg (fatty or low moisture sample).

Note: Given limited sample numbers, comparisons between brand data are not appropriate.

### 4.2.3 Iodine

**Table 5 Iodine content (mg/kg) of foods in Q4 of 2003/04 NZTDS**

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	0.004	0.047	0.004	0.003
Apricot, canned	0.009	0.013	0.017	0.019
Banana	< 0.002	< 0.002	0.002	< 0.002
Beans	< 0.002	< 0.002	< 0.002	< 0.002
Beans, baked, canned	0.011	0.012	0.011	0.026
Beer	< 0.001	< 0.001	0.038	0.003
Beetroot, canned	0.016	0.029	0.030	0.027
Biscuit, chocolate	0.020	0.050	0.018	0.030
Biscuit, cracker	< 0.010	< 0.010	< 0.010	< 0.010
Biscuits, plain sweet	< 0.010	< 0.010	< 0.010	< 0.010
Bran flake cereal, mixed	< 0.010	< 0.010	0.040	< 0.010
Caffeinated beverage	< 0.001	0.003	< 0.001	0.001
Carbonated drink	< 0.001	0.005	0.001	0.003
Cheese	0.050	0.060	0.070	0.060
Chicken	0.011	0.005	0.037	0.043
Chocolate beverage	0.028	0.015	< 0.001	0.015
Chocolate, plain milk	0.100	0.130	0.070	0.120
Coffee, instant	< 0.001	< 0.001	< 0.001	< 0.001
Confectionery	< 0.010	< 0.010	< 0.010	0.020
Corn, canned	0.010	0.007	0.007	0.007
Cornflakes	< 0.010	< 0.010	< 0.010	< 0.010
Dairy dessert	0.074	0.050	0.045	0.057
Fish fingers	0.020	0.033	0.035	0.028
Fish, canned	0.078	0.160	0.114	0.128
Fruit drink	< 0.001	< 0.001	< 0.001	< 0.001
Honey	0.010	< 0.010	< 0.010	< 0.010
Icecream	0.064	0.043	0.043	0.061
Infant & Follow on formula	0.089	0.030	0.103	0.104
Infant weaning food, cereal based	0.049	0.004	0.025	0.044
Infant weaning food, custard/fruit dish	0.006	0.112	0.102	0.055
Infant weaning food, savoury	0.015	< 0.002	0.021	0.062
Jam	< 0.010	< 0.010	< 0.010	< 0.010
Margarine	< 0.010	< 0.010	< 0.010	< 0.010
Muesli	< 0.010	< 0.010	< 0.010	0.020
Noodles, instant	< 0.002	0.170	0.186	0.027
Oats, rolled	< 0.002	< 0.002	< 0.002	< 0.002
Oil	< 0.010	< 0.010	< 0.010	< 0.010
Orange juice	< 0.001	< 0.001	0.004	0.020

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	< 0.002	< 0.002	< 0.002	0.086
Peaches, canned	0.018	0.007	0.004	0.009
Peanut butter	0.010	< 0.010	< 0.010	< 0.010
Peanuts, whole	< 0.010	< 0.010	< 0.010	0.010
Peas	< 0.002	< 0.002	< 0.002	< 0.002
Pineapple, canned	0.025	0.013	0.006	0.028
Potato crisps	< 0.010	0.010	< 0.010	< 0.010
Prunes	0.009	0.008	0.006	0.010
Raisin/sultana	0.027	0.014	0.020	0.018
Rice, white	0.005	0.005	0.004	< 0.002
Salad dressing	0.020	0.030	< 0.010	0.030
Snack bars	0.010	0.060	0.490	< 0.010
Snacks, flavoured	0.100	0.020	0.070	0.020
Soup, chicken	0.016	0.023	0.011	0.006
Soy milk	1.320	0.015	0.005	0.007
Spaghetti in sauce, canned	0.013	0.019	0.019	0.017
Sugar	< 0.010	< 0.010	< 0.010	< 0.010
Tea	< 0.001	< 0.001	< 0.001	< 0.001
Tomato sauce	0.012	0.013	0.002	0.013
Tomatoes in juice	0.012	0.007	< 0.002	< 0.002
Wheatbix	< 0.010	< 0.010	< 0.010	< 0.010
Wine, still red	0.005	0.010	0.004	0.002
Wine, still white	0.010	0.008	0.001	< 0.001
Yeast extract	0.020	0.090	0.030	0.090
Yoghurt	0.057	0.109	0.078	0.103

Limit of detection for iodine = 0.001 mg/kg (liquid) / 0.002 mg/kg (high moisture samples) / 0.010 mg/kg (fatty or low moisture samples).

Note: Given limited sample numbers, comparisons between brand data are not appropriate.

#### 4.2.4 Iron

**Table 6 Iron content (mg/kg) of foods in Q4 of 2003/04 NZTDS**

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	0.1	< 0.1	0.2	0.2
Apricot, canned	2.1	2.2	2.8	2.3
Banana	2.4	2.0	1.8	1.7
Beans	5.0	5.1	5.9	5.1
Beans, baked, canned	9.2	9.4	11.0	14.0
Beer	< 0.1	< 0.1	< 0.1	< 0.1
Beetroot, canned	3.8	3.0	3.4	4.4
Biscuit, chocolate	38.0	46.0	12.5	14.0
Biscuit, cracker	19.0	15.0	15.0	18.0
Biscuits, plain sweet	11.0	11.0	19.0	10.0
Bran flake cereal, mixed	92.0	92.0	36.0	48.0
Caffeinated beverage	< 0.1	< 0.1	< 0.1	< 0.1
Carbonated drink	< 0.1	< 0.1	< 0.1	< 0.1
Cheese	< 1.0	< 1.0	< 1.0	2.0
Chicken	12.1	4.3	7.2	14.5
Chocolate beverage	6.7	6.7	1.0	1.1
Chocolate, plain milk	10.0	12.0	16.0	14.0
Coffee, instant	0.4	0.7	1.0	0.7
Confectionery	< 1.0	< 1.0	< 1.0	< 1.0
Corn, canned	3.2	2.6	3.3	3.4
Cornflakes	64.0	141.0	13.0	134.0
Dairy dessert	< 0.2	3.1	< 0.2	0.4
Fish fingers	2.5	4.3	2.5	5.4
Fish, canned	14.7	8.0	10.6	9.5
Fruit drink	< 0.1	< 0.1	< 0.1	< 0.1
Honey	2.0	2.0	< 1.0	< 1.0
Icecream	< 0.2	< 0.2	0.5	< 0.2
Infant & Follow on formula	10.6	12.9	7.6	6.9
Infant weaning food, cereal based	< 0.2	71.7	102.0	2.8
Infant weaning food, custard/fruit dish	2.0	1.2	3.4	7.9
Infant weaning food, savoury	3.8	4.7	6.2	5.8
Jam	1.0	2.0	< 1.0	1.0
Margarine	4.0	4.0	3.0	3.0
Muesli	39.0	50.0	40.0	43.0
Noodles, instant	5.9	4.6	17.5	3.6
Oats, rolled	8.0	9.5	9.5	9.5
Oil	4.0	3.0	4.0	3.0
Orange juice	0.4	0.7	0.5	0.3

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	6.6	16.5	7.0	7.2
Peaches, canned	6.0	1.6	1.5	1.3
Peanut butter	23.0	16.0	13.0	19.0
Peanuts, whole	16.0	13.0	12.0	15.0
Peas	12.8	13.9	15.7	14.3
Pineapple, canned	1.8	1.2	0.7	0.6
Potato crisps	17.0	11.0	9.0	12.0
Prunes	4.8	6.0	4.9	4.4
Raisin/sultana	13.3	12.4	20.6	11.8
Rice, white	0.7	0.8	1.1	0.6
Salad dressing	5.0	6.0	7.0	2.0
Snack bars	10.0	5.0	18.0	24.0
Snacks, flavoured	9.0	14.0	14.0	14.0
Soup, chicken	1.6	2.5	0.6	0.7
Soy milk	6.1	4.1	4.7	1.7
Spaghetti in sauce, canned	2.7	2.2	2.5	2.4
Sugar	< 1.0	< 1.0	< 1.0	< 1.0
Tea	0.3	0.4	0.2	0.2
Tomato sauce	3.1	2.4	4.8	3.1
Tomatoes in juice	3.0	2.2	12.2	10.4
Wheatbix	144.0	37.0	58.0	35.0
Wine, still red	1.4	2.2	2.6	1.5
Wine, still white	0.5	1.0	1.0	1.0
Yeast extract	431.0	37.0	446.0	39.0
Yoghurt	0.5	0.4	0.7	< 0.2

Limit of detection for iron = 0.1 mg/kg (liquid) / 0.2 mg/kg (high moisture solid samples) / 1.0 mg/kg (fatty or low moisture samples).

Note: Given limited sample numbers, comparisons between brand data are not appropriate.



#### 4.2.5 Lead

**Table 7      Lead content (mg/kg) of foods in Q4 of 2003/04 NZTDS**

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	0.001	0.004	0.001	< 0.001
Apricot, canned	0.126	0.039	0.134	0.029
Banana	< 0.002	0.002	< 0.002	< 0.002
Beans	0.003	0.003	0.007	0.003
Beans, baked, canned	0.003	0.002	< 0.002	0.004
Beer	< 0.001	0.001	< 0.001	< 0.001
Beetroot, canned	0.003	0.003	0.002	< 0.002
Biscuit, chocolate	0.040	0.020	< 0.010	0.010
Biscuit, cracker	< 0.010	< 0.010	< 0.010	0.010
Biscuits, plain sweet	< 0.010	< 0.010	< 0.010	0.010
Bran flake cereal, mixed	0.100	0.010	0.050	0.030
Caffeinated beverage	0.006	< 0.001	< 0.001	< 0.001
Carbonated drink	< 0.001	< 0.001	< 0.001	< 0.001
Cheese	< 0.010	< 0.010	< 0.010	< 0.010
Chicken	0.004	0.004	0.005	0.005
Chocolate beverage	0.004	0.002	0.003	0.005
Chocolate, plain milk	0.010	0.020	0.020	0.020
Coffee, instant	< 0.001	0.001	0.003	< 0.001
Confectionery	< 0.010	< 0.010	< 0.010	< 0.010
Corn, canned	< 0.002	< 0.002	< 0.002	< 0.002
Cornflakes	< 0.010	0.030	< 0.010	< 0.010
Dairy dessert	< 0.002	< 0.002	< 0.002	< 0.002
Fish fingers	0.004	0.004	0.004	0.019
Fish, canned	0.006	< 0.002	< 0.002	0.002
Fruit drink	< 0.001	< 0.001	< 0.001	< 0.001
Honey	0.020	0.040	0.030	0.027
Icecream	< 0.002	0.003	< 0.002	< 0.002
Infant & Follow on formula	0.005	0.002	< 0.001	< 0.001
Infant weaning food, cereal based	0.002	0.008	0.054	< 0.002
Infant weaning food, custard/fruit dish	0.002	0.005	0.002	0.472
Infant weaning food, savoury	0.005	< 0.002	0.004	< 0.002
Jam	0.010	< 0.010	< 0.010	< 0.010
Margarine	< 0.010	< 0.010	< 0.010	< 0.010
Muesli	0.010	0.020	0.070	0.010
Noodles, instant	0.014	0.014	0.018	0.043
Oats, rolled	0.002	0.016	0.015	0.004
Oil	< 0.010	< 0.010	< 0.010	< 0.010
Orange juice	< 0.001	< 0.001	< 0.001	0.004

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	0.025	0.035	0.016	0.004
Peaches, canned	0.009	0.008	0.019	0.016
Peanut butter	0.020	< 0.010	< 0.010	< 0.010
Peanuts, whole	0.011	< 0.010	< 0.010	< 0.010
Peas	0.003	0.004	0.003	0.004
Pineapple, canned	0.016	0.022	0.013	0.010
Potato crisps	< 0.010	0.010	0.024	< 0.010
Prunes	0.002	0.083	0.005	0.003
Raisin/sultana	0.017	0.011	0.024	0.018
Rice, white	0.003	< 0.002	0.003	0.002
Salad dressing	< 0.010	< 0.010	0.012	< 0.010
Snack bars	0.010	0.020	0.020	0.014
Snacks, flavoured	< 0.010	< 0.010	< 0.010	0.010
Soup, chicken	0.003	0.003	0.003	0.005
Soy milk	< 0.001	< 0.001	< 0.001	< 0.001
Spaghetti in sauce, canned	0.002	< 0.002	< 0.002	< 0.002
Sugar	< 0.010	< 0.010	< 0.010	0.012
Tea	0.001	0.001	< 0.001	< 0.001
Tomato sauce	0.004	0.002	0.003	0.003
Tomatoes in juice	0.008	0.003	0.018	0.013
Wheatbix	< 0.010	< 0.010	< 0.010	0.010
Wine, still red	0.008	0.012	0.025	0.003
Wine, still white	0.010	0.013	0.011	0.009
Yeast extract	0.045	0.031	0.045	0.026
Yoghurt	< 0.002	< 0.002	< 0.002	< 0.002

Limit of detection for lead = 0.001 mg/kg (liquid) / 0.002 mg/kg (high moisture) / or 0.010 mg/kg (fatty or low moisture samples)

Note: Given limited sample numbers, comparisons between brand data are not appropriate.

#### 4.2.6 Mercury (total)

**Table 8 Total mercury content (mg/kg) of foods in Q4 of 2003/04 NZTDS**

Food	Brand 1	Brand 2	Brand 3	Brand 4
Apple-based juice	< 0.001	< 0.001	< 0.001	< 0.001
Apricot, canned	< 0.002	< 0.002	< 0.002	< 0.002
Banana	< 0.002	< 0.002	< 0.002	< 0.002
Beans	< 0.002	< 0.002	< 0.002	< 0.002
Beans, baked, canned	< 0.002	< 0.002	< 0.002	< 0.002
Beer	< 0.001	< 0.001	< 0.001	< 0.001
Beetroot, canned	< 0.002	< 0.002	< 0.002	< 0.002
Biscuit, chocolate	NA	NA	NA	NA
Biscuit, cracker	NA	NA	NA	NA
Biscuits, plain sweet	NA	NA	NA	NA
Bran flake cereal, mixed	NA	NA	NA	NA
Caffeinated beverage	< 0.001	< 0.001	< 0.001	< 0.001
Carbonated drink	< 0.001	< 0.001	< 0.001	< 0.001
Cheese	NA	NA	NA	NA
Chicken	< 0.002	< 0.002	< 0.002	< 0.002
Chocolate beverage	< 0.001	< 0.001	< 0.001	< 0.001
Chocolate, plain milk	NA	NA	NA	NA
Coffee, instant	< 0.001	< 0.001	< 0.001	< 0.001
Confectionery	NA	NA	NA	NA
Corn, canned	< 0.002	< 0.002	< 0.002	< 0.002
Cornflakes	NA	NA	NA	NA
Dairy dessert	< 0.002	< 0.002	< 0.002	< 0.002
Fish fingers	0.094	0.040	0.121	0.080
Fish, canned	0.033	0.048	0.047	0.156
Fruit drink	< 0.001	< 0.001	< 0.001	< 0.001
Honey	NA	NA	NA	NA
Icecream	NA	NA	NA	NA
Infant & Follow on formula	< 0.001	< 0.001	< 0.001	< 0.001
Infant weaning food, cereal based	< 0.002	< 0.002	< 0.002	< 0.002
Infant weaning food, custard/fruit dish	< 0.002	< 0.002	< 0.002	< 0.002
Infant weaning food, savoury	< 0.002	< 0.002	< 0.002	< 0.002
Jam	NA	NA	NA	NA
Margarine	NA	NA	NA	NA
Muesli	NA	NA	NA	NA
Noodles, instant	< 0.002	< 0.002	< 0.002	< 0.002
Oats, rolled	< 0.002	< 0.002	< 0.002	< 0.002
Oil	NA	NA	NA	NA
Orange juice	< 0.001	< 0.001	< 0.001	< 0.001

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	< 0.002	< 0.002	< 0.002	< 0.002
Peaches, canned	< 0.002	< 0.002	< 0.002	< 0.002
Peanut butter	NA	NA	NA	NA
Peanuts, whole	NA	NA	NA	NA
Peas	< 0.002	< 0.002	< 0.002	< 0.002
Pineapple, canned	< 0.002	< 0.002	< 0.002	< 0.002
Potato crisps	< 0.010	< 0.010	< 0.010	< 0.010
Prunes	< 0.002	< 0.002	< 0.002	< 0.002
Raisin/sultana	0.004	< 0.002	< 0.002	< 0.002
Rice, white	< 0.002	< 0.002	< 0.002	< 0.002
Salad dressing	NA	NA	NA	NA
Snack bars	NA	NA	NA	NA
Snacks, flavoured	NA	NA	NA	NA
Soup, chicken	< 0.002	< 0.002	< 0.002	< 0.002
Soy milk	< 0.001	< 0.001	< 0.001	< 0.001
Spaghetti in sauce, canned	NA	NA	NA	NA
Sugar	NA	NA	NA	NA
Tea	< 0.001	< 0.001	< 0.001	< 0.001
Tomato sauce	< 0.002	< 0.002	< 0.002	< 0.002
Tomatoes in juice	< 0.002	< 0.002	< 0.002	< 0.002
Wheatbix	NA	NA	NA	NA
Wine, still red	< 0.001	< 0.001	< 0.001	< 0.001
Wine, still white	< 0.001	< 0.001	< 0.001	< 0.001
Yeast extract	NA	NA	NA	NA
Yoghurt	< 0.002	< 0.002	< 0.002	< 0.002

NA – not analysed. These cases are those in which existing information suggests there is little likelihood of the element being detected using the current analytical methodologies eg mercury in biscuits.

Limit of detection for total mercury = 0.001 mg/kg (liquid) / 0.002 mg/kg (high moisture) / 0.010 mg/kg (fatty or low moisture solid samples) / NA = not analysed (as limit of detection inadequate for low moisture samples for dietary exposure purposes).

Note: Given limited sample numbers, comparisons between brand data are not appropriate.

