



Second quarter analytical results for the 2016 New Zealand Total Diet Study

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1 Introduction

New Zealand Total Diet Studies are undertaken approximately every 5 years with the 2016 study being the eighth of its kind in New Zealand. Its primary focus is to assess exposure to chemical residues, contaminant elements and selected nutrients, from approximately 130 representative foods, across the average diet of different age-sex groups within the New Zealand population.

This report presents the test results from the second quarterly sampling period for the 2016 New Zealand Total Diet Study (NZTDS). Samples of national foods were purchased in Christchurch over a six week period. Analysis and interpretation of the results has not occurred at this time.

A final comprehensive report including dietary exposure estimates for all specific population groups will be prepared once all data from the 4 quarterly sampling periods in 2016 have been consolidated. A full risk assessment of any possible risks to human health from overall exposure of consumers to chemicals in the food supply will also be undertaken. It is expected that this report will be published in December 2017.

2 Survey Design

2.1 SAMPLING

Regional foods are sampled in Quarter 1 and Quarter 3 with samples being purchased in Auckland, Napier, Christchurch and Dunedin over a six week period. National foods are sampled in Quarter 2 and 4 with samples being purchased in Christchurch over a six week period.

2.2 RETAIL OUTLETS

Wherever possible, the purchasing of any particular food is carried out over a range of retail outlets in order to represent typical buying habits of the community. Therefore the majority of purchases are made at supermarkets. However, convenience stores, delicatessens, butchers and green grocers are included where appropriate.

2.3 RANGE OF BRANDS / USE BY DATES / BATCH NUMBERS

The most commonly purchased brands, as based on consumer data, are sampled during the NZTDS. A range of use by dates and/or batch numbers within each brand are included to increase the range of products being sampled.

Where imported and domestic lines are available for a particular food, a mixture is selected.

2.4 SAMPLING - NATIONAL FOODS

Each national food is sampled twice throughout the year so that any seasonal variation can be captured.

Samples of 4 brands of national foods are purchased from retail outlets. The samples from each brand are then composited prior to analysis. The different brands are then analysed individually for all applicable analytes.

Due to limited availability only two samples of taro were able to be purchased and analysed, as a result additional samples will be purchased during quarter 4.

2.5 SAMPLE PREPARATION

As the primary purpose of the NZTDS is to estimate dietary exposure to chemical residues, contaminant elements and selected nutrients, foods are analysed on an 'as consumed' basis (i.e. banana, peeled; meat, cooked etc.).

2.6 SAMPLE ANALYSIS

All analyses (agricultural compounds and elements), with the exception of inorganic arsenic, are carried out by R J Hill Laboratories Ltd, Hamilton, New Zealand.

Inorganic arsenic analysis (only in samples exceeding 0.02mg/kg total arsenic) is undertaken by the Cawthron Institute, Nelson, New Zealand as required.

2.7 ANALYTICAL QUALITY CONTROL

A range of quality control procedures are employed to provide confidence in the methodology and the validity of results. R J Hill Laboratories is an internationally accredited laboratory to ISO 17025, as such they maintain a range of internal quality controls including analysing samples in duplicate, spiked recoveries, internal standardisation and the use of Internationally Certified Reference Materials (CRMs).

In addition all results are scrutinised by an MPI expert and any unusual findings result in the samples being re-analysed. Transcription errors are avoided as the test results are directly and electronically transferred to the MPI database from the Laboratory Information Management System (LIMS).

3 Analyte List

3.1 ELEMENTS

Eleven elements and two speciated forms of elements are included for analysis in the 2016 NZTDS. Table 1 lists the elements, the analytical methodologies used and the foods which are analysed. It should be noted that Q2 involves analysis of national foods only and that for some foods not all the elements are analysed (as indicated in the table below).