#### 4.2.7 Selenium

**Table 9 Selenium content (mg/kg) of foods in Q4 of 2003/04 NZTDS**

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	< 0.002	< 0.002	< 0.002	< 0.002
Apricot, canned	< 0.004	< 0.004	< 0.004	< 0.004
Banana	< 0.004	< 0.004	< 0.004	< 0.004
Beans	< 0.004	< 0.004	< 0.004	< 0.004
Beans, baked, canned	0.020	0.029	0.030	0.007
Beer	< 0.002	< 0.002	< 0.002	< 0.002
Beetroot, canned	< 0.004	< 0.004	< 0.004	< 0.004
Biscuit, chocolate	< 0.020	0.020	< 0.020	0.030
Biscuit, cracker	0.090	0.060	0.050	0.090
Biscuits, plain sweet	0.020	< 0.020	0.160	< 0.020
Bran flake cereal, mixed	0.130	0.070	0.130	0.050
Caffeinated beverage	< 0.002	< 0.002	< 0.002	< 0.002
Carbonated drink	< 0.002	< 0.002	< 0.002	< 0.002
Cheese	0.050	0.070	0.050	0.050
Chicken	0.317	0.163	0.137	0.101
Chocolate beverage	0.003	< 0.002	< 0.002	< 0.002
Chocolate, plain milk	< 0.020	< 0.020	< 0.020	< 0.020
Coffee, instant	< 0.002	< 0.002	< 0.002	< 0.002
Confectionery	< 0.020	< 0.020	< 0.020	< 0.020
Corn, canned	0.014	< 0.004	0.004	< 0.004
Cornflakes	0.060	< 0.020	< 0.020	< 0.020
Dairy dessert	0.009	< 0.004	0.006	0.009
Fish fingers	0.234	0.189	0.254	0.194
Fish, canned	0.311	0.772	0.458	0.532
Fruit drink	< 0.002	< 0.002	< 0.002	< 0.002
Honey	< 0.020	< 0.020	< 0.020	< 0.020
Icecream	0.007	0.015	0.011	0.009
Infant & Follow on formula	0.019	0.007	0.003	0.007
Infant weaning food, cereal based	0.009	0.006	0.020	0.012
Infant weaning food, custard/fruit dish	0.007	0.005	0.010	0.021
Infant weaning food, savoury	0.016	0.005	0.007	0.019
Jam	< 0.020	< 0.020	< 0.020	< 0.020
Margarine	0.000	0.000	0.000	0.000
Muesli	0.080	0.130	0.030	0.060
Noodles, instant	0.005	0.045	0.055	0.047
Oats, rolled	0.024	< 0.004	0.006	0.033
Oil	0.000	0.000	0.000	0.000
Orange juice	< 0.002	< 0.002	< 0.002	< 0.002

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	0.179	0.033	0.015	0.053
Peaches, canned	< 0.004	< 0.004	< 0.004	< 0.004
Peanut butter	0.170	0.100	0.100	0.400
Peanuts, whole	0.100	0.050	0.050	0.050
Peas	< 0.004	< 0.004	< 0.004	< 0.004
Pineapple, canned	< 0.004	< 0.004	< 0.004	< 0.004
Potato crisps	< 0.020	0.020	< 0.020	< 0.020
Prunes	< 0.004	0.008	< 0.004	< 0.004
Raisin/sultana	< 0.004	< 0.004	< 0.004	< 0.004
Rice, white	0.021	0.020	0.007	0.004
Salad dressing	0.000	0.000	0.000	0.000
Snack bars	0.050	0.050	0.040	0.030
Snacks, flavoured	0.060	< 0.020	0.030	0.050
Soup, chicken	0.007	0.019	0.005	< 0.004
Soy milk	0.008	0.029	0.020	0.003
Spaghetti in sauce, canned	0.011	0.005	0.007	0.004
Sugar	< 0.020	< 0.020	< 0.020	< 0.020
Tea	< 0.002	< 0.002	< 0.002	< 0.002
Tomato sauce	< 0.004	< 0.004	0.007	< 0.004
Tomatoes in juice	< 0.004	< 0.004	0.011	< 0.004
Wheatbix	< 0.020	< 0.020	0.090	< 0.020
Wine, still red	< 0.002	< 0.002	< 0.002	< 0.002
Wine, still white	< 0.002	< 0.002	< 0.002	< 0.002
Yeast extract	< 0.020	0.030	< 0.020	0.030
Yoghurt	0.008	0.008	0.007	0.009

Limit of detection for selenium = 0.002 mg/kg (liquid) / 0.004 mg/kg (high moisture samples) / 0.020 mg/kg (fatty or low moisture samples).

Note: Given limited sample numbers, comparisons between brand data are not appropriate.

#### 4.2.8 Sodium

**Table 10 Sodium content (mg/kg) of foods in Q4 of 2003/04 NZTDS**

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	24	77	36	26
Apricot, canned	< 10	11	84	11
Banana	< 10	< 10	< 10	< 10
Beans	< 10	< 10	< 10	< 10
Beans, baked, canned	4460	3910	4380	3190
Beer	29	14	16	18
Beetroot, canned	349	1275	1640	2080
Biscuit, chocolate	2070	1380	2795	1040
Biscuit, cracker	3990	6200	3610	3870
Biscuits, plain sweet	3620	2810	2810	2730
Bran flake cereal, mixed	7150	1590	2350	1970
Caffeinated beverage	899	189	530	724
Carbonated drink	48	46	40	29
Cheese	5930	6120	5840	6000
Chicken	1540	3660	7320	6360
Chocolate beverage	102	100	< 5	106
Chocolate, plain milk	825	632	639	717
Coffee, instant	6	7	< 5	5
Confectionery	< 50	< 50	157	339
Corn, canned	1450	2470	1550	1080
Cornflakes	6640	9600	4460	6980
Dairy dessert	564	723	493	516
Fish fingers	3280	4650	3160	3920
Fish, canned	2050	2210	3770	477
Fruit drink	70	146	178	155
Honey	< 50	< 50	< 50	< 50
Icecream	391	460	430	436
Infant & Follow on formula	241	337	229	164
Infant weaning food, cereal based	285	12	239	159
Infant weaning food, custard/fruit dish	44	350	223	126
Infant weaning food, savoury	187	113	210	382
Jam	< 50	331	81	382
Margarine	5920	5260	3450	6020
Muesli	58	4820	< 50	369
Noodles, instant	1820	3600	2680	3400
Oats, rolled	< 10	< 10	< 10	< 10
Oil	< 50	< 50	< 50	< 50
Orange juice	10	6	8	35

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	< 10	< 10	< 10	82
Peaches, canned	141	31	53	28
Peanut butter	1590	3340	5050	5090
Peanuts, whole	4460	4660	611	491
Peas	< 10	< 10	< 10	< 10
Pineapple, canned	< 10	68	< 10	18
Potato crisps	2570	1990	3210	4950
Prunes	< 10	42	< 10	< 10
Raisin/sultana	130	40	79	56
Rice, white	< 10	< 10	< 10	< 10
Salad dressing	7780	8210	4840	4810
Snack bars	3550	3080	640	718
Snacks, flavoured	8660	11600	5130	21300
Soup, chicken	4010	3170	3070	2920
Soy milk	499	391	433	865
Spaghetti in sauce, canned	3560	4470	4450	4330
Sugar	< 50	< 50	< 50	< 50
Tea	< 5	< 5	< 5	< 5
Tomato sauce	4760	8500	6960	8680
Tomatoes in juice	844	1650	2330	2670
Wheatbix	2650	2710	2810	3750
Wine, still red	26	36	24	14
Wine, still white	32	49	12	17
Yeast extract	33100	41800	32300	40000
Yoghurt	484	425	501	432

Limit of detection for sodium = 5 mg/kg (liquid) / 10 mg/kg (high moisture) / 50 mg/kg (high fat or low moisture).

Note: Given limited sample numbers, comparisons between brand data are not appropriate.



### 4.3 Agricultural Compound Residues

For agricultural compounds, results are reported in four sections; multi-residue pesticides screened for but not detected (which for brevity are listed collectively on one page); each pesticide detected is reported on a per pesticide basis for all foods screened; dithiocarbamate fungicides and acid herbicides.

All agricultural compound results in the NZTDS are reported on a ‘foods as consumed’ basis. Moisture contents of the foods have been separately determined, but are not detailed in this report.

Where no results are reported/recorded in the results tables, this is because samples were not analysed for that food/analyte combination. This is because existing information suggested there was little likelihood of the agricultural compound being detected, and resources were thus prioritised elsewhere in the project.

Pesticides are applied to specific foods, often under specific conditions or only at certain times. Different producers of a particular crop will not necessarily use the same pesticides to perform the same tasks. This specificity suggests that residues will only be present in specific foods, rather than as ubiquitous contaminants present in all food groups. In addition, many pesticides are known to break down rapidly in the environment. Therefore, for most pesticides in most foods, a “not detected” result is likely to represent a true zero result.

#### 4.3.1 Multi-residue pesticides screened for but not detected in any food in Q4 of 2003/04 NZTDS

**Table 11 Multi-residue pesticides screened for but not detected in any food in Q4 of 2003/04 NZTDS**

Acephate	Carbofuran	DDE, 2,4'	Endrin
Acetochlor	Carboxin	DDT, 2,4'	EPN
Alachlor	Chlordane-cis	DDT, 4,4'	Epoxiconazole
Aldrin	Chlordane-trans	Deltamethrin	EPTC
Atrazine	Chlorfenvinphos	Demeton-s-methyl	Esfenvalerate
Azaconazole	Chlorfluazuron	Diazinon	Ethiofencarb
Azinphos-methyl	Chlornitrofen	Dichlobenil	Ethion
Azoxystrobin	Chlorobenzilate	Dichlofenthion	Etridiazole
Benalaxyl	Chlorothalonil	Dichlofluanid	Etrimphos
Bendiocarb	Chlorthal-dimethyl	Dichlorvos	Famphur
Benodanil	Chlozolate	Dicloran	Fenarimol
Bifenthrin	Clomazone	Dicrotophos	Fenchlorphos
Binapacryl	Coumaphos	Dieldrin	Fenoxycarb
Bitertanol	Cyanazine	Difenoconazole-cis	Fenpiclonil
Bromacil	Cyfluthrin	Difenoconazole-trans	Fenpropathrin
Bromophos-ethyl	Cyhalothrin-g	Dimethenamid	Fenpropimorph
Bromophos(-methyl)	Cyhalothrin-l	Dimethoate	Fensulfothion
Bromopropylate	Cyproconazole	Dimethomorph	Fenthion
Bupirimate	DDD, 4,4'	Diphenamid	Fenvalerate
Buprofezin	DDD, 2,4'	Disulfoton	Fipronil

Flamprop-methyl	Isofenphos	Parathion-methyl	Pyrazophos
Fluazifop-butyl	Isoproturon	Penconazole	Pyriproxyfen
Fluazinam	Kresoxim-methyl	Pendimethalin	Quizalofop-ethyl
Fludioxonil	Lindane	Permethrin-cis	Sethoxydim
Fluometuron	Linuron	Permethrin-trans	Simazine
Flusilazole	Metalaxyl	Phorate	Tebuconazole
Flutriafol	Methacrifos	Phorate sulphoxide	Tebufenpyrad
Fluvalinate-DL	Methidathion	Phosalone	Terbacil
Fluvalinate-D	Methiocarb	Phosmet	Trebumeton
Folpet	Metolachlor	Phosphamidon-a	Terbutryn
Furalaxyl	Metribuzin	Phosphamidon-b	Tetrachlorvinphos
Furathiocarb	Mevinphos	Pirimicarb	Tetradifon
Halxyfop-methyl	Monocrotophos	Prochloraz	Thiometon
HCB	Napropamide	Prometryn	Tolclofos-methyl
Heptachlor	Nitrofen	Propachlor	Tolyfluanid
Heptachlor endo epoxide	Nitrothal-isopropyl	Propazine	Tralkoxydim
Heptachlor exo epoxide	Norflurazon	Propetamphos	Triademefon
Heptenophos	Omethoate	Propham	Triademenol
Hexaconazole	Oxadiazon	Propiconazole-cis	Triallate
Hexazinone	Oxadixyl	Propiconazole-trans	Triazophos
Indoxacarb	Oxyfluorfen	Propoxur	Trifloxystrobin
Iodophenphos	Paclobutrazol	Propyzamide	Trifluralin
Isazophos	Parathion(-ethyl)	Prothiophos	Vinclozolin

4.3.2 BHC - a

**Table 12 BHC - a residues (mg/kg) in foods in Q4 of 2003/04 NZTDS**

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	ND	ND	ND	ND
Apricot, canned	ND	ND	ND	ND
Banana	ND	ND	ND	ND
Beans	ND	ND	ND	ND
Beans, baked, canned	ND	ND	ND	ND
Beer	ND	ND	ND	ND
Beetroot, canned	ND	ND	ND	ND
Biscuit, chocolate	ND	ND	ND	ND
Biscuit, cracker	ND	ND	ND	ND
Biscuits, plain sweet	ND	ND	ND	ND
Bran flake cereal, mixed	ND	ND	ND	ND
Caffeinated beverage	ND	ND	ND	ND
Carbonated drink	ND	ND	ND	ND
Cheese	ND	ND	ND	ND
Chicken	ND	ND	ND	ND
Chocolate beverage	ND	ND	ND	ND
Chocolate, plain milk	ND	ND	ND	ND
Coffee, instant	ND	ND	ND	ND
Confectionery	ND	ND	ND	ND
Corn, canned	ND	ND	ND	ND
Cornflakes	ND	ND	ND	ND
Dairy dessert	ND	ND	ND	ND
Fish fingers	ND	ND	ND	ND
Fish, canned	ND	ND	ND	ND
Fruit drink	ND	ND	ND	ND
Honey	ND	ND	ND	ND
Icecream	ND	ND	ND	ND
Infant & Follow on formula	ND	ND	ND	ND
Infant weaning food, cereal based	ND	ND	ND	ND
Infant weaning food, custard/fruit dish	ND	ND	ND	ND
Infant weaning food, savoury	ND	ND	ND	ND
Jam	ND	ND	ND	ND
Margarine	ND	ND	ND	ND
Muesli	ND	ND	ND	ND
Noodles, instant	ND	ND	ND	ND
Oats, rolled	ND	ND	ND	ND
Oil	ND	ND	ND	ND
Orange juice	ND	ND	ND	ND

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	ND	ND	ND	ND
Peaches, canned	ND	ND	ND	ND
Peanut butter	ND	ND	ND	ND
Peanuts, whole	ND	ND	ND	0.006
Peas	ND	ND	ND	ND
Pineapple, canned	ND	ND	ND	ND
Potato crisps	ND	ND	ND	ND
Prunes	ND	ND	ND	ND
Raisin/sultana	ND	ND	ND	ND
Rice, white	ND	ND	ND	ND
Salad dressing	ND	ND	ND	ND
Snack bars	ND	ND	ND	ND
Snacks, flavoured	ND	ND	ND	ND
Soup, chicken	ND	ND	ND	ND
Soy milk	ND	ND	ND	ND
Spaghetti in sauce, canned	ND	ND	ND	ND
Sugar	ND	ND	ND	ND
Tea	ND	ND	ND	ND
Tomato sauce	ND	ND	ND	ND
Tomatoes in juice	ND	ND	ND	ND
Wheatbix	ND	ND	ND	ND
Wine, still red	ND	ND	ND	ND
Wine, still white	ND	ND	ND	ND
Yeast extract	ND	ND	ND	ND
Yoghurt	ND	ND	ND	ND

ND = not detected. Limit of reporting (LOR) for BHC - a = 0.010 mg/kg (most samples).

Note: Given limited sample numbers, comparisons between brand data are not appropriate.

### 4.3.3 BHC -b

**Table 13 BHC -b residues (mg/kg) in foods in Q4 of 2003/04 NZTDS**

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	ND	ND	ND	ND
Apricot, canned	ND	ND	ND	ND
Banana	ND	ND	ND	ND
Beans	ND	ND	ND	ND
Beans, baked, canned	ND	ND	ND	ND
Beer	ND	ND	ND	ND
Beetroot, canned	ND	ND	ND	ND
Biscuit, chocolate	ND	ND	ND	ND
Biscuit, cracker	ND	ND	ND	ND
Biscuits, plain sweet	ND	ND	ND	ND
Bran flake cereal, mixed	ND	ND	ND	ND
Caffeinated beverage	ND	ND	ND	ND
Carbonated drink	ND	ND	ND	ND
Cheese	ND	ND	ND	ND
Chicken	ND	ND	ND	ND
Chocolate beverage	ND	ND	ND	ND
Chocolate, plain milk	ND	ND	ND	ND
Coffee, instant	ND	ND	ND	ND
Confectionery	ND	ND	ND	ND
Corn, canned	ND	ND	ND	ND
Cornflakes	ND	ND	ND	ND
Dairy dessert	ND	ND	ND	ND
Fish fingers	ND	ND	ND	ND
Fish, canned	ND	ND	ND	ND
Fruit drink	ND	ND	ND	ND
Honey	ND	ND	ND	ND
Icecream	ND	ND	ND	ND
Infant & Follow on formula	ND	ND	ND	ND
Infant weaning food, cereal based	ND	ND	ND	ND
Infant weaning food, custard/fruit dish	ND	ND	ND	ND
Infant weaning food, savoury	ND	ND	ND	ND
Jam	ND	ND	ND	ND
Margarine	ND	ND	ND	ND
Muesli	ND	ND	ND	ND
Noodles, instant	ND	ND	ND	ND
Oats, rolled	ND	ND	ND	ND
Oil	ND	ND	ND	ND
Orange juice	ND	ND	ND	ND

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	ND	ND	ND	ND
Peaches, canned	ND	ND	ND	ND
Peanut butter	ND	ND	ND	ND
Peanuts, whole	ND	ND	ND	0.020
Peas	ND	ND	ND	ND
Pineapple, canned	ND	ND	ND	ND
Potato crisps	ND	ND	ND	ND
Prunes	ND	ND	ND	ND
Raisin/sultana	ND	ND	ND	ND
Rice, white	ND	ND	ND	ND
Salad dressing	ND	ND	ND	ND
Snack bars	ND	ND	ND	ND
Snacks, flavoured	ND	ND	ND	ND
Soup, chicken	ND	ND	ND	ND
Soy milk	ND	ND	ND	ND
Spaghetti in sauce, canned	ND	ND	ND	ND
Sugar	ND	ND	ND	ND
Tea	ND	ND	ND	ND
Tomato sauce	ND	ND	ND	ND
Tomatoes in juice	ND	ND	ND	ND
Wheatbix	ND	ND	ND	ND
Wine, still red	ND	ND	ND	ND
Wine, still white	ND	ND	ND	ND
Yeast extract	ND	ND	ND	ND
Yoghurt	ND	ND	ND	ND

ND = not detected. Limit of reporting (LOR) for BHC - b = 0.010 mg/kg (most samples).  
The LOR does vary with different matrices.

Note: Given limited sample numbers, comparisons between brand data are not appropriate.

#### 4.3.4 Captan

**Table 14      Captan residues (mg/kg) in foods in Q4 of 2003/04 NZTDS**

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	ND	ND	ND	ND
Apricot, canned	ND	ND	ND	ND
Banana	ND	ND	ND	ND
Beans	ND	ND	ND	ND
Beans, baked, canned	ND	ND	ND	ND
Beer	ND	ND	ND	ND
Beetroot, canned	ND	ND	ND	ND
Biscuit, chocolate	ND	ND	ND	ND
Biscuit, cracker	ND	ND	ND	ND
Biscuits, plain sweet	ND	ND	ND	ND
Bran flake cereal, mixed	ND	ND	ND	ND
Caffeinated beverage	ND	ND	ND	ND
Carbonated drink	ND	ND	ND	ND
Cheese	ND	ND	ND	ND
Chicken	ND	ND	ND	ND
Chocolate beverage	ND	ND	ND	ND
Chocolate, plain milk	ND	ND	ND	ND
Coffee, instant	ND	ND	ND	ND
Confectionery	ND	ND	ND	ND
Corn, canned	ND	ND	ND	ND
Cornflakes	ND	ND	ND	ND
Dairy dessert	ND	ND	ND	ND
Fish fingers	ND	ND	ND	ND
Fish, canned	ND	ND	ND	ND
Fruit drink	ND	ND	ND	ND
Honey	ND	ND	ND	ND
Icecream	ND	ND	ND	ND
Infant & Follow on formula	ND	ND	ND	ND
Infant weaning food, cereal based	ND	ND	ND	ND
Infant weaning food, custard/fruit dish	ND	ND	ND	ND
Infant weaning food, savoury	ND	ND	ND	ND
Jam	ND	ND	ND	ND
Margarine	ND	ND	ND	ND
Muesli	ND	ND	ND	ND
Noodles, instant	ND	ND	ND	ND
Oats, rolled	ND	ND	ND	ND
Oil	ND	ND	ND	ND
Orange juice	ND	ND	ND	ND

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	ND	ND	ND	ND
Peaches, canned	ND	ND	ND	ND
Peanut butter	ND	ND	ND	ND
Peanuts, whole	ND	ND	ND	ND
Peas	ND	ND	ND	ND
Pineapple, canned	ND	ND	ND	ND
Potato crisps	ND	ND	ND	ND
Prunes	ND	ND	ND	ND
Raisin/sultana	ND	0.039	ND	ND
Rice, white	ND	ND	ND	ND
Salad dressing	ND	ND	ND	ND
Snack bars	ND	ND	ND	ND
Snacks, flavoured	ND	ND	ND	ND
Soup, chicken	ND	ND	ND	ND
Soy milk	ND	ND	ND	ND
Spaghetti in sauce, canned	ND	ND	ND	ND
Sugar	ND	ND	ND	ND
Tea	ND	ND	ND	ND
Tomato sauce	ND	ND	ND	ND
Tomatoes in juice	ND	ND	ND	ND
Wheatbix	ND	ND	ND	ND
Wine, still red	ND	ND	ND	ND
Wine, still white	ND	ND	ND	ND
Yeast extract	ND	ND	ND	ND
Yoghurt	ND	ND	ND	ND

ND = not detected. Limit of reporting (LOR) for Captan = 0.010 mg/kg (most samples). The LOR does vary with different matrices.

Note: Given limited sample numbers, comparisons between brand data are not appropriate.



#### 4.3.5 Carbaryl

**Table 15 Carbaryl residues (mg/kg) in foods in Q4 of 2003/04 NZTDS**

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	ND	ND	ND	ND
Apricot, canned	ND	0.010	ND	ND
Banana	ND	ND	ND	ND
Beans	ND	ND	ND	ND
Beans, baked, canned	ND	ND	ND	ND
Beer	ND	ND	ND	ND
Beetroot, canned	ND	ND	ND	ND
Biscuit, chocolate	ND	ND	ND	ND
Biscuit, cracker	ND	ND	ND	ND
Biscuits, plain sweet	ND	ND	ND	ND
Bran flake cereal, mixed	ND	ND	ND	ND
Caffeinated beverage	ND	ND	ND	ND
Carbonated drink	ND	ND	ND	ND
Cheese	ND	ND	ND	ND
Chicken	ND	ND	ND	ND
Chocolate beverage	ND	ND	ND	ND
Chocolate, plain milk	ND	ND	ND	ND
Coffee, instant	ND	ND	ND	ND
Confectionery	ND	ND	ND	ND
Corn, canned	ND	ND	ND	ND
Cornflakes	ND	ND	ND	ND
Dairy dessert	ND	ND	ND	ND
Fish fingers	ND	ND	ND	ND
Fish, canned	ND	ND	ND	ND
Fruit drink	ND	ND	ND	ND
Honey	ND	ND	ND	ND
Icecream	ND	ND	ND	ND
Infant & Follow on formula	ND	ND	ND	ND
Infant weaning food, cereal based	ND	ND	0.003	ND
Infant weaning food, custard/fruit dish	ND	ND	ND	ND
Infant weaning food, savoury	ND	ND	ND	ND
Jam	ND	ND	ND	ND
Margarine	ND	ND	ND	ND
Muesli	ND	ND	ND	ND
Noodles, instant	ND	ND	ND	ND
Oats, rolled	ND	ND	ND	ND
Oil	ND	ND	ND	ND
Orange juice	ND	ND	ND	ND

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	ND	ND	ND	ND
Peaches, canned	0.046	ND	0.064	ND
Peanut butter	ND	ND	ND	ND
Peanuts, whole	ND	ND	ND	ND
Peas	ND	ND	ND	ND
Pineapple, canned	ND	ND	ND	ND
Potato crisps	ND	ND	ND	ND
Prunes	ND	ND	ND	ND
Raisin/sultana	ND	0.146	ND	ND
Rice, white	ND	ND	ND	ND
Salad dressing	ND	ND	ND	ND
Snack bars	ND	ND	ND	ND
Snacks, flavoured	ND	ND	ND	ND
Soup, chicken	ND	ND	ND	ND
Soy milk	ND	ND	ND	ND
Spaghetti in sauce, canned	ND	ND	ND	ND
Sugar	ND	ND	ND	ND
Tea	ND	ND	ND	ND
Tomato sauce	ND	ND	ND	ND
Tomatoes in juice	ND	ND	ND	ND
Wheatbix	ND	ND	ND	ND
Wine, still red	ND	ND	0.029	ND
Wine, still white	ND	ND	ND	ND
Yeast extract	ND	ND	ND	ND
Yoghurt	ND	ND	ND	ND

ND = not detected. Limit of reporting (LOR) for carbaryl = 0.006 mg/kg (most samples). The LOR does vary with different matrices.

Note: Given limited sample numbers, comparisons between brand data are not appropriate.

#### 4.3.6 Chlorpropham

**Table 16 Chlorpropham residues (mg/kg) in foods in Q4 of 2003/04 NZTDS**

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	ND	ND	ND	ND
Apricot, canned	ND	ND	ND	ND
Banana	ND	ND	ND	ND
Beans	ND	ND	ND	ND
Beans, baked, canned	ND	ND	ND	ND
Beer	ND	ND	ND	ND
Beetroot, canned	ND	ND	ND	ND
Biscuit, chocolate	ND	ND	ND	ND
Biscuit, cracker	ND	ND	ND	ND
Biscuits, plain sweet	ND	ND	ND	ND
Bran flake cereal, mixed	ND	ND	ND	ND
Caffeinated beverage	ND	ND	ND	ND
Carbonated drink	ND	ND	ND	ND
Cheese	ND	ND	ND	ND
Chicken	ND	ND	ND	ND
Chocolate beverage	ND	ND	ND	ND
Chocolate, plain milk	ND	ND	ND	ND
Coffee, instant	ND	ND	ND	ND
Confectionery	ND	ND	ND	ND
Corn, canned	ND	ND	ND	ND
Cornflakes	ND	ND	ND	ND
Dairy dessert	ND	ND	ND	ND
Fish fingers	ND	ND	ND	ND
Fish, canned	ND	ND	ND	ND
Fruit drink	ND	ND	ND	ND
Honey	ND	ND	ND	ND
Icecream	ND	ND	ND	ND
Infant & Follow on formula	ND	ND	ND	ND
Infant weaning food, cereal based	ND	ND	ND	ND
Infant weaning food, custard/fruit dish	ND	ND	ND	ND
Infant weaning food, savoury	ND	ND	ND	ND
Jam	ND	ND	ND	ND
Margarine	ND	ND	ND	ND
Muesli	ND	ND	ND	ND
Noodles, instant	ND	ND	ND	ND
Oats, rolled	ND	ND	ND	ND
Oil	ND	ND	ND	ND
Orange juice	ND	ND	ND	ND

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	ND	ND	ND	ND
Peaches, canned	ND	ND	ND	ND
Peanut butter	ND	ND	ND	ND
Peanuts, whole	ND	ND	ND	ND
Peas	ND	ND	ND	ND
Pineapple, canned	ND	ND	ND	ND
Potato crisps	ND	ND	ND	0.038
Prunes	ND	ND	ND	ND
Raisin/sultana	ND	ND	ND	ND
Rice, white	ND	ND	ND	ND
Salad dressing	ND	ND	ND	ND
Snack bars	ND	ND	ND	ND
Snacks, flavoured	ND	ND	ND	ND
Soup, chicken	ND	ND	ND	ND
Soy milk	ND	ND	ND	ND
Spaghetti in sauce, canned	ND	ND	ND	ND
Sugar	ND	ND	ND	ND
Tea	ND	ND	ND	ND
Tomato sauce	ND	ND	ND	ND
Tomatoes in juice	ND	ND	ND	ND
Wheatbix	ND	ND	ND	ND
Wine, still red	ND	ND	ND	ND
Wine, still white	ND	ND	ND	ND
Yeast extract	ND	ND	ND	ND
Yoghurt	ND	ND	ND	ND

ND = not detected. Limit of reporting (LOR) for chlorpropham = 0.010 mg/kg (most samples). The LOR does vary with different matrices.

Note: Given limited sample numbers, comparisons between brand data are not appropriate.

#### 4.3.7 Chlorpyrifos

**Table 17 Chlorpyrifos residues (mg/kg) in foods in Q4 of 2003/04 NZTDS**

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	ND	ND	ND	ND
Apricot, canned	ND	ND	ND	ND
Banana	ND	ND	ND	ND
Beans	ND	ND	ND	ND
Beans, baked, canned	ND	ND	ND	ND
Beer	ND	ND	ND	ND
Beetroot, canned	ND	ND	ND	ND
Biscuit, chocolate	ND	ND	ND	ND
Biscuit, cracker	ND	ND	ND	ND
Biscuits, plain sweet	ND	ND	ND	ND
Bran flake cereal, mixed	ND	ND	ND	ND
Caffeinated beverage	ND	ND	ND	ND
Carbonated drink	ND	ND	ND	ND
Cheese	ND	ND	ND	ND
Chicken	ND	ND	ND	ND
Chocolate beverage	ND	ND	ND	ND
Chocolate, plain milk	ND	ND	ND	ND
Coffee, instant	ND	ND	ND	ND
Confectionery	ND	ND	ND	ND
Corn, canned	ND	ND	ND	ND
Cornflakes	ND	ND	ND	ND
Dairy dessert	ND	ND	ND	ND
Fish fingers	ND	ND	ND	ND
Fish, canned	ND	ND	ND	ND
Fruit drink	ND	ND	ND	ND
Honey	ND	ND	ND	ND
Icecream	ND	ND	ND	ND
Infant & Follow on formula	ND	ND	ND	ND
Infant weaning food, cereal based	ND	ND	ND	ND
Infant weaning food, custard/fruit dish	ND	ND	ND	ND
Infant weaning food, savoury	ND	ND	ND	ND
Jam	ND	ND	ND	ND
Margarine	ND	ND	ND	ND
Muesli	ND	ND	ND	ND
Noodles, instant	ND	ND	ND	ND
Oats, rolled	ND	ND	ND	ND
Oil	ND	ND	ND	ND
Orange juice	ND	ND	ND	ND

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	ND	ND	ND	ND
Peaches, canned	ND	ND	ND	ND
Peanut butter	ND	ND	ND	ND
Peanuts, whole	ND	ND	ND	ND
Peas	ND	ND	ND	ND
Pineapple, canned	ND	ND	ND	ND
Potato crisps	ND	ND	ND	ND
Prunes	ND	ND	ND	ND
Raisin/sultana	0.013	0.011	0.011	ND
Rice, white	ND	ND	ND	ND
Salad dressing	ND	ND	ND	ND
Snack bars	0.006	ND	ND	ND
Snacks, flavoured	ND	ND	ND	ND
Soup, chicken	ND	ND	ND	ND
Soy milk	ND	ND	ND	ND
Spaghetti in sauce, canned	ND	ND	ND	ND
Sugar	ND	ND	ND	ND
Tea	ND	ND	ND	ND
Tomato sauce	ND	ND	ND	ND
Tomatoes in juice	ND	ND	ND	ND
Wheatbix	ND	ND	ND	ND
Wine, still red	ND	ND	ND	ND
Wine, still white	ND	ND	ND	ND
Yeast extract	ND	ND	ND	ND
Yoghurt	ND	ND	ND	ND

ND = not detected. Limit of reporting (LOR) for chlorpyrifos = 0.006 mg/kg (most samples). The LOR does vary with different matrices.

Note: Given limited sample numbers, comparisons between brand data are not appropriate.

#### 4.3.8 Chlorpyriphos-methyl

**Table 18 Chlorpyriphos-methyl residues (mg/kg) in foods in Q4 of 2003/04 NZTDS**

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	ND	ND	ND	ND
Apricot, canned	ND	ND	ND	ND
Banana	ND	ND	ND	ND
Beans	ND	ND	ND	ND
Beans, baked, canned	ND	ND	ND	ND
Beer	ND	ND	ND	ND
Beetroot, canned	ND	ND	ND	ND
Biscuit, chocolate	ND	0.044	ND	ND
Biscuit, cracker	0.044	0.029	0.023	0.015
Biscuits, plain sweet	ND	0.006	0.121	0.006
Bran flake cereal, mixed	ND	ND	ND	0.028
Caffeinated beverage	ND	ND	ND	ND
Carbonated drink	ND	ND	ND	ND
Cheese	ND	ND	ND	ND
Chicken	ND	0.012	0.006	ND
Chocolate beverage	ND	ND	ND	ND
Chocolate, plain milk	ND	ND	ND	ND
Coffee, instant	ND	ND	ND	ND
Confectionery	ND	ND	ND	ND
Corn, canned	ND	ND	ND	ND
Cornflakes	ND	ND	ND	ND
Dairy dessert	ND	ND	ND	ND
Fish fingers	ND	ND	ND	ND
Fish, canned	ND	ND	ND	ND
Fruit drink	ND	ND	ND	ND
Honey	ND	ND	ND	ND
Icecream	ND	ND	ND	ND
Infant & Follow on formula	ND	ND	ND	ND
Infant weaning food, cereal based	ND	ND	ND	ND
Infant weaning food, custard/fruit dish	ND	ND	ND	ND
Infant weaning food, savoury	ND	ND	ND	ND
Jam	ND	ND	ND	ND
Margarine	ND	ND	ND	ND
Muesli	ND	ND	ND	ND
Noodles, instant	ND	ND	ND	ND
Oats, rolled	ND	ND	ND	ND
Oil	ND	ND	ND	ND
Orange juice	ND	ND	ND	ND

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	ND	0.011	ND	ND
Peaches, canned	ND	ND	ND	ND
Peanut butter	ND	ND	ND	ND
Peanuts, whole	ND	ND	ND	ND
Peas	ND	ND	ND	ND
Pineapple, canned	ND	ND	ND	ND
Potato crisps	ND	ND	ND	ND
Prunes	ND	ND	ND	ND
Raisin/sultana	ND	ND	ND	ND
Rice, white	ND	ND	ND	ND
Salad dressing	ND	ND	ND	ND
Snack bars	0.069	ND	0.049	ND
Snacks, flavoured	ND	ND	ND	ND
Soup, chicken	ND	ND	ND	ND
Soy milk	ND	ND	ND	ND
Spaghetti in sauce, canned	ND	ND	ND	ND
Sugar	ND	ND	ND	ND
Tea	ND	ND	ND	ND
Tomato sauce	ND	ND	ND	ND
Tomatoes in juice	ND	ND	ND	ND
Wheatbix	ND	ND	ND	ND
Wine, still red	ND	ND	ND	ND
Wine, still white	ND	ND	ND	ND
Yeast extract	ND	ND	ND	ND
Yoghurt	ND	ND	ND	ND

ND = not detected. Limit of reporting (LOR) for chlorpyrifos-methyl = 0.006 mg/kg (most samples). The LOR does vary with different matrices.

Note: Given limited sample numbers, comparisons between brand data are not appropriate.



#### 4.3.9 Cypermethrin

**Table 19 Cypermethrin residues (mg/kg) in foods in Q4 of 2003/04 NZTDS**

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	ND	ND	ND	ND
Apricot, canned	ND	ND	ND	ND
Banana	ND	ND	ND	ND
Beans	ND	ND	ND	ND
Beans, baked, canned	ND	ND	ND	ND
Beer	ND	ND	ND	ND
Beetroot, canned	ND	ND	ND	ND
Biscuit, chocolate	ND	ND	ND	ND
Biscuit, cracker	ND	ND	ND	ND
Biscuits, plain sweet	ND	ND	ND	ND
Bran flake cereal, mixed	ND	ND	ND	ND
Caffeinated beverage	ND	ND	ND	ND
Carbonated drink	ND	ND	ND	ND
Cheese	ND	ND	ND	ND
Chicken	ND	ND	ND	ND
Chocolate beverage	ND	ND	ND	ND
Chocolate, plain milk	ND	ND	ND	ND
Coffee, instant	ND	ND	ND	ND
Confectionery	ND	ND	ND	ND
Corn, canned	ND	ND	ND	ND
Cornflakes	ND	ND	ND	ND
Dairy dessert	ND	ND	ND	ND
Fish fingers	ND	ND	ND	ND
Fish, canned	ND	ND	ND	ND
Fruit drink	ND	ND	ND	ND
Honey	ND	ND	ND	ND
Icecream	ND	ND	ND	ND
Infant & Follow on formula	ND	ND	ND	ND
Infant weaning food, cereal based	ND	ND	ND	ND
Infant weaning food, custard/fruit dish	ND	ND	ND	ND
Infant weaning food, savoury	ND	ND	ND	ND
Jam	ND	ND	ND	ND
Margarine	ND	ND	ND	ND
Muesli	ND	ND	ND	ND
Noodles, instant	ND	ND	ND	ND
Oats, rolled	ND	ND	ND	ND
Oil	ND	ND	ND	ND
Orange juice	ND	ND	ND	ND

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	ND	ND	ND	ND
Peaches, canned	ND	ND	ND	ND
Peanut butter	ND	ND	ND	ND
Peanuts, whole	ND	ND	ND	ND
Peas	ND	ND	ND	ND
Pineapple, canned	ND	ND	ND	ND
Potato crisps	ND	ND	ND	ND
Prunes	ND	ND	ND	ND
Raisin/sultana	0.015	0.023	ND	ND
Rice, white	ND	ND	ND	ND
Salad dressing	ND	ND	ND	ND
Snack bars	ND	ND	ND	ND
Snacks, flavoured	ND	ND	ND	ND
Soup, chicken	ND	ND	ND	ND
Soy milk	ND	ND	ND	ND
Spaghetti in sauce, canned	ND	ND	ND	ND
Sugar	ND	ND	ND	ND
Tea	ND	ND	ND	ND
Tomato sauce	ND	ND	ND	ND
Tomatoes in juice	ND	ND	ND	ND
Wheatbix	ND	ND	ND	ND
Wine, still red	ND	ND	ND	ND
Wine, still white	ND	ND	ND	ND
Yeast extract	ND	ND	ND	ND
Yoghurt	ND	ND	ND	ND

ND = not detected. Limit of reporting (LOR) for cypermethrin = 0.010 mg/kg (most samples). The LOR does vary with different matrices.

Note: Given limited sample numbers, comparisons between brand data are not appropriate.

#### 4.3.10 Cyprodinil

**Table 20** Cyprodinil residues (mg/kg) in foods in Q4 of 2003/04 NZTDS

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	ND	ND	ND	ND
Apricot, canned	ND	ND	ND	ND
Banana	ND	ND	ND	ND
Beans	ND	ND	ND	ND
Beans, baked, canned	ND	ND	ND	ND
Beer	ND	ND	ND	ND
Beetroot, canned	ND	ND	ND	ND
Biscuit, chocolate	ND	ND	ND	ND
Biscuit, cracker	ND	ND	ND	ND
Biscuits, plain sweet	ND	ND	ND	ND
Bran flake cereal, mixed	ND	ND	ND	ND
Caffeinated beverage	ND	ND	ND	ND
Carbonated drink	ND	ND	ND	ND
Cheese	ND	ND	ND	ND
Chicken	ND	ND	ND	ND
Chocolate beverage	ND	ND	ND	ND
Chocolate, plain milk	ND	ND	ND	ND
Coffee, instant	ND	ND	ND	ND
Confectionery	ND	ND	ND	ND
Corn, canned	ND	ND	ND	ND
Cornflakes	ND	ND	ND	ND
Dairy dessert	ND	ND	ND	ND
Fish fingers	ND	ND	ND	ND
Fish, canned	ND	ND	ND	ND
Fruit drink	ND	ND	ND	ND
Honey	ND	ND	ND	ND
Icecream	ND	ND	ND	ND
Infant & Follow on formula	ND	ND	ND	ND
Infant weaning food, cereal based	ND	ND	ND	ND
Infant weaning food, custard/fruit dish	ND	ND	ND	ND
Infant weaning food, savoury	ND	ND	ND	ND
Jam	ND	ND	ND	ND
Margarine	ND	ND	ND	ND
Muesli	ND	ND	ND	ND
Noodles, instant	ND	ND	ND	ND
Oats, rolled	ND	ND	ND	ND
Oil	ND	ND	ND	ND
Orange juice	ND	ND	ND	ND

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	ND	ND	ND	ND
Peaches, canned	ND	ND	ND	ND
Peanut butter	ND	ND	ND	ND
Peanuts, whole	ND	ND	ND	ND
Peas	ND	ND	ND	ND
Pineapple, canned	ND	ND	ND	ND
Potato crisps	ND	ND	ND	ND
Prunes	ND	ND	ND	ND
Raisin/sultana	ND	0.044	ND	ND
Rice, white	ND	ND	ND	ND
Salad dressing	ND	ND	ND	ND
Snack bars	0.006	ND	ND	ND
Snacks, flavoured	ND	ND	ND	ND
Soup, chicken	ND	ND	ND	ND
Soy milk	ND	ND	ND	ND
Spaghetti in sauce, canned	ND	ND	ND	ND
Sugar	ND	ND	ND	ND
Tea	ND	ND	ND	ND
Tomato sauce	ND	ND	ND	ND
Tomatoes in juice	ND	ND	ND	ND
Wheatbix	ND	ND	ND	ND
Wine, still red	ND	ND	ND	ND
Wine, still white	ND	ND	ND	ND
Yeast extract	ND	ND	ND	ND
Yoghurt	ND	ND	ND	ND

ND = not detected. Limit of reporting (LOR) for cyprodonil = 0.003 mg/kg (most samples). The LOR does vary with different matrices.

Note: Given limited sample numbers, comparisons between brand data are not appropriate.

## 4.3.11 DDE, 4,4'

**Table 21 DDE, 4,4' residues (mg/kg) in foods in Q4 of 2003/04 NZTDS**

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	ND	ND	ND	ND
Apricot, canned	ND	ND	ND	ND
Banana	ND	ND	ND	ND
Beans	ND	ND	ND	ND
Beans, baked, canned	ND	ND	ND	ND
Beer	ND	ND	ND	ND
Beetroot, canned	ND	ND	ND	ND
Biscuit, chocolate	ND	ND	ND	ND
Biscuit, cracker	ND	ND	ND	ND
Biscuits, plain sweet	ND	ND	ND	ND
Bran flake cereal, mixed	ND	ND	ND	ND
Caffeinated beverage	ND	ND	ND	ND
Carbonated drink	ND	ND	ND	ND
Cheese	0.007	0.006	0.007	0.010
Chicken	0.006	ND	ND	ND
Chocolate beverage	ND	ND	ND	ND
Chocolate, plain milk	ND	ND	ND	0.007
Coffee, instant	ND	ND	ND	ND
Confectionery	ND	ND	ND	ND
Corn, canned	ND	ND	ND	ND
Cornflakes	ND	ND	ND	ND
Dairy dessert	ND	ND	ND	ND
Fish fingers	ND	ND	ND	ND
Fish, canned	ND	ND	ND	ND
Fruit drink	ND	ND	ND	ND
Honey	ND	ND	ND	ND
Icecream	0.005	0.007	0.007	0.007
Infant & Follow on formula	ND	ND	ND	ND
Infant weaning food, cereal based	ND	ND	ND	ND
Infant weaning food, custard/fruit dish	ND	ND	ND	ND
Infant weaning food, savoury	ND	ND	ND	ND
Jam	ND	ND	ND	ND
Margarine	ND	ND	ND	ND
Muesli	ND	ND	ND	ND
Noodles, instant	ND	ND	ND	ND
Oats, rolled	ND	ND	ND	ND
Oil	ND	ND	ND	ND
Orange juice	ND	ND	ND	ND

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	ND	ND	ND	ND
Peaches, canned	ND	ND	ND	ND
Peanut butter	ND	ND	ND	ND
Peanuts, whole	ND	ND	ND	ND
Peas	ND	ND	ND	ND
Pineapple, canned	ND	ND	ND	ND
Potato crisps	ND	ND	ND	ND
Prunes	ND	ND	ND	ND
Raisin/sultana	ND	ND	ND	ND
Rice, white	ND	ND	ND	ND
Salad dressing	ND	ND	ND	ND
Snack bars	ND	ND	ND	ND
Snacks, flavoured	ND	ND	ND	ND
Soup, chicken	ND	ND	ND	ND
Soy milk	ND	ND	ND	ND
Spaghetti in sauce, canned	ND	ND	ND	ND
Sugar	ND	ND	ND	ND
Tea	ND	ND	ND	ND
Tomato sauce	ND	ND	ND	ND
Tomatoes in juice	ND	ND	ND	ND
Wheatbix	ND	ND	ND	ND
Wine, still red	ND	ND	ND	ND
Wine, still white	ND	ND	ND	ND
Yeast extract	ND	ND	ND	ND
Yoghurt	ND	ND	ND	ND

ND = not detected. Limit of reporting (LOR) for DDE, 4,4' = 0.005 mg/kg (most samples).  
The LOR does vary with different matrices.

Note: Given limited sample numbers, comparisons between brand data are not appropriate.

4.3.12 Dicofol**Table 22 Dicofol residues (mg/kg) in foods in Q4 of 2003/04 NZTDS**

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	ND	ND	ND	ND
Apricot, canned	ND	ND	ND	ND
Banana	ND	ND	ND	ND
Beans	ND	ND	ND	ND
Beans, baked, canned	ND	ND	ND	ND
Beer	ND	ND	ND	ND
Beetroot, canned	ND	ND	ND	ND
Biscuit, chocolate	ND	ND	ND	ND
Biscuit, cracker	ND	ND	ND	ND
Biscuits, plain sweet	ND	ND	ND	ND
Bran flake cereal, mixed	ND	ND	ND	ND
Caffeinated beverage	ND	ND	ND	ND
Carbonated drink	ND	ND	ND	ND
Cheese	ND	ND	ND	ND
Chicken	ND	ND	ND	ND
Chocolate beverage	ND	ND	ND	ND
Chocolate, plain milk	ND	ND	ND	ND
Coffee, instant	ND	ND	ND	ND
Confectionery	ND	ND	ND	ND
Corn, canned	ND	ND	ND	ND
Cornflakes	ND	ND	ND	ND
Dairy dessert	ND	ND	ND	ND
Fish fingers	ND	ND	ND	ND
Fish, canned	ND	ND	ND	ND
Fruit drink	ND	ND	ND	ND
Honey	ND	ND	ND	ND
Icecream	ND	ND	ND	ND
Infant & Follow on formula	ND	ND	ND	ND
Infant weaning food, cereal based	ND	ND	ND	ND
Infant weaning food, custard/fruit dish	ND	ND	ND	ND
Infant weaning food, savoury	ND	ND	ND	ND
Jam	ND	ND	ND	ND
Margarine	ND	ND	ND	ND
Muesli	ND	ND	ND	ND
Noodles, instant	ND	ND	ND	ND
Oats, rolled	ND	ND	ND	ND
Oil	ND	ND	ND	ND
Orange juice	ND	ND	ND	ND

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	ND	ND	ND	ND
Peaches, canned	ND	ND	ND	ND
Peanut butter	ND	ND	ND	ND
Peanuts, whole	ND	ND	ND	ND
Peas	ND	ND	ND	ND
Pineapple, canned	ND	ND	ND	ND
Potato crisps	ND	ND	ND	ND
Prunes	ND	ND	ND	ND
Raisin/sultana	0.039	0.129	ND	ND
Rice, white	ND	ND	ND	ND
Salad dressing	ND	ND	ND	ND
Snack bars	ND	ND	ND	ND
Snacks, flavoured	ND	ND	ND	ND
Soup, chicken	ND	ND	ND	ND
Soy milk	ND	ND	ND	ND
Spaghetti in sauce, canned	ND	ND	ND	ND
Sugar	ND	ND	ND	ND
Tea	ND	ND	ND	ND
Tomato sauce	ND	ND	ND	ND
Tomatoes in juice	ND	ND	ND	ND
Wheatbix	ND	ND	ND	ND
Wine, still red	ND	ND	ND	ND
Wine, still white	ND	ND	ND	ND
Yeast extract	ND	ND	ND	ND
Yoghurt	ND	ND	ND	ND

ND = not detected. Limit of reporting (LOR) for dicofol = 0.010 mg/kg (most samples). The LOR does vary with different matrices.

Note: Given limited sample numbers, comparisons between brand data are not appropriate.



#### 4.3.13 Diflufenican

**Table 23 Diflufenican residues (mg/kg) in foods in Q4 of 2003/04 NZTDS**

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	ND	ND	ND	ND
Apricot, canned	ND	ND	ND	ND
Banana	ND	ND	ND	ND
Beans	ND	ND	ND	ND
Beans, baked, canned	ND	ND	ND	ND
Beer	ND	ND	ND	ND
Beetroot, canned	ND	ND	ND	ND
Biscuit, chocolate	ND	ND	ND	ND
Biscuit, cracker	ND	ND	ND	ND
Biscuits, plain sweet	ND	ND	ND	ND
Bran flake cereal, mixed	ND	ND	ND	ND
Caffeinated beverage	ND	ND	ND	ND
Carbonated drink	ND	ND	ND	ND
Cheese	ND	ND	ND	ND
Chicken	ND	ND	ND	ND
Chocolate beverage	ND	ND	ND	ND
Chocolate, plain milk	ND	ND	ND	ND
Coffee, instant	ND	ND	ND	ND
Confectionery	ND	ND	ND	ND
Corn, canned	ND	ND	ND	ND
Cornflakes	ND	ND	ND	ND
Dairy dessert	ND	ND	ND	ND
Fish fingers	ND	ND	ND	ND
Fish, canned	ND	ND	ND	ND
Fruit drink	ND	ND	ND	ND
Honey	ND	ND	ND	ND
Icecream	ND	ND	ND	ND
Infant & Follow on formula	ND	ND	ND	ND
Infant weaning food, cereal based	ND	ND	ND	ND
Infant weaning food, custard/fruit dish	ND	ND	ND	ND
Infant weaning food, savoury	ND	ND	ND	ND
Jam	ND	ND	ND	ND
Margarine	ND	ND	ND	ND
Muesli	ND	ND	ND	ND
Noodles, instant	ND	ND	ND	ND
Oats, rolled	ND	ND	ND	ND
Oil	ND	ND	0.014	ND
Orange juice	ND	ND	ND	ND

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	ND	ND	ND	ND
Peaches, canned	ND	ND	ND	ND
Peanut butter	ND	ND	ND	ND
Peanuts, whole	ND	ND	ND	ND
Peas	ND	ND	ND	ND
Pineapple, canned	ND	ND	ND	ND
Potato crisps	ND	ND	ND	ND
Prunes	ND	ND	ND	ND
Raisin/sultana	ND	ND	ND	ND
Rice, white	ND	ND	ND	ND
Salad dressing	ND	ND	ND	ND
Snack bars	ND	ND	ND	ND
Snacks, flavoured	ND	ND	ND	ND
Soup, chicken	ND	ND	ND	ND
Soy milk	ND	ND	ND	ND
Spaghetti in sauce, canned	ND	ND	ND	ND
Sugar	ND	ND	ND	ND
Tea	ND	ND	ND	ND
Tomato sauce	ND	ND	ND	ND
Tomatoes in juice	ND	ND	ND	ND
Wheatbix	ND	ND	ND	ND
Wine, still red	ND	ND	ND	ND
Wine, still white	ND	ND	ND	ND
Yeast extract	ND	ND	ND	ND
Yoghurt	ND	ND	ND	ND

ND = not detected. Limit of reporting diflufenican = 0.010 mg/kg (most samples). The LOR does vary with different matrices.

Note: Given limited sample numbers, comparisons between brand data are not appropriate.

#### 4.3.14 Diphenylamine

**Table 24 Diphenylamine residues (mg/kg) in foods in Q4 of 2003/04 NZTDS**

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	ND	ND	ND	ND
Apricot, canned	ND	ND	ND	0.002
Banana	ND	ND	ND	ND
Beans	ND	ND	ND	ND
Beans, baked, canned	ND	ND	ND	ND
Beer	ND	ND	ND	ND
Beetroot, canned	ND	ND	ND	ND
Biscuit, chocolate	ND	ND	ND	ND
Biscuit, cracker	ND	ND	ND	ND
Biscuits, plain sweet	ND	ND	ND	ND
Bran flake cereal, mixed	ND	ND	ND	ND
Caffeinated beverage	ND	ND	ND	0.015
Carbonated drink	ND	ND	ND	ND
Cheese	0.003	0.003	0.003	0.003
Chicken	ND	ND	ND	ND
Chocolate beverage	ND	ND	ND	ND
Chocolate, plain milk	ND	ND	ND	ND
Coffee, instant	ND	ND	ND	ND
Confectionery	ND	ND	ND	ND
Corn, canned	ND	ND	ND	ND
Cornflakes	ND	ND	ND	ND
Dairy dessert	ND	ND	ND	ND
Fish fingers	ND	ND	ND	ND
Fish, canned	ND	ND	ND	ND
Fruit drink	ND	ND	ND	ND
Honey	ND	ND	ND	ND
Icecream	ND	ND	ND	ND
Infant & Follow on formula	ND	ND	ND	ND
Infant weaning food, cereal based	ND	0.006	0.020	ND
Infant weaning food, custard/fruit dish	ND	0.005	ND	ND
Infant weaning food, savoury	ND	ND	ND	ND
Jam	ND	ND	ND	ND
Margarine	ND	ND	ND	ND
Muesli	ND	ND	ND	ND
Noodles, instant	ND	ND	ND	ND
Oats, rolled	ND	ND	ND	ND
Oil	ND	ND	ND	ND
Orange juice	ND	ND	ND	ND

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	ND	ND	ND	ND
Peaches, canned	ND	ND	ND	ND
Peanut butter	ND	0.003	0.006	0.003
Peanuts, whole	ND	ND	ND	ND
Peas	ND	ND	ND	ND
Pineapple, canned	ND	ND	ND	ND
Potato crisps	ND	ND	ND	ND
Prunes	ND	ND	ND	ND
Raisin/sultana	ND	ND	ND	ND
Rice, white	ND	ND	ND	ND
Salad dressing	ND	ND	ND	ND
Snack bars	ND	ND	ND	ND
Snacks, flavoured	ND	ND	ND	ND
Soup, chicken	ND	ND	ND	ND
Soy milk	ND	ND	ND	ND
Spaghetti in sauce, canned	ND	ND	ND	ND
Sugar	ND	ND	ND	ND
Tea	ND	ND	ND	ND
Tomato sauce	ND	ND	ND	ND
Tomatoes in juice	ND	ND	ND	ND
Wheatbix	ND	ND	ND	ND
Wine, still red	ND	ND	ND	ND
Wine, still white	ND	ND	ND	ND
Yeast extract	ND	ND	ND	ND
Yoghurt	ND	ND	ND	ND

ND = not detected. Limit of reporting diphenylamine = 0.002 mg/kg (most samples). The LOR does vary with different matrices.

Note: Given limited sample numbers, comparisons between brand data are not appropriate.

4.3.15 Endosulfan -a**Table 25** Endosulfan -a residues (mg/kg) in foods in Q4 of 2003/04 NZTDS

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	ND	ND	ND	ND
Apricot, canned	ND	ND	ND	ND
Banana	ND	ND	ND	ND
Beans	ND	ND	ND	ND
Beans, baked, canned	ND	ND	ND	ND
Beer	ND	ND	ND	ND
Beetroot, canned	ND	ND	ND	ND
Biscuit, chocolate	ND	ND	ND	ND
Biscuit, cracker	ND	ND	ND	ND
Biscuits, plain sweet	ND	ND	ND	ND
Bran flake cereal, mixed	ND	ND	ND	ND
Caffeinated beverage	ND	ND	ND	ND
Carbonated drink	ND	ND	ND	ND
Cheese	ND	ND	ND	ND
Chicken	ND	ND	ND	ND
Chocolate beverage	ND	ND	ND	ND
Chocolate, plain milk	ND	ND	ND	ND
Coffee, instant	ND	ND	ND	ND
Confectionery	ND	ND	ND	ND
Corn, canned	ND	ND	ND	ND
Cornflakes	ND	ND	ND	ND
Dairy dessert	ND	ND	ND	ND
Fish fingers	ND	ND	ND	ND
Fish, canned	ND	ND	ND	ND
Fruit drink	ND	ND	ND	ND
Honey	ND	ND	ND	ND
Icecream	ND	ND	ND	ND
Infant & Follow on formula	ND	ND	ND	ND
Infant weaning food, cereal based	ND	ND	ND	ND
Infant weaning food, custard/fruit dish	ND	ND	ND	ND
Infant weaning food, savoury	ND	ND	ND	ND
Jam	ND	ND	ND	ND
Margarine	ND	ND	ND	ND
Muesli	ND	ND	ND	ND
Noodles, instant	ND	ND	ND	ND
Oats, rolled	ND	ND	ND	ND
Oil	ND	ND	ND	ND
Orange juice	ND	ND	ND	ND

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	ND	ND	ND	ND
Peaches, canned	ND	ND	ND	ND
Peanut butter	ND	ND	ND	0.097
Peanuts, whole	ND	ND	ND	ND
Peas	ND	ND	ND	ND
Pineapple, canned	ND	ND	ND	ND
Potato crisps	ND	ND	ND	ND
Prunes	ND	ND	ND	ND
Raisin/sultana	ND	ND	ND	ND
Rice, white	ND	ND	ND	ND
Salad dressing	ND	ND	ND	ND
Snack bars	ND	ND	ND	ND
Snacks, flavoured	ND	ND	ND	ND
Soup, chicken	ND	ND	ND	ND
Soy milk	ND	ND	ND	ND
Spaghetti in sauce, canned	ND	ND	ND	ND
Sugar	ND	ND	ND	ND
Tea	ND	ND	ND	ND
Tomato sauce	ND	ND	ND	ND
Tomatoes in juice	ND	ND	ND	ND
Wheatbix	ND	ND	ND	ND
Wine, still red	ND	ND	ND	ND
Wine, still white	ND	ND	ND	ND
Yeast extract	ND	ND	ND	ND
Yoghurt	ND	ND	ND	ND

ND = not detected. Limit of reporting endosulfan -a = 0.010 mg/kg (most samples). The LOR does vary with different matrices.

Note: Given limited sample numbers, comparisons between brand data are not appropriate.

4.3.16 Endosulfan -b**Table 26** Endosulfan -b residues (mg/kg) in foods in Q4 of 2003/04 NZTDS

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	ND	ND	ND	ND
Apricot, canned	ND	ND	ND	ND
Banana	ND	ND	ND	ND
Beans	ND	ND	ND	ND
Beans, baked, canned	ND	ND	ND	ND
Beer	ND	ND	ND	ND
Beetroot, canned	ND	ND	ND	ND
Biscuit, chocolate	ND	ND	ND	ND
Biscuit, cracker	ND	ND	ND	ND
Biscuits, plain sweet	ND	ND	ND	ND
Bran flake cereal, mixed	ND	ND	ND	ND
Caffeinated beverage	ND	ND	ND	ND
Carbonated drink	ND	ND	ND	ND
Cheese	ND	ND	ND	ND
Chicken	ND	ND	ND	ND
Chocolate beverage	ND	ND	ND	ND
Chocolate, plain milk	ND	ND	ND	ND
Coffee, instant	ND	ND	ND	ND
Confectionery	ND	ND	ND	ND
Corn, canned	ND	ND	ND	ND
Cornflakes	ND	ND	ND	ND
Dairy dessert	ND	ND	ND	ND
Fish fingers	ND	ND	ND	ND
Fish, canned	ND	ND	ND	ND
Fruit drink	ND	ND	ND	ND
Honey	ND	ND	ND	ND
Icecream	ND	ND	ND	ND
Infant & Follow on formula	ND	ND	ND	ND
Infant weaning food, cereal based	ND	ND	ND	ND
Infant weaning food, custard/fruit dish	ND	ND	ND	ND
Infant weaning food, savoury	ND	ND	ND	ND
Jam	ND	ND	ND	ND
Margarine	ND	ND	ND	ND
Muesli	ND	ND	ND	ND
Noodles, instant	ND	ND	ND	ND
Oats, rolled	ND	ND	ND	ND
Oil	ND	ND	ND	ND
Orange juice	ND	ND	ND	ND

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	ND	ND	ND	ND
Peaches, canned	ND	ND	ND	ND
Peanut butter	ND	ND	ND	0.019
Peanuts, whole	ND	ND	ND	ND
Peas	ND	ND	ND	ND
Pineapple, canned	ND	ND	ND	ND
Potato crisps	ND	ND	ND	ND
Prunes	ND	ND	ND	ND
Raisin/sultana	ND	ND	ND	ND
Rice, white	ND	ND	ND	ND
Salad dressing	ND	ND	ND	ND
Snack bars	ND	ND	ND	ND
Snacks, flavoured	ND	ND	ND	ND
Soup, chicken	ND	ND	ND	ND
Soy milk	ND	ND	ND	ND
Spaghetti in sauce, canned	ND	ND	ND	ND
Sugar	ND	ND	ND	ND
Tea	ND	ND	ND	ND
Tomato sauce	ND	ND	ND	ND
Tomatoes in juice	ND	ND	ND	ND
Wheatbix	ND	ND	ND	ND
Wine, still red	ND	ND	ND	ND
Wine, still white	ND	ND	ND	ND
Yeast extract	ND	ND	ND	ND
Yoghurt	ND	ND	ND	ND

ND = not detected. Limit of reporting endosulfan -b = 0.010 mg/kg (most samples). The LOR does vary with different matrices.

Note: Given limited sample numbers, comparisons between brand data are not appropriate.



4.3.17 Endosulfan-sulphate**Table 27** Endosulfan-sulphate residues (mg/kg) in foods in Q4 of 2003/04 NZTDS

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	ND	ND	ND	ND
Apricot, canned	ND	ND	ND	ND
Banana	ND	ND	ND	ND
Beans	ND	ND	ND	ND
Beans, baked, canned	ND	ND	ND	ND
Beer	ND	ND	ND	ND
Beetroot, canned	ND	ND	ND	ND
Biscuit, chocolate	ND	ND	ND	ND
Biscuit, cracker	ND	ND	ND	ND
Biscuits, plain sweet	ND	ND	ND	ND
Bran flake cereal, mixed	ND	ND	ND	ND
Caffeinated beverage	ND	ND	ND	ND
Carbonated drink	ND	ND	ND	ND
Cheese	ND	ND	ND	ND
Chicken	ND	ND	ND	ND
Chocolate beverage	ND	ND	ND	ND
Chocolate, plain milk	ND	ND	ND	ND
Coffee, instant	ND	ND	ND	ND
Confectionery	ND	ND	ND	ND
Corn, canned	ND	ND	ND	ND
Cornflakes	ND	ND	ND	ND
Dairy dessert	ND	ND	ND	ND
Fish fingers	ND	ND	ND	ND
Fish, canned	ND	ND	ND	ND
Fruit drink	ND	ND	ND	ND
Honey	ND	ND	ND	ND
Icecream	ND	ND	ND	ND
Infant & Follow on formula	ND	ND	ND	ND
Infant weaning food, cereal based	ND	ND	ND	ND
Infant weaning food, custard/fruit dish	ND	ND	ND	ND
Infant weaning food, savoury	ND	ND	ND	ND
Jam	ND	ND	ND	ND
Margarine	ND	ND	ND	ND
Muesli	ND	ND	ND	ND
Noodles, instant	ND	ND	ND	ND
Oats, rolled	ND	ND	ND	ND
Oil	0.025	ND	0.145	0.040
Orange juice	ND	ND	ND	ND

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	ND	ND	ND	ND
Peaches, canned	ND	ND	ND	ND
Peanut butter	ND	ND	ND	ND
Peanuts, whole	ND	ND	ND	ND
Peas	ND	ND	ND	ND
Pineapple, canned	ND	ND	ND	ND
Potato crisps	ND	ND	ND	ND
Prunes	ND	ND	ND	ND
Raisin/sultana	ND	ND	ND	ND
Rice, white	ND	ND	ND	ND
Salad dressing	ND	ND	ND	ND
Snack bars	ND	ND	ND	ND
Snacks, flavoured	ND	ND	ND	ND
Soup, chicken	ND	ND	ND	ND
Soy milk	ND	ND	ND	ND
Spaghetti in sauce, canned	ND	ND	ND	ND
Sugar	ND	ND	ND	ND
Tea	ND	ND	ND	ND
Tomato sauce	ND	ND	ND	ND
Tomatoes in juice	ND	ND	ND	ND
Wheatbix	ND	ND	ND	ND
Wine, still red	ND	ND	ND	ND
Wine, still white	ND	ND	ND	ND
Yeast extract	ND	ND	ND	ND
Yoghurt	ND	ND	ND	ND

ND = not detected. Limit of reporting (LOR) for endosulfan-sulphate = 0.010 mg/kg (most samples). The LOR does vary with different matrices.

Note: Given limited sample numbers, comparisons between brand data are not appropriate.

## 4.3.18 Ethoxyquin

**Table 28 Ethoxyquin residues (mg/kg) in foods in Q4 of 2003/04 NZTDS**

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	ND	ND	ND	ND
Apricot, canned	ND	ND	ND	ND
Banana	ND	ND	ND	ND
Beans	ND	ND	ND	ND
Beans, baked, canned	ND	ND	ND	ND
Beer	ND	ND	ND	ND
Beetroot, canned	ND	ND	ND	ND
Biscuit, chocolate	ND	ND	ND	ND
Biscuit, cracker	ND	ND	ND	ND
Biscuits, plain sweet	ND	ND	ND	ND
Bran flake cereal, mixed	ND	ND	ND	ND
Caffeinated beverage	ND	ND	ND	ND
Carbonated drink	ND	ND	ND	ND
Cheese	ND	ND	ND	ND
Chicken	0.015	ND	ND	ND
Chocolate beverage	ND	ND	ND	ND
Chocolate, plain milk	ND	ND	ND	ND
Coffee, instant	ND	ND	ND	ND
Confectionery	ND	ND	ND	ND
Corn, canned	ND	ND	ND	ND
Cornflakes	ND	ND	ND	ND
Dairy dessert	ND	ND	ND	ND
Fish fingers	ND	ND	ND	ND
Fish, canned	ND	ND	ND	ND
Fruit drink	ND	ND	ND	ND
Honey	ND	ND	ND	ND
Icecream	ND	ND	ND	ND
Infant & Follow on formula	ND	ND	ND	ND
Infant weaning food, cereal based	ND	ND	ND	ND
Infant weaning food, custard/fruit dish	ND	ND	ND	ND
Infant weaning food, savoury	ND	ND	ND	ND
Jam	ND	ND	ND	ND
Margarine	ND	ND	ND	ND
Muesli	ND	ND	ND	ND
Noodles, instant	ND	ND	ND	ND
Oats, rolled	ND	ND	ND	ND
Oil	ND	ND	ND	ND
Orange juice	ND	ND	ND	ND

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	ND	ND	ND	ND
Peaches, canned	ND	ND	ND	ND
Peanut butter	ND	ND	ND	ND
Peanuts, whole	ND	ND	ND	ND
Peas	ND	ND	ND	ND
Pineapple, canned	ND	ND	ND	ND
Potato crisps	ND	ND	ND	ND
Prunes	ND	ND	ND	ND
Raisin/sultana	ND	ND	ND	ND
Rice, white	ND	ND	ND	ND
Salad dressing	ND	ND	ND	ND
Snack bars	ND	ND	ND	ND
Snacks, flavoured	ND	ND	ND	ND
Soup, chicken	ND	ND	ND	ND
Soy milk	ND	ND	ND	ND
Spaghetti in sauce, canned	ND	ND	ND	ND
Sugar	ND	ND	ND	ND
Tea	ND	ND	ND	ND
Tomato sauce	ND	ND	ND	ND
Tomatoes in juice	ND	ND	ND	ND
Wheatbix	ND	ND	ND	ND
Wine, still red	ND	ND	ND	ND
Wine, still white	ND	ND	ND	ND
Yeast extract	ND	ND	ND	ND
Yoghurt	ND	ND	ND	ND

ND = not detected. Limit of reporting (LOR) for ethoxyquin = 0.010 mg/kg (most samples). The LOR does vary with different matrices.

Note: Given limited sample numbers, comparisons between brand data are not appropriate.

## 4.3.19 Fenitrothion

**Table 29 Fenitrothion residues (mg/kg) in foods in Q4 of 2003/04 NZTDS**

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	ND	ND	ND	ND
Apricot, canned	ND	ND	ND	ND
Banana	ND	ND	ND	ND
Beans	ND	ND	ND	ND
Beans, baked, canned	ND	ND	ND	ND
Beer	ND	ND	ND	ND
Beetroot, canned	ND	ND	ND	ND
Biscuit, chocolate	ND	ND	ND	ND
Biscuit, cracker	ND	ND	ND	ND
Biscuits, plain sweet	ND	ND	0.018	ND
Bran flake cereal, mixed	0.043	ND	ND	ND
Caffeinated beverage	ND	ND	ND	ND
Carbonated drink	ND	ND	ND	ND
Cheese	ND	ND	ND	ND
Chicken	ND	ND	ND	ND
Chocolate beverage	ND	ND	ND	ND
Chocolate, plain milk	ND	ND	ND	ND
Coffee, instant	ND	ND	ND	ND
Confectionery	ND	ND	ND	ND
Corn, canned	ND	ND	ND	ND
Cornflakes	ND	ND	ND	ND
Dairy dessert	ND	ND	ND	ND
Fish fingers	ND	ND	ND	ND
Fish, canned	ND	ND	ND	ND
Fruit drink	ND	ND	ND	ND
Honey	ND	ND	ND	ND
Icecream	ND	ND	ND	ND
Infant & Follow on formula	ND	ND	ND	ND
Infant weaning food, cereal based	ND	ND	ND	ND
Infant weaning food, custard/fruit dish	ND	ND	ND	ND
Infant weaning food, savoury	ND	ND	ND	ND
Jam	ND	ND	ND	ND
Margarine	ND	ND	ND	ND
Muesli	ND	ND	ND	ND
Noodles, instant	ND	ND	ND	ND
Oats, rolled	0.034	ND	ND	ND
Oil	ND	ND	ND	ND
Orange juice	ND	ND	ND	ND

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	ND	ND	ND	ND
Peaches, canned	ND	ND	ND	ND
Peanut butter	ND	ND	ND	ND
Peanuts, whole	ND	ND	ND	ND
Peas	ND	ND	ND	ND
Pineapple, canned	ND	ND	ND	ND
Potato crisps	ND	ND	ND	ND
Prunes	ND	ND	ND	ND
Raisin/sultana	ND	ND	ND	ND
Rice, white	ND	ND	ND	ND
Salad dressing	ND	ND	ND	ND
Snack bars	ND	ND	0.016	0.015
Snacks, flavoured	ND	ND	ND	ND
Soup, chicken	ND	ND	ND	ND
Soy milk	ND	ND	ND	ND
Spaghetti in sauce, canned	ND	ND	ND	ND
Sugar	ND	ND	ND	ND
Tea	ND	ND	ND	ND
Tomato sauce	ND	ND	ND	ND
Tomatoes in juice	ND	ND	ND	ND
Wheatbix	ND	ND	ND	ND
Wine, still red	ND	ND	ND	ND
Wine, still white	ND	ND	ND	ND
Yeast extract	ND	ND	ND	ND
Yoghurt	ND	ND	ND	ND

ND = not detected. Limit of reporting (LOR) for fenitrothion = 0.010 mg/kg (most samples). The LOR does vary with different matrices.

Note: Given limited sample numbers, comparisons between brand data are not appropriate.

4.3.20 Iprodione

**Table 30 Iprodione residues (mg/kg) in foods in Q4 of 2003/04 NZTDS**

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	ND	ND	ND	ND
Apricot, canned	ND	0.111	ND	0.033
Banana	ND	ND	ND	ND
Beans	ND	ND	ND	ND
Beans, baked, canned	ND	ND	ND	ND
Beer	ND	ND	ND	ND
Beetroot, canned	ND	ND	ND	ND
Biscuit, chocolate	ND	ND	ND	ND
Biscuit, cracker	ND	ND	ND	ND
Biscuits, plain sweet	ND	ND	ND	ND
Bran flake cereal, mixed	ND	ND	ND	ND
Caffeinated beverage	ND	ND	ND	ND
Carbonated drink	ND	ND	ND	ND
Cheese	ND	ND	ND	ND
Chicken	ND	ND	ND	ND
Chocolate beverage	ND	ND	ND	ND
Chocolate, plain milk	ND	ND	ND	ND
Coffee, instant	ND	ND	ND	ND
Confectionery	ND	ND	ND	ND
Corn, canned	ND	ND	ND	ND
Cornflakes	ND	ND	ND	ND
Dairy dessert	ND	ND	ND	ND
Fish fingers	ND	ND	ND	ND
Fish, canned	ND	ND	ND	ND
Fruit drink	ND	ND	ND	ND
Honey	ND	ND	ND	ND
Icecream	ND	ND	ND	ND
Infant & Follow on formula	ND	ND	ND	ND
Infant weaning food, cereal based	ND	0.019	0.115	ND
Infant weaning food, custard/fruit dish	ND	ND	ND	ND
Infant weaning food, savoury	ND	ND	ND	ND
Jam	ND	ND	ND	ND
Margarine	ND	ND	ND	ND
Muesli	0.019	ND	ND	ND
Noodles, instant	ND	ND	ND	ND
Oats, rolled	ND	ND	ND	ND
Oil	ND	ND	ND	ND
Orange juice	ND	ND	ND	ND

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	ND	ND	ND	ND
Peaches, canned	ND	0.019	ND	0.010
Peanut butter	ND	ND	ND	ND
Peanuts, whole	ND	ND	ND	ND
Peas	ND	ND	ND	ND
Pineapple, canned	ND	ND	ND	ND
Potato crisps	ND	ND	ND	ND
Prunes	ND	ND	ND	ND
Raisin/sultana	0.101	0.018	0.070	0.015
Rice, white	ND	ND	ND	ND
Salad dressing	ND	ND	ND	ND
Snack bars	0.046	ND	ND	ND
Snacks, flavoured	ND	ND	ND	ND
Soup, chicken	ND	ND	ND	ND
Soy milk	ND	ND	ND	ND
Spaghetti in sauce, canned	ND	ND	ND	ND
Sugar	ND	ND	ND	ND
Tea	ND	ND	ND	ND
Tomato sauce	ND	ND	ND	ND
Tomatoes in juice	ND	ND	ND	ND
Wheatbix	ND	ND	ND	ND
Wine, still red	0.051	0.035	0.044	0.011
Wine, still white	0.012	0.014	0.025	0.020
Yeast extract	ND	ND	ND	ND
Yoghurt	ND	ND	ND	ND

ND = not detected. Limit of reporting (LOR) for iprodione = 0.010 mg/kg (most samples). The LOR does vary with different matrices.

Note: Given limited sample numbers, comparisons between brand data are not appropriate.



4.3.21 Malathion**Table 31 Malathion residues (mg/kg) in foods in Q4 of 2003/04 NZTDS**

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	ND	ND	ND	ND
Apricot, canned	ND	ND	ND	ND
Banana	ND	ND	ND	ND
Beans	ND	ND	ND	ND
Beans, baked, canned	ND	ND	ND	ND
Beer	ND	ND	ND	ND
Beetroot, canned	ND	ND	ND	ND
Biscuit, chocolate	0.010	ND	0.005	ND
Biscuit, cracker	0.012	ND	0.034	0.029
Biscuits, plain sweet	0.043	0.018	ND	0.019
Bran flake cereal, mixed	ND	ND	ND	ND
Caffeinated beverage	ND	ND	ND	ND
Carbonated drink	ND	ND	ND	ND
Cheese	ND	ND	ND	ND
Chicken	ND	ND	ND	ND
Chocolate beverage	ND	ND	ND	ND
Chocolate, plain milk	ND	ND	ND	ND
Coffee, instant	ND	ND	ND	ND
Confectionery	ND	ND	ND	ND
Corn, canned	ND	ND	ND	ND
Cornflakes	ND	ND	ND	ND
Dairy dessert	ND	ND	ND	ND
Fish fingers	ND	ND	ND	ND
Fish, canned	ND	ND	ND	ND
Fruit drink	ND	ND	ND	ND
Honey	ND	ND	ND	ND
Icecream	ND	ND	ND	ND
Infant & Follow on formula	ND	ND	ND	ND
Infant weaning food, cereal based	ND	ND	ND	ND
Infant weaning food, custard/fruit dish	ND	ND	ND	ND
Infant weaning food, savoury	ND	ND	ND	ND
Jam	ND	ND	ND	ND
Margarine	ND	ND	ND	ND
Muesli	ND	0.037	ND	ND
Noodles, instant	ND	ND	ND	ND
Oats, rolled	ND	ND	ND	ND
Oil	ND	ND	ND	ND
Orange juice	ND	ND	ND	ND

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	ND	ND	ND	ND
Peaches, canned	ND	ND	ND	ND
Peanut butter	ND	ND	ND	ND
Peanuts, whole	ND	ND	ND	ND
Peas	ND	ND	ND	ND
Pineapple, canned	ND	ND	ND	ND
Potato crisps	ND	ND	ND	ND
Prunes	ND	ND	ND	ND
Raisin/sultana	ND	ND	ND	ND
Rice, white	ND	ND	ND	ND
Salad dressing	ND	ND	ND	ND
Snack bars	ND	ND	ND	ND
Snacks, flavoured	ND	ND	ND	ND
Soup, chicken	ND	ND	ND	ND
Soy milk	ND	ND	ND	ND
Spaghetti in sauce, canned	ND	ND	ND	ND
Sugar	ND	ND	ND	ND
Tea	ND	ND	ND	ND
Tomato sauce	ND	ND	ND	ND
Tomatoes in juice	ND	ND	ND	ND
Wheatbix	ND	ND	ND	ND
Wine, still red	ND	ND	ND	ND
Wine, still white	ND	ND	ND	ND
Yeast extract	ND	ND	ND	ND
Yoghurt	ND	ND	ND	ND

ND = not detected. Limit of reporting (LOR) for malathion = 0.007 mg/kg (most samples).  
The LOR does vary with different matrices.

Note: Given limited sample numbers, comparisons between brand data are not appropriate.

4.3.22 Phorate sulphone

**Table 32 Phorate sulphone residues (mg/kg) in foods in Q4 of 2003/04 NZTDS**

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	ND	ND	ND	ND
Apricot, canned	ND	ND	ND	ND
Banana	ND	ND	ND	ND
Beans	ND	ND	ND	ND
Beans, baked, canned	ND	ND	ND	ND
Beer	ND	ND	ND	ND
Beetroot, canned	ND	ND	ND	ND
Biscuit, chocolate	ND	ND	ND	ND
Biscuit, cracker	ND	ND	ND	ND
Biscuits, plain sweet	ND	ND	ND	ND
Bran flake cereal, mixed	ND	ND	ND	ND
Caffeinated beverage	ND	ND	ND	ND
Carbonated drink	ND	ND	ND	ND
Cheese	ND	ND	ND	ND
Chicken	ND	ND	ND	ND
Chocolate beverage	ND	ND	ND	ND
Chocolate, plain milk	ND	ND	ND	ND
Coffee, instant	ND	ND	ND	ND
Confectionery	ND	ND	ND	ND
Corn, canned	ND	ND	ND	ND
Cornflakes	ND	ND	ND	ND
Dairy dessert	ND	ND	ND	ND
Fish fingers	ND	ND	ND	ND
Fish, canned	ND	ND	ND	ND
Fruit drink	ND	ND	ND	ND
Honey	ND	ND	ND	ND
Icecream	ND	ND	ND	ND
Infant & Follow on formula	ND	ND	ND	ND
Infant weaning food, cereal based	ND	ND	ND	ND
Infant weaning food, custard/fruit dish	ND	ND	ND	ND
Infant weaning food, savoury	ND	ND	ND	ND
Jam	ND	ND	ND	ND
Margarine	ND	ND	ND	ND
Muesli	ND	ND	ND	ND
Noodles, instant	ND	ND	ND	ND
Oats, rolled	ND	ND	ND	ND
Oil	ND	ND	ND	ND
Orange juice	ND	ND	ND	ND

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	ND	ND	ND	ND
Peaches, canned	ND	ND	ND	ND
Peanut butter	ND	ND	ND	ND
Peanuts, whole	ND	ND	ND	0.040
Peas	ND	ND	ND	ND
Pineapple, canned	ND	ND	ND	ND
Potato crisps	ND	ND	ND	ND
Prunes	ND	ND	ND	ND
Raisin/sultana	ND	ND	ND	ND
Rice, white	ND	ND	ND	ND
Salad dressing	ND	ND	ND	ND
Snack bars	ND	ND	ND	ND
Snacks, flavoured	ND	ND	ND	ND
Soup, chicken	ND	ND	ND	ND
Soy milk	ND	ND	ND	ND
Spaghetti in sauce, canned	ND	ND	ND	ND
Sugar	ND	ND	ND	ND
Tea	ND	ND	ND	ND
Tomato sauce	ND	ND	ND	ND
Tomatoes in juice	ND	ND	ND	ND
Wheatbix	ND	ND	ND	ND
Wine, still red	ND	ND	ND	ND
Wine, still white	ND	ND	ND	ND
Yeast extract	ND	ND	ND	ND
Yoghurt	ND	ND	ND	ND

ND = not detected. Limit of reporting (LOR) for phorate sulphone = 0.010 mg/kg (most samples). The LOR does vary with different matrices.

Note: Given limited sample numbers, comparisons between brand data are not appropriate.

4.3.23 Piperonyl butoxide

**Table 33 Piperonyl butoxide residues (mg/kg) in foods in Q4 of 2003/04 NZTDS**

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	ND	ND	ND	ND
Apricot, canned	ND	ND	ND	ND
Banana	ND	ND	ND	ND
Beans	ND	ND	ND	ND
Beans, baked, canned	ND	ND	ND	ND
Beer	ND	ND	ND	ND
Beetroot, canned	ND	ND	ND	ND
Biscuit, chocolate	ND	ND	ND	ND
Biscuit, cracker	ND	ND	ND	ND
Biscuits, plain sweet	ND	ND	ND	ND
Bran flake cereal, mixed	ND	ND	ND	ND
Caffeinated beverage	ND	ND	ND	ND
Carbonated drink	ND	ND	ND	ND
Cheese	ND	ND	ND	ND
Chicken	ND	ND	ND	ND
Chocolate beverage	ND	ND	ND	ND
Chocolate, plain milk	ND	ND	ND	ND
Coffee, instant	ND	ND	ND	ND
Confectionery	ND	ND	ND	ND
Corn, canned	ND	ND	ND	ND
Cornflakes	ND	ND	ND	ND
Dairy dessert	ND	ND	ND	ND
Fish fingers	ND	ND	ND	ND
Fish, canned	ND	ND	ND	ND
Fruit drink	ND	ND	ND	ND
Honey	ND	ND	ND	ND
Icecream	ND	ND	ND	ND
Infant & Follow on formula	ND	ND	ND	ND
Infant weaning food, cereal based	ND	ND	ND	ND
Infant weaning food, custard/fruit dish	ND	ND	ND	ND
Infant weaning food, savoury	ND	ND	ND	ND
Jam	ND	ND	ND	ND
Margarine	ND	ND	ND	ND
Muesli	ND	ND	ND	ND
Noodles, instant	ND	ND	ND	ND
Oats, rolled	ND	ND	ND	ND
Oil	ND	ND	ND	ND
Orange juice	ND	ND	ND	ND

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	ND	ND	ND	ND
Peaches, canned	ND	ND	ND	ND
Peanut butter	ND	ND	0.039	ND
Peanuts, whole	ND	ND	ND	ND
Peas	ND	ND	ND	ND
Pineapple, canned	ND	ND	ND	ND
Potato crisps	ND	ND	ND	ND
Prunes	ND	ND	ND	ND
Raisin/sultana	ND	ND	ND	ND
Rice, white	ND	ND	ND	ND
Salad dressing	ND	ND	ND	ND
Snack bars	ND	ND	ND	ND
Snacks, flavoured	ND	ND	ND	ND
Soup, chicken	ND	ND	ND	ND
Soy milk	ND	ND	ND	ND
Spaghetti in sauce, canned	ND	ND	ND	ND
Sugar	ND	ND	ND	ND
Tea	ND	ND	ND	ND
Tomato sauce	ND	ND	ND	ND
Tomatoes in juice	ND	ND	ND	ND
Wheatbix	ND	ND	ND	ND
Wine, still red	ND	ND	ND	ND
Wine, still white	ND	ND	ND	ND
Yeast extract	ND	ND	ND	ND
Yoghurt	ND	ND	ND	ND

ND = not detected. Limit of reporting (LOR) for piperonyl butoxide = 0.010 mg/kg (most samples). The LOR does vary with different matrices.

Note: Given limited sample numbers, comparisons between brand data are not appropriate.

4.3.24 Pirimiphos-methyl**Table 34 Pirimiphos-methyl residues (mg/kg) in foods in Q4 of 2003/04 NZTDS**

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	ND	ND	ND	ND
Apricot, canned	ND	ND	ND	ND
Banana	ND	ND	ND	ND
Beans	ND	ND	ND	ND
Beans, baked, canned	ND	ND	ND	ND
Beer	ND	ND	ND	ND
Beetroot, canned	ND	ND	ND	ND
Biscuit, chocolate	0.034	ND	0.870	ND
Biscuit, cracker	0.058	ND	0.091	0.050
Biscuits, plain sweet	0.037	0.325	0.121	0.254
Bran flake cereal, mixed	0.016	0.010	ND	0.006
Caffeinated beverage	ND	ND	ND	ND
Carbonated drink	ND	ND	ND	ND
Cheese	ND	ND	ND	ND
Chicken	ND	ND	0.014	0.024
Chocolate beverage	ND	ND	ND	ND
Chocolate, plain milk	ND	ND	ND	ND
Coffee, instant	ND	ND	ND	ND
Confectionery	ND	ND	ND	ND
Corn, canned	ND	ND	ND	ND
Cornflakes	ND	ND	ND	ND
Dairy dessert	ND	ND	ND	ND
Fish fingers	0.030	0.049	0.037	0.051
Fish, canned	ND	ND	ND	ND
Fruit drink	ND	ND	ND	ND
Honey	ND	ND	ND	ND
Icecream	ND	ND	ND	ND
Infant & Follow on formula	ND	ND	ND	ND
Infant weaning food, cereal based	ND	ND	ND	ND
Infant weaning food, custard/fruit dish	ND	ND	ND	ND
Infant weaning food, savoury	ND	ND	ND	ND
Jam	ND	ND	ND	ND
Margarine	ND	ND	ND	ND
Muesli	0.153	ND	ND	ND
Noodles, instant	ND	ND	ND	ND
Oats, rolled	ND	ND	ND	ND
Oil	ND	ND	ND	ND
Orange juice	ND	ND	ND	ND

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	ND	ND	ND	ND
Peaches, canned	ND	ND	ND	ND
Peanut butter	0.029	0.009	0.011	ND
Peanuts, whole	0.025	ND	ND	ND
Peas	ND	ND	ND	ND
Pineapple, canned	ND	ND	ND	ND
Potato crisps	ND	ND	ND	ND
Prunes	ND	ND	ND	ND
Raisin/sultana	ND	ND	ND	ND
Rice, white	ND	ND	ND	ND
Salad dressing	ND	ND	ND	ND
Snack bars	ND	ND	ND	0.008
Snacks, flavoured	ND	ND	0.010	ND
Soup, chicken	ND	ND	ND	ND
Soy milk	ND	ND	ND	ND
Spaghetti in sauce, canned	ND	ND	ND	ND
Sugar	ND	ND	ND	ND
Tea	ND	ND	ND	ND
Tomato sauce	ND	ND	ND	ND
Tomatoes in juice	ND	ND	ND	ND
Wheatbix	0.091	0.045	0.011	0.027
Wine, still red	ND	ND	ND	ND
Wine, still white	ND	ND	ND	ND
Yeast extract	ND	ND	ND	ND
Yoghurt	ND	ND	ND	ND

ND = not detected. Limit of reporting (LOR) for pirimiphos-methyl = 0.007 mg/kg (most samples). The LOR does vary with different matrices.

Note: Given limited sample numbers, comparisons between brand data are not appropriate.



4.3.25 Procymidone

**Table 35 Procymidone residues (mg/kg) in foods in Q4 of 2003/04 NZTDS**

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	ND	ND	ND	ND
Apricot, canned	ND	ND	ND	ND
Banana	ND	ND	ND	ND
Beans	0.054	ND	ND	0.130
Beans, baked, canned	ND	ND	ND	ND
Beer	ND	ND	ND	ND
Beetroot, canned	ND	ND	ND	ND
Biscuit, chocolate	ND	ND	ND	ND
Biscuit, cracker	ND	ND	ND	ND
Biscuits, plain sweet	ND	ND	ND	ND
Bran flake cereal, mixed	ND	ND	ND	ND
Caffeinated beverage	ND	ND	ND	ND
Carbonated drink	ND	ND	ND	ND
Cheese	ND	ND	ND	ND
Chicken	ND	ND	ND	ND
Chocolate beverage	ND	ND	ND	ND
Chocolate, plain milk	ND	ND	ND	ND
Coffee, instant	ND	ND	ND	ND
Confectionery	ND	ND	ND	ND
Corn, canned	ND	ND	ND	ND
Cornflakes	ND	ND	ND	ND
Dairy dessert	ND	ND	ND	ND
Fish fingers	ND	ND	ND	ND
Fish, canned	ND	ND	ND	ND
Fruit drink	ND	ND	ND	ND
Honey	ND	ND	ND	ND
Icecream	ND	ND	ND	ND
Infant & Follow on formula	ND	ND	ND	ND
Infant weaning food, cereal based	ND	ND	ND	ND
Infant weaning food, custard/fruit dish	ND	ND	ND	ND
Infant weaning food, savoury	ND	ND	ND	ND
Jam	ND	ND	ND	ND
Margarine	ND	ND	ND	ND
Muesli	0.037	ND	ND	ND
Noodles, instant	ND	ND	ND	ND
Oats, rolled	ND	ND	ND	ND
Oil	ND	0.057	ND	ND
Orange juice	ND	ND	ND	ND

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	ND	ND	ND	ND
Peaches, canned	ND	ND	0.026	ND
Peanut butter	ND	ND	ND	ND
Peanuts, whole	ND	ND	ND	ND
Peas	ND	ND	ND	ND
Pineapple, canned	ND	ND	ND	ND
Potato crisps	ND	ND	ND	ND
Prunes	ND	ND	ND	ND
Raisin/sultana	0.127	0.053	0.036	0.053
Rice, white	ND	ND	ND	ND
Salad dressing	ND	ND	ND	ND
Snack bars	0.119	ND	ND	ND
Snacks, flavoured	ND	ND	ND	ND
Soup, chicken	ND	ND	ND	ND
Soy milk	ND	ND	ND	ND
Spaghetti in sauce, canned	ND	ND	ND	ND
Sugar	ND	ND	ND	ND
Tea	ND	ND	ND	ND
Tomato sauce	ND	ND	0.019	ND
Tomatoes in juice	ND	0.014	ND	ND
Wheatbix	ND	ND	ND	ND
Wine, still red	0.016	ND	ND	ND
Wine, still white	ND	ND	ND	ND
Yeast extract	ND	ND	ND	ND
Yoghurt	ND	ND	ND	ND

ND = not detected. Limit of reporting (LOR) for procymidone = 0.010 mg/kg (most samples). The LOR does vary with different matrices.

Note: Given limited sample numbers, comparisons between brand data are not appropriate.

## 4.3.26 Propargite 1+2

**Table 36 Propargite 1+2 residues (mg/kg) in foods in Q4 of 2003/04 NZTDS**

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	ND	ND	ND	ND
Apricot, canned	ND	ND	ND	ND
Banana	ND	ND	ND	ND
Beans	ND	ND	ND	ND
Beans, baked, canned	ND	ND	ND	ND
Beer	ND	ND	ND	ND
Beetroot, canned	ND	ND	ND	ND
Biscuit, chocolate	ND	ND	ND	ND
Biscuit, cracker	ND	ND	ND	ND
Biscuits, plain sweet	ND	ND	ND	ND
Bran flake cereal, mixed	ND	ND	ND	ND
Caffeinated beverage	ND	ND	ND	ND
Carbonated drink	ND	ND	ND	ND
Cheese	ND	ND	ND	ND
Chicken	ND	ND	ND	ND
Chocolate beverage	ND	ND	ND	ND
Chocolate, plain milk	ND	ND	ND	ND
Coffee, instant	ND	ND	ND	ND
Confectionery	ND	ND	ND	ND
Corn, canned	ND	ND	ND	ND
Cornflakes	ND	ND	ND	ND
Dairy dessert	ND	ND	ND	ND
Fish fingers	ND	ND	ND	ND
Fish, canned	ND	ND	ND	ND
Fruit drink	ND	ND	ND	ND
Honey	ND	ND	ND	ND
Icecream	ND	ND	ND	ND
Infant & Follow on formula	ND	ND	ND	ND
Infant weaning food, cereal based	ND	ND	ND	ND
Infant weaning food, custard/fruit dish	ND	ND	ND	ND
Infant weaning food, savoury	ND	ND	ND	ND
Jam	ND	ND	ND	ND
Margarine	ND	ND	ND	ND
Muesli	ND	ND	ND	ND
Noodles, instant	ND	ND	ND	ND
Oats, rolled	ND	ND	ND	ND
Oil	ND	ND	ND	ND
Orange juice	ND	ND	ND	ND

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	ND	ND	ND	ND
Peaches, canned	ND	ND	ND	ND
Peanut butter	ND	ND	ND	ND
Peanuts, whole	ND	ND	ND	ND
Peas	ND	ND	ND	ND
Pineapple, canned	ND	ND	ND	ND
Potato crisps	ND	ND	ND	ND
Prunes	ND	ND	ND	ND
Raisin/sultana	0.072	0.115	0.043	ND
Rice, white	ND	ND	ND	ND
Salad dressing	ND	ND	ND	ND
Snack bars	ND	ND	ND	ND
Snacks, flavoured	ND	ND	ND	ND
Soup, chicken	ND	ND	ND	ND
Soy milk	ND	ND	ND	ND
Spaghetti in sauce, canned	ND	ND	ND	ND
Sugar	ND	ND	ND	ND
Tea	ND	ND	ND	ND
Tomato sauce	ND	ND	ND	ND
Tomatoes in juice	ND	ND	ND	ND
Wheatbix	ND	ND	ND	ND
Wine, still red	ND	ND	ND	ND
Wine, still white	ND	ND	ND	ND
Yeast extract	ND	ND	ND	ND
Yoghurt	ND	ND	ND	ND

ND = not detected. Limit of reporting (LOR) for propargite 1+2 = 0.010 mg/kg (most samples). The LOR does vary with different matrices.

Note: Given limited sample numbers, comparisons between brand data are not appropriate.

#### 4.3.27 Pyrimethanil

**Table 37 Pyrimethanil residues (mg/kg) in foods in Q4 of 2003/04 NZTDS**

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	ND	ND	ND	ND
Apricot, canned	ND	ND	ND	ND
Banana	ND	ND	ND	ND
Beans	ND	ND	ND	ND
Beans, baked, canned	ND	ND	ND	ND
Beer	ND	ND	ND	ND
Beetroot, canned	ND	ND	ND	ND
Biscuit, chocolate	ND	ND	ND	ND
Biscuit, cracker	ND	ND	ND	ND
Biscuits, plain sweet	ND	ND	ND	ND
Bran flake cereal, mixed	ND	ND	ND	ND
Caffeinated beverage	ND	ND	ND	ND
Carbonated drink	ND	ND	ND	ND
Cheese	ND	ND	ND	ND
Chicken	ND	ND	ND	ND
Chocolate beverage	ND	ND	ND	ND
Chocolate, plain milk	ND	ND	ND	ND
Coffee, instant	ND	ND	ND	ND
Confectionery	ND	ND	ND	ND
Corn, canned	ND	ND	ND	ND
Cornflakes	ND	ND	ND	ND
Dairy dessert	ND	ND	ND	ND
Fish fingers	ND	ND	ND	ND
Fish, canned	ND	ND	ND	ND
Fruit drink	ND	ND	ND	ND
Honey	ND	ND	ND	ND
Icecream	ND	ND	ND	ND
Infant & Follow on formula	ND	ND	ND	ND
Infant weaning food, cereal based	ND	ND	ND	ND
Infant weaning food, custard/fruit dish	ND	ND	ND	ND
Infant weaning food, savoury	ND	ND	ND	ND
Jam	ND	ND	ND	ND
Margarine	ND	ND	ND	ND
Muesli	ND	ND	ND	ND
Noodles, instant	ND	ND	ND	ND
Oats, rolled	ND	ND	ND	ND
Oil	ND	ND	ND	ND
Orange juice	ND	ND	ND	ND

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	ND	ND	ND	ND
Peaches, canned	ND	ND	ND	ND
Peanut butter	ND	ND	ND	ND
Peanuts, whole	ND	ND	ND	ND
Peas	ND	ND	ND	ND
Pineapple, canned	ND	ND	ND	ND
Potato crisps	ND	ND	ND	ND
Prunes	ND	ND	ND	ND
Raisin/sultana	ND	ND	ND	ND
Rice, white	ND	ND	ND	ND
Salad dressing	ND	ND	ND	ND
Snack bars	ND	ND	ND	ND
Snacks, flavoured	ND	ND	ND	ND
Soup, chicken	ND	ND	ND	ND
Soy milk	ND	ND	ND	ND
Spaghetti in sauce, canned	ND	ND	ND	ND
Sugar	ND	ND	ND	ND
Tea	ND	ND	ND	ND
Tomato sauce	ND	ND	ND	ND
Tomatoes in juice	ND	ND	ND	ND
Wheatbix	ND	ND	ND	ND
Wine, still red	ND	0.016	0.411	ND
Wine, still white	ND	ND	ND	0.037
Yeast extract	ND	ND	ND	ND
Yoghurt	ND	ND	ND	ND

ND = not detected. Limit of reporting (LOR) for pyrimethanil = 0.010 mg/kg (most samples). The LOR does vary with different matrices.

Note: Given limited sample numbers, comparisons between brand data are not appropriate.

4.3.28 Quintozene**Table 38**      **Quintozene residues (mg/kg) in foods in Q4 of 2003/04 NZTDS**

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	ND	ND	ND	ND
Apricot, canned	ND	ND	ND	ND
Banana	ND	ND	ND	ND
Beans	ND	ND	ND	ND
Beans, baked, canned	ND	ND	ND	ND
Beer	ND	ND	ND	ND
Beetroot, canned	ND	ND	ND	ND
Biscuit, chocolate	ND	ND	ND	ND
Biscuit, cracker	ND	ND	ND	ND
Biscuits, plain sweet	ND	ND	ND	ND
Bran flake cereal, mixed	ND	ND	ND	ND
Caffeinated beverage	ND	ND	ND	ND
Carbonated drink	ND	ND	ND	ND
Cheese	ND	ND	ND	ND
Chicken	ND	ND	ND	ND
Chocolate beverage	ND	ND	ND	ND
Chocolate, plain milk	ND	ND	ND	ND
Coffee, instant	ND	ND	ND	ND
Confectionery	ND	ND	ND	ND
Corn, canned	ND	ND	ND	ND
Cornflakes	ND	ND	ND	ND
Dairy dessert	ND	ND	ND	ND
Fish fingers	ND	ND	ND	ND
Fish, canned	ND	ND	ND	ND
Fruit drink	ND	ND	ND	ND
Honey	ND	ND	ND	ND
Icecream	ND	ND	ND	ND
Infant & Follow on formula	ND	ND	ND	ND
Infant weaning food, cereal based	ND	ND	ND	ND
Infant weaning food, custard/fruit dish	ND	ND	ND	ND
Infant weaning food, savoury	ND	ND	ND	ND
Jam	ND	ND	ND	ND
Margarine	ND	ND	ND	ND
Muesli	ND	ND	ND	ND
Noodles, instant	ND	ND	ND	ND
Oats, rolled	ND	ND	ND	ND
Oil	ND	ND	ND	ND
Orange juice	ND	ND	ND	ND

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	ND	ND	ND	ND
Peaches, canned	ND	ND	ND	ND
Peanut butter	ND	ND	ND	ND
Peanuts, whole	0.004	ND	ND	ND
Peas	ND	ND	ND	ND
Pineapple, canned	ND	ND	ND	ND
Potato crisps	ND	ND	ND	ND
Prunes	ND	ND	ND	ND
Raisin/sultana	ND	ND	ND	ND
Rice, white	ND	ND	ND	ND
Salad dressing	ND	ND	ND	ND
Snack bars	ND	ND	ND	ND
Snacks, flavoured	ND	ND	ND	ND
Soup, chicken	ND	ND	ND	ND
Soy milk	ND	ND	ND	ND
Spaghetti in sauce, canned	ND	ND	ND	ND
Sugar	ND	ND	ND	ND
Tea	ND	ND	ND	ND
Tomato sauce	ND	ND	ND	ND
Tomatoes in juice	ND	ND	ND	ND
Wheatbix	ND	ND	ND	ND
Wine, still red	ND	ND	ND	ND
Wine, still white	ND	ND	ND	ND
Yeast extract	ND	ND	ND	ND
Yoghurt	ND	ND	ND	ND

ND = not detected. Limit of reporting (LOR) for quitozene = 0.003 mg/kg (most samples). The LOR does vary with different matrices.

Note: Given limited sample numbers, comparisons between brand data are not appropriate.



## 4.3.29 Terbufos

**Table 39** Terbufos residues (mg/kg) in foods in Q4 of 2003/04 NZTDS

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	ND	ND	ND	ND
Apricot, canned	ND	ND	ND	ND
Banana	ND	ND	ND	ND
Beans	ND	ND	ND	ND
Beans, baked, canned	ND	ND	ND	ND
Beer	ND	ND	ND	ND
Beetroot, canned	ND	ND	ND	ND
Biscuit, chocolate	ND	ND	ND	ND
Biscuit, cracker	ND	ND	ND	ND
Biscuits, plain sweet	ND	ND	ND	ND
Bran flake cereal, mixed	ND	ND	ND	ND
Caffeinated beverage	ND	ND	ND	ND
Carbonated drink	ND	ND	ND	ND
Cheese	ND	ND	ND	ND
Chicken	ND	ND	ND	ND
Chocolate beverage	ND	ND	ND	ND
Chocolate, plain milk	ND	ND	ND	ND
Coffee, instant	ND	ND	ND	ND
Confectionery	ND	ND	ND	ND
Corn, canned	ND	ND	ND	ND
Cornflakes	ND	ND	ND	ND
Dairy dessert	ND	ND	ND	ND
Fish fingers	ND	ND	ND	ND
Fish, canned	ND	ND	ND	ND
Fruit drink	ND	ND	ND	ND
Honey	ND	ND	ND	ND
Icecream	ND	ND	ND	ND
Infant & Follow on formula	ND	ND	ND	ND
Infant weaning food, cereal based	ND	ND	ND	ND
Infant weaning food, custard/fruit dish	ND	ND	ND	ND
Infant weaning food, savoury	ND	ND	ND	ND
Jam	ND	ND	ND	ND
Margarine	ND	ND	ND	ND
Muesli	ND	ND	ND	ND
Noodles, instant	ND	ND	ND	ND
Oats, rolled	ND	ND	ND	ND
Oil	0.008	0.011	0.010	0.008
Orange juice	ND	ND	ND	ND

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	ND	ND	ND	ND
Peaches, canned	ND	ND	ND	ND
Peanut butter	ND	ND	ND	ND
Peanuts, whole	ND	ND	ND	ND
Peas	ND	ND	ND	ND
Pineapple, canned	ND	ND	ND	ND
Potato crisps	ND	ND	ND	ND
Prunes	ND	ND	ND	ND
Raisin/sultana	ND	ND	ND	ND
Rice, white	ND	ND	ND	ND
Salad dressing	ND	ND	ND	ND
Snack bars	ND	ND	ND	ND
Snacks, flavoured	ND	ND	ND	ND
Soup, chicken	ND	ND	ND	ND
Soy milk	ND	ND	ND	ND
Spaghetti in sauce, canned	ND	ND	ND	ND
Sugar	ND	ND	ND	ND
Tea	ND	ND	ND	ND
Tomato sauce	ND	ND	ND	ND
Tomatoes in juice	ND	ND	ND	ND
Wheatbix	ND	ND	ND	ND
Wine, still red	ND	ND	ND	ND
Wine, still white	ND	ND	ND	ND
Yeast extract	ND	ND	ND	ND
Yoghurt	ND	ND	ND	ND

ND = not detected. Limit of reporting (LOR) for terbufos = 0.006 mg/kg (most samples). The LOR does vary with different matrices.

Note: Given limited sample numbers, comparisons between brand data are not appropriate.

#### 4.3.30 Terbutylazine

**Table 40 Terbutylazine residues (mg/kg) in foods in Q4 of 2003/04 NZTDS**

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Apple-based juice	ND	ND	ND	ND
Apricot, canned	ND	ND	ND	ND
Banana	ND	ND	ND	ND
Beans	ND	ND	ND	ND
Beans, baked, canned	ND	ND	ND	ND
Beer	ND	ND	ND	ND
Beetroot, canned	ND	ND	ND	ND
Biscuit, chocolate	ND	ND	ND	ND
Biscuit, cracker	ND	ND	ND	ND
Biscuits, plain sweet	ND	ND	ND	ND
Bran flake cereal, mixed	ND	ND	ND	ND
Caffeinated beverage	ND	ND	ND	ND
Carbonated drink	ND	ND	ND	ND
Cheese	ND	ND	ND	ND
Chicken	ND	ND	ND	ND
Chocolate beverage	ND	ND	ND	ND
Chocolate, plain milk	ND	ND	ND	ND
Coffee, instant	ND	ND	ND	ND
Confectionery	ND	ND	ND	ND
Corn, canned	ND	ND	ND	ND
Cornflakes	ND	ND	ND	ND
Dairy dessert	ND	ND	ND	ND
Fish fingers	ND	ND	ND	ND
Fish, canned	ND	ND	ND	ND
Fruit drink	ND	ND	ND	ND
Honey	ND	ND	ND	ND
Icecream	ND	ND	ND	ND
Infant & Follow on formula	ND	ND	ND	ND
Infant weaning food, cereal based	ND	ND	ND	ND
Infant weaning food, custard/fruit dish	ND	ND	ND	ND
Infant weaning food, savoury	ND	ND	ND	ND
Jam	ND	ND	ND	ND
Margarine	ND	ND	ND	ND
Muesli	ND	ND	ND	ND
Noodles, instant	ND	ND	ND	ND
Oats, rolled	ND	ND	ND	ND
Oil	ND	ND	0.114	ND
Orange juice	ND	ND	ND	ND

<b>Food</b>	<b>Brand 1</b>	<b>Brand 2</b>	<b>Brand 3</b>	<b>Brand 4</b>
Pasta, dried	ND	ND	ND	ND
Peaches, canned	ND	ND	ND	ND
Peanut butter	ND	ND	ND	ND
Peanuts, whole	ND	ND	ND	ND
Peas	ND	ND	ND	ND
Pineapple, canned	ND	ND	ND	ND
Potato crisps	ND	ND	ND	ND
Prunes	ND	ND	ND	ND
Raisin/sultana	ND	ND	ND	ND
Rice, white	ND	ND	ND	ND
Salad dressing	ND	ND	ND	ND
Snack bars	ND	ND	ND	ND
Snacks, flavoured	ND	ND	ND	ND
Soup, chicken	ND	ND	ND	ND
Soy milk	ND	ND	ND	ND
Spaghetti in sauce, canned	ND	ND	ND	ND
Sugar	ND	ND	ND	ND
Tea	ND	ND	ND	ND
Tomato sauce	ND	ND	ND	ND
Tomatoes in juice	ND	ND	ND	ND
Wheatbix	ND	ND	ND	ND
Wine, still red	ND	ND	ND	ND
Wine, still white	ND	ND	ND	ND
Yeast extract	ND	ND	ND	ND
Yoghurt	ND	ND	ND	ND

ND = not detected. Limit of reporting (LOR) for terbuthylazine = 0.010 mg/kg (most samples). The LOR does vary with different matrices.

Note: Given limited sample numbers, comparisons between brand data are not appropriate.

#### 4.3.31 Dithiocarbamate Fungicides

The level of dithiocarbamates in foods is generally analysed internationally in terms of the amount of carbon disulphide (CS<sub>2</sub>). The method is unable to differentiate which dithiocarbamate is present.

**Table 41 Dithiocarbamate fungicide content (mg/kg of CS<sub>2</sub>) of fruit and vegetable products in Q4 of 2003/04 NZTDS**

Food	Brand 1	Brand 2	Brand 3	Brand 4
Apple-based juice	ND	ND	ND	ND
Apricot, canned	ND	0.20	ND	0.45
Banana	ND	ND	ND	ND
Beans	ND	0.01	0.01	0.02
Beans, baked, canned	0.01	ND	ND	0.02
Beetroot, canned	ND	ND	ND	ND
Corn, canned	0.01	ND	ND	ND
Infant & Follow on formula	ND	ND	ND	ND
Infant weaning food, cereal based	ND	ND	ND	ND
Infant weaning food, custard/fruit dish	ND	ND	ND	ND
Infant weaning food, savoury	ND	ND	ND	ND
Orange juice	ND	ND	ND	ND
Peaches, canned	ND	ND	ND	ND
Peas	0.02	0.02	0.02	0.03
Pineapple, canned	ND	ND	ND	ND
Potato crisps	ND	ND	ND	ND
Prunes	ND	0.01	ND	ND
Raisin/sultana	ND	ND	ND	ND
Tomato sauce	ND	ND	0.02	ND
Tomatoes in juice	ND	ND	ND	ND

ND = not detected. Limit of reporting = 0.01 mg/kg CS<sub>2</sub> (most samples). The LOR does vary with different matrices.

Note: Given limited sample numbers, comparisons between brand data are not appropriate.

#### 4.3.32 Acid Herbicides

**Table 42 Acid herbicide content (mg/kg) of foods analysed in Q4 of 2003/04 NZTDS**

Food	Brand 1	Brand 2	Brand 3	Brand 4	Brand Composite
Chicken	ND	ND	ND	ND	
Infant & Follow on formula					ND
Infant weaning food, cereal based					ND
Infant weaning food, custard/fruit dish					ND
Infant weaning food, savoury					ND
Peas					ND
Soy milk	ND	ND	ND	ND	

The acid herbicides (AH) involved a separate screen which included 18 herbicides. These have been detailed in section 3.1. Selected foods, as identified above, were analysed, but no herbicides were detected.

ND = not detected. Limit of reporting = 0.02 mg/kg (most samples). The LOR does vary with different matrices.

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## **APPENDIX 1            BACKGROUND TO THE 2003/04 NEW ZEALAND TOTAL DIET SURVEY**

The primary focus of the New Zealand Total Diet Survey (NZTDS) is to assess dietary exposure to chemical residues, contaminant elements and selected nutrients, from 121 representative foods, across the average diet of different age-sex groups within the New Zealand population. As such, foods are analysed on an 'as consumed' basis.

The New Zealand Food Safety Authority (NZFSA) are the purchasers of the 2003/04 NZTDS, and have key responsibilities regarding the overall direction of it, public release of results in a timely manner and follow up actions. The NZTDS represents a powerful tool for the NZFSA's risk management activities related to the safety of the New Zealand food supply. NZFSA fund ESR to manage the survey, purchase national and regional food samples, prepare all food samples, organise and manage robust, quality analyses, and to produce interim analytical results and final interpretative NZTDS reports.

The NZFSA undertook extensive consultation with stakeholder groups and interested parties (including public health, academia and research institutes, industry sector groups, and consumer groups) on the design and content of the 2003/04 NZTDS.

The 2003/04 New Zealand Total Diet Survey (NZTDS) is the sixth such study of its kind in New Zealand. The previous five surveys have been carried out jointly by the Ministry of Health (formerly the Department of Health) and ESR (formerly DSIR Chemistry Division).

The first NZTDS was carried out in 1974 (Dick et al, 1978a,b) and involved analysis of a relatively small number of food group composites. These were based on the diet of an adolescent male, the age/sex group which consumes the largest quantity of food on a daily basis. The 1982 survey was similar, but the energy content of the diet was recalculated to give intake estimates for other age/sex groups (Pickston et al, 1985). The 1987/88 survey saw a change in survey design to an analysis of a large number of individual foods. This increased the flexibility of the survey and allowed calculation of estimated dietary intakes for a wider range of age/sex groups (ESR/MoH, 1994). The 1990/91 and 1997/98 surveys adopted a similar approach for food selection (Vannoort et al, 1995a,b; Hannah et al, 1995; Pickston and Vannoort, 1995; Cressey et al, 2000; Vannoort et al, 2000), and this is to be used as the basis for the 2003/04 survey.

The 1987/88 and 1990/91 NZTDSs considered a wide range of nutrient elements (13 nutrient elements and eleven nutrient elements plus one vitamin respectively) in addition to agricultural compounds and contaminant elements. The 1997/98 and 2003/04 NZTDSs refocused mainly onto contaminants in food, with only two nutrient elements of special interest (selenium and iodine) being considered in both, and iron and sodium being additionally assessed in the 2003/04 NZTDS. The range of agricultural compounds screened for has increased consistently with each NZTDS, to over 200 in the current survey.

The survey is conducted in accordance with the recommendations of the FAO/WHO Joint Expert Committee on Pesticide Residues and in agreement with the objectives of the Joint FAO/WHO Global Environmental Monitoring Systems (GEMS; FAO/UNEP/WHO, 1985).

### **Objectives**

The objectives of the 2003/04 NZTDS are:

- agree in consultation with stakeholders the design and content of the 2003/04 NZTDS;
- estimate dietary exposure for selected chemical residues, contaminants and nutrient elements in the New Zealand food supply and identify trends in New Zealand over time;
- compare dietary exposure estimates with those in other countries where comparable data is available;
- ensure that the outcomes of the NZTDS complement data on chemical residues, contaminants and nutrient elements generated from other sources in New Zealand;
- where appropriate, provide data on selected chemical residues, contaminants and nutrient elements for incorporation into other databases including the World Health Organization (WHO) Global Environmental Monitoring System (GEMS) and the New Zealand Food Composition Database; and
- communicate findings in a timely and transparent manner.

## **Timetable**

Sampling will be carried out on four occasions during the 2003/04 financial year. Chemical analyses will be carried out during the 2003/04 year and the early part of the 2004/05 year. Data analysis, exposure estimates, writing of full interpretative reports will take place in the latter part of 2004/05 and be completed early in 2005/06 year. This report refers to the results of the fourth of the four sampling occasions (Q4).

## **Foods**

Foods to be analysed have been divided into two categories:

National Foods (63) - are not expected to exhibit any regional variability and include processed foods such as biscuits, breakfast cereals and beverages, which are uniformly available New Zealand wide. National Foods will be sampled in a single location (Christchurch) on two occasions. Up to four brands, selected on the basis of market share, will be collected on each sampling occasion. Foods will almost all be prepared and analysed on the basis of individual brands/seasons to give a total of four analyses for each food for each season, although occasionally seasonal composites of the four brands to give one analysis for each food.

Regional Foods (58) - may be expected to demonstrate variation in agricultural compound, contaminant and nutrient level depending on the location in which the food was produced. Regional foods include meat, fruit and vegetables. Regional foods will be sampled in each of four locations (Auckland, Napier, Christchurch and Dunedin) on two occasions. Foods will almost all be prepared and analysed on the basis of individual regions/seasons to give a total

of four analyses for each food for each season, although occasionally seasonal composites of the four regions to give one analysis for each food each season.

Foods sampled in the fourth quarter (Q4) were national foods. The full food list for the 2003/04 NZTDS is given in Appendix 2.

## **Analyses**

Analyses have been carried out by the following organisations:

Agricultural compounds – Agriquality NZ Ltd, Gracefield, Lower Hutt  
Elements and Moisture - R J Hill Laboratories, Hamilton

## **Operation of the Survey**

- A detailed food list for the 2003/04 NZTDS was developed for the New Zealand Food Safety Authority (Brinsdon, 2002).
- A detailed procedures manual, covering purchasing of foods and preparation of foods to the point of dispatch to the analytical facilities, was prepared by ESR during June 2003 (Vannoort, 2003a).
- Sampling of regional and national foods were carried out by Health Protection Officers under the direction of a designated ESR contact officer.
- Sample preparation was carried out by the ESR Food Safety group, Christchurch Science Centre.
- Funding for the survey is provided by the New Zealand Food Safety Authority.

## **Co-ordination and Management of the Survey**

The survey is managed and co-ordinated by ESR in consultation with the New Zealand Food Safety Authority.

## **Reporting**

Four analytical results reports are being generated at the conclusion of analyses each quarter, detailing the concentrations of agricultural compounds, contaminants and nutrients found in foods sampled during that quarter. This is the fourth of these quarterly reports. The first was produced in November 2003 (Vannoort, 2003b), the second in April 2004 (Vannoort, 2004a) and the third in July 2004 (Vannoort, 2004b)..

Two internally and externally peer-reviewed interpretative reports will be produced at the conclusion of the project (target date October 2005), commenting on concentration data and estimated dietary intakes, and making comparisons to internationally accepted health standards and comparable overseas studies.

## APPENDIX 2 FOOD LIST AND ASSOCIATED ANALYSES IN THE 2003/04 NZTDS

The foods of the 2003/04 NZTDS are listed in the table below in alphabetical order. Foods which are actually new to the food list for the 2003/04 NZTDS are identified in the first column. These were either not included in the food list for the 1997/98 NZTDS, or have replaced foods included in the 1997/98 NZTDS food list. The food 'type' column identifies the NZTDS foods as either national (N) or regional (R) foods (see Appendix 1 for an explanation of these terms). Only national foods were analysed in Q4. The remainder of the table consolidates information about which foods were analysed for which analytes in the 2003/04 NZTDS. The other abbreviations used in the table are as follows:- MR = Multi residue pesticide screen; DTC = dithiocarbamate fungicide screen; AH = Acid Herbicides screen; Elements (six) = arsenic, cadmium, iodine, iron, lead and sodium; IC = samples analysed as Individual Composites for brand/region; SC = samples analysed as Seasonal Composites; and NA = food not analysed for this analyte.

The NZFSA and ESR agreed the following criteria be used to decide if a food was analysed in the 2003/04 NZTDS for certain analytes, and whether these were analysed as an individual regional / brand composite (IC) per season; or as a seasonal composite (SC)

- High contributor to exposure ex WHO GEMS
- High contributor to exposure ex 97/98 NZTDS;
- high concentration in 97/98 NZTDS;
- Limit of detection (LOD) in respective matrices
- Key food(s) /food groups covered for new analytes (ie AH)
- Available budget, recognising differential costs for agricultural compounds, elements and moisture
- Increase individual analyses from 97/8 NZTDS to 2003/04;

New Food in 03/ 04 NZTDS	Food	Type	MR	DTC	AH	Elements (six)	Mer-cury	Selen-ium
	Apple-based juice	N	IC	IC	NA	IC	IC	IC
	Apples	R	IC	IC	SC	IC	IC	IC
	Apricots, canned	N	IC	IC	NA	IC	IC	IC
*	Avocado	R	IC	IC	NA	IC	IC	IC
	Bacon	R	IC	NA	IC	IC	IC	IC
	Bananas	N	IC	IC	NA	IC	IC	IC
	Beans	N	IC	IC	NA	IC	IC	IC
	Beans, baked, canned	N	IC	IC	NA	IC	IC	IC
*	Beef, corned	R	IC	NA	NA	IC	IC	IC
	Beef, mince	R	IC	NA	IC	IC	IC	IC
	Beef, rump	R	IC	NA	NA	IC	IC	IC
	Beer	N	IC	NA	NA	IC	IC	IC
	Beetroot, canned	N	IC	IC	NA	IC	IC	IC
	Biscuits, chocolate	N	IC	NA	NA	IC	NA	IC
	Biscuits, cracker	N	IC	NA	NA	IC	NA	IC
	Biscuits, plain sweet	N	IC	NA	NA	IC	NA	IC
	Bran flake cereal, mixed	N	IC	NA	NA	IC	NA	IC
	Bread, mixed grain, sliced	R	IC	NA	SC	IC	NA	IC
	Bread, wheatmeal, sliced	R	IC	NA	NA	IC	NA	IC
	Bread, white, sliced	R	IC	NA	NA	IC	NA	IC

<b>New Food in 03/ 04 NZTDS</b>	<b>Food</b>	<b>Type</b>	<b>MR</b>	<b>DTC</b>	<b>AH</b>	<b>Elements (six)</b>	<b>Mercury</b>	<b>Selenium</b>
	Broccoli/Cauliflower	R	IC	IC	NA	IC	IC	IC
	Butter	N	IC	NA	NA	IC	NA	IC
	Cabbage	R	IC	IC	NA	IC	IC	IC
*	Caffeinated beverage	N	IC	NA	NA	IC	IC	IC
	Cake, plain	R	IC	NA	NA	IC	NA	IC
	Capsicum	R	IC	IC	NA	IC	IC	IC
	Carbonated drink	N	IC	NA	NA	IC	IC	IC
	Carrots	R	IC	IC	NA	IC	IC	IC
	Celery	R	IC	IC	NA	IC	IC	IC
	Cheese	N	IC	NA	NA	IC	NA	IC
	Chicken	N	IC	NA	IC	IC	IC	IC
	Chicken takeaway	R	IC	NA	NA	IC	IC	IC
	Chinese dish	R	IC	NA	NA	IC	IC	IC
	Chocolate beverage	N	IC	NA	NA	IC	IC	IC
	Chocolate, plain milk	N	IC	NA	NA	IC	NA	IC
	Coffee instant	N	IC	NA	NA	IC	IC	IC
*	Coffee, beans/ground	R	IC	NA	NA	IC	IC	IC
	Confectionery	N	IC	NA	NA	IC	NA	IC
	Corn, canned	N	IC	IC	NA	IC	IC	IC
	Cornflakes	N	IC	NA	NA	IC	NA	IC
	Courgette	R	IC	IC	NA	IC	IC	IC
*	Cream	R	IC	NA	NA	IC	NA	IC
	Cucumber	R	IC	IC	NA	IC	IC	IC
	Dairy dessert	N	IC	NA	NA	IC	IC	IC
	Egg	R	IC	NA	IC	IC	IC	IC
	Fish fingers	N	IC	NA	NA	IC	IC	IC
	Fish in batter	R	IC	NA	NA	IC	IC	IC
	Fish, canned	N	IC	NA	NA	IC	IC	IC
	Fish, fresh	R	IC	NA	NA	IC	IC	IC
	Fruit drink	N	IC	NA	NA	IC	IC	IC
*	Grapes	R	IC	IC	NA	IC	IC	IC
*	Ham	R	IC	NA	NA	IC	IC	IC
	Hamburger, plain	R	IC	NA	NA	IC	IC	IC
	Honey	N	IC	NA	NA	IC	NA	IC
	Ice cream	N	IC	NA	NA	IC	NA	IC
*	Infant and follow-on formula	N	IC	IC	SC	IC	IC	IC
*	Infant weaning food, cereal based	N	IC	IC	SC	IC	IC	IC
*	Infant weaning food, custard, fruit	N	IC	IC	SC	IC	IC	IC
*	Infant weaning food, savoury meat/veg	N	IC	IC	SC	IC	IC	IC
	Jam	N	IC	NA	NA	IC	NA	IC
	Kiwifruit	R	IC	IC	NA	IC	IC	IC
	Kumara	R	IC	IC	NA	IC	IC	IC
	Lamb/mutton	R	IC	NA	IC	IC	IC	IC
	Lamb's liver	R	IC	NA	NA	IC	IC	IC
	Lettuce	R	IC	IC	NA	IC	IC	IC

<b>New Food in 03/ 04 NZTDS</b>	<b>Food</b>	<b>Type</b>	<b>MR</b>	<b>DTC</b>	<b>AH</b>	<b>Elements (six)</b>	<b>Mer- cury</b>	<b>Selen- ium</b>
	Margarine	N	IC	NA	NA	IC	NA	NA
	Meat pie	R	IC	NA	NA	IC	IC	IC
*	Melon	R	IC	IC	NA	IC	IC	IC
	Milk, 0.5% fat (Trim)	R	IC	NA	NA	IC	IC	IC
	Milk, 3.25% fat	R	IC	NA	SC	IC	IC	IC
*	Milk, flavoured	R	IC	NA	NA	IC	IC	IC
	Muesli	N	IC	NA	NA	IC	NA	IC
*	Muffin	R	IC	NA	NA	IC	NA	IC
	Mushrooms	R	IC	IC	NA	IC	IC	IC
	Mussels	R	IC	NA	NA	IC	IC	IC
	Nectarines	R	IC	IC	NA	IC	IC	IC
	Noodles, instant	N	IC	NA	NA	IC	NA	IC
	Oats, rolled	N	IC	NA	NA	IC	NA	IC
	Oil	N	IC	NA	NA	IC	NA	NA
	Onions	R	IC	IC	NA	IC	IC	IC
	Orange juice	N	IC	IC	NA	IC	IC	IC
	Oranges	R	IC	IC	NA	IC	IC	IC
	Oysters	R	IC	NA	NA	IC	IC	IC
	Pasta, dried	N	IC	NA	NA	IC	NA	IC
	Peaches, canned	N	IC	IC	NA	IC	IC	IC
	Peanut butter	N	IC	NA	NA	IC	NA	IC
	Peanuts, whole	N	IC	NA	NA	IC	NA	IC
	Pears	R	IC	IC	NA	IC	IC	IC
	Peas	N	IC	IC	SC	IC	IC	IC
	Pineapple, canned	N	IC	IC	NA	IC	IC	IC
	Pizza	R	IC	NA	NA	IC	IC	IC
	Pork chop	R	IC	NA	NA	IC	IC	IC
	Potato crisps	N	IC	IC	NA	IC	IC	IC
	Potato, hot chips	R	IC	NA	NA	IC	IC	IC
	Potatoes with skin	R	IC	IC	NA	IC	IC	IC
	Potatoes, peeled	R	IC	IC	SC	IC	IC	IC
*	Prunes	N	IC	IC	NA	IC	IC	IC
	Pumpkin	R	IC	IC	NA	IC	IC	IC
	Raisins/Sultanas	N	IC	IC	NA	IC	IC	IC
	Rice, white	N	IC	NA	NA	IC	NA	IC
*	Salad dressing	N	IC	NA	NA	IC	NA	NA
	Sausages	R	IC	NA	NA	IC	IC	IC
	Silverbeet	R	IC	IC	NA	IC	IC	IC
*	Snack bars	N	IC	NA	NA	IC	IC	IC
	Snacks, flavoured	N	IC	NA	NA	IC	NA	IC
	Soup, chicken	N	IC	NA	NA	IC	IC	IC
	Soya milk	N	IC	NA	IC	IC	IC	IC
	Spaghetti in sauce, canned	N	IC	NA	NA	IC	NA	IC
*	Strawberries	R	IC	IC	SC	IC	IC	IC
*	Sugar	N	IC	NA	NA	IC	NA	IC
*	Taro	R	IC	IC	NA	IC	IC	IC

<b>New Food in 03/ 04 NZTDS</b>	<b>Food</b>	<b>Type</b>	<b>MR</b>	<b>DTC</b>	<b>AH</b>	<b>Elements (six)</b>	<b>Mer- cury</b>	<b>Selen- ium</b>
	Tea	N	IC	NA	NA	IC	IC	IC
	Tomato	R	IC	IC	SC	IC	IC	IC
	Tomato sauce	N	IC	IC	NA	IC	IC	IC
	Tomatoes in juice	N	IC	IC	NA	IC	IC	IC
	Water	R	IC	NA	IC	IC	IC	IC
	Wheatbix	N	IC	NA	NA	IC	NA	IC
	Wine, still red	N	IC	NA	NA	IC	IC	IC
	Wine, still white	N	IC	NA	NA	IC	IC	IC
	Yeast extract	N	IC	NA	NA	IC	NA	IC
	Yoghurt	N	IC	NA	NA	IC	NA	IC

R = regional food

N = national food

MR = Multi residue pesticides

DTC = dithiocarbamate fungicides

AH = Acid Herbicides screen

Elements (six) = arsenic, cadmium, iodine, iron, lead and sodium

IC = analysed Individual Composites for brand/region

SC = analysed as Seasonal Composites

NA = food not analysed for this analyte

## **APPENDIX 3            ANALYTICAL QUALITY CONTROL PROCEDURES**

Trace analyses of a wide range of complex analytes in a variety of complex matrices is an exacting science. For this reason, it is essential to have quality control steps in place to ensure confidence in the methodology and robustness of the results. For this reason the following quality control requirements have been built into the project.

### **Data quality**

All manipulations of spreadsheets and data have checks built in based on ESR database quality management systems. Data are also checked for sense and order of magnitude. All quality control data are assessed and validated before release. Unsatisfactory quality control (QC) data require an explanation from the laboratory and where necessary, reanalyses at their expense.

Quality control (QC) data include:

### **Blanks**

Blanks are required in batches to ensure carryover between samples is not occurring and to minimise the risk of false positives.

### **Duplicates**

Duplicates of samples are performed on a selection of samples in each batch to ascertain analytical precision. Coefficients of variation (CV = standard deviation of results divided by mean x 100%) of less than 10% are considered very good but may be acceptable at significantly greater than this, depending on the matrix, analyte and concentration.

### **Certified Reference Materials (CRMs)**

International Certified Reference Materials (CRMs) for a range of different matrices for the analytes in question at a variety of concentrations are also included in each batch to ascertain the accuracy of method. CRMs are samples that have been measured by a range of international laboratories using independent but established methodologies. From these results, justifiable outliers are excluded and a certified range of results for the CRM established. The laboratory should obtain a result within 70 - 125% of the certified value, depending on the analyte and concentration. It should be noted that the number of international CRMs is quite limited as it would represent an enormous amount of work internationally to have all matrices covered for all analytes at a multiplicity of concentrations by numerous international laboratories. For this reason some degree of compromise is often necessary, possibly the analyte concentration being significantly higher or lower in the CRM than in the sample, or the matrix may be different although the concentration the same. The situation also arises where many of the analytes (such as some agricultural compounds, vitamins) are unstable to light, air and/or heat, and so CRMs are not internationally available.



### **Spike recovery**

Where CRMs are not available the laboratories were required to spike the analyte into a selection of samples. The amount of analyte measured in the spiked sample minus the amount in the unspiked sample divided by the amount of analyte spiked into the sample times 100 represents the recovery of analyte in that matrix at that concentration. Acceptable recoveries for trace analyses would generally be 70 - 125%. If outside this window, the results would need to be assessed on a case by case basis.

### **In-house control samples**

Where practicable for the analytes in question, the laboratories were also requested to run an in-house control sample. This is run through all batches and represents a check on method precision and accuracy from day to day and analyst to analyst.

### **Blind duplicates**

Although ESR are confident that each analytical laboratory has appropriate built-in quality assurance procedures, ESR also believe it is necessary to build into this project provision of repeat samples which are submitted to the analytical laboratory as 'blind' duplicates. That is, the analyst will not be aware that the samples are duplicates. Results obtained provide an independent and external check on the quality of the data generated.