3.1.1.1 Table 1 - Elements and speciated forms of elements analysed in the 2016 NZTDS

Element	Method of analysis	Foods to be analysed
Aluminium (Al)	ICP-MS	All
Total Arsenic (As)	ICP-MS	All
Inorganic Arsenic (iAs)	HG-AAS	All foods with total arsenic levels above 0.02 mg/kg
Cadmium (Cd)	ICP-MS	All
Fluoride (F)	Ion selective electrode.	All plant based foods (except avocados and mixed plant/dairy foods) and beverages
Iodine (I)	ICP-MS	All
Lead (Pb)	ICP-MS	All

Total Mercury (Hg)	ICP-MS	All
Methylmercury (MeHg)	SPME-GCMS	Only seafood
Selenium (Se)	ICP-MS	All
Sodium (Na)	ICP-OES	All
Tin (Sn)	ICP-MS	All
Zinc (Zn)	ICP-MS	All

ICP-MS = Inductively-coupled plasma mass spectrometry

HG-AAS = Hydride generation-atomic absorption spectrometry

ICP-OES = Inductively-coupled plasma optical emission spectrometry

SPME GCMS – Solid phase micro extraction gas chromatography mass spectrometry

3.2 AGRICULTURAL COMPOUNDS

Testing of foods in the 2016 NZTDS for residues of agricultural compounds is undertaken by way of three separate screens. A multi-residue (MR) screen of 301 compounds that includes organochlorine pesticides, organophosphorus and carbamate pesticides, pyrethroids, fungicides and a number of other agricultural compounds not included in these groups. The MR screen also includes analysis of quaternary ammonium compounds that are used as agricultural compounds but are also commonly used as surface disinfectants.

Two separate screens are also undertaken in subgroupings of the foods:

The first is for carbon disulphide (CS₂) a common chemical marker for nine dithiocarbamate fungicides which is undertaken in all fruits, nuts and vegetables; and in fruit based beverages.

The second is a screen for twenty one phenoxy and aromatic acid herbicides which is undertaken in all cereal grains and vegetables and some vegetable based foods.

3.2.1 Multi-residue screen in the 2016 NZTDS

All foods are analysed for agricultural compound residues by the MR screen method. Table 2 lists the 301 agricultural compound analytes included in this screen.

3.2.1.1 Table 2 - Agricultural compound analytes in the 2016 NZTDS multi-residue screen

2,4' - DDD	Cyfluthrin	Fluvalinate	Procymidone
2,4' - DDE	Cyhalothrin	Fluxapyroxad	Profenofos
2,4' - DDT	Cypermethrin	Folpet	Prometryn
4,4' - DDD	Cyproconazole	Fonofos	Propachlor
4,4' - DDE	Cyprodinil	Furalaxyl	Propamocarb
4,4' - DDT	delta-BHC	Furathiocarb	Propanil
Abamectin	Deltamethrin (including Tralomethrin)	gamma-BHC (Lindane)	Propaphos
Acephate	Demeton-S-methyl	Halfenprox	Propargite
Acetamiprid	Diazinon	Haloxypop-methyl	Propazine

Acetochlor	Dichlobenil	Heptachlor	Propetamphos
Acrinathrin	Dichlofenthion	Heptachlor epoxide	Propham
Alachlor	Dichlofluanid	Hexachlorobenzene	Propiconazole
Aldicarb	Dichloran	Hexaconazole	Propoxur
Aldicarb sulfone	Dichlorvos	Hexazinone	Propyzamide
Aldicarb sulfoxide	Dicofol	Hexythiazox	Prothiofos
Aldrin	Dicrotophos	Imazalil	Pyraclofos
alpha-BHC	Didecyldimethylammonium chloride (DDAC)	Imidacloprid	Pyraclostrobin
Ametryn	Dieldrin	Indoxacarb	Pyrazophos
Anilazine	Diethofencarb	Iodofenphos	Pyrazoxyfen
Atrazine	Difenoconazole	Iprobenfos	Pyrethrin
Atrazine - desethyl	Diflubenzuron	Iprodione	Pyridaphenthion
Atrazine - desisopropyl	Diflufenican	Isazophos	Pyrifenox
Azaconazole	Dimethenamid	Isofenphos	Pyrimethanil
Azinphos-methyl	Dimethoate	Isoprocarb	Pyriproxyfen
Azoxystrobin	Dimethylvinphos	Kresoxim-methyl	Quinalphos
Benalaxyl	Dimthomorph	Leptophos	Quintozene
Bendiocarb	Dioxabenzofos	Linuron	Quizalofop-ethyl
Benodanil	Diphenylamine	Lufenuron	Sethoxydim
Benoxacor	Disulfoton	Malathion	Simazine
Benzalkonium Chloride (C12)	Diuron	Mepronil	Simetryn
Benzalkonium Chloride (C14)	Dodine	Metalaxyl (Mefenoxam)	Spinetoram
Benzalkonium Chloride (C16)	Edifenphos	Metconazole	Spinosad
Beta-BHC	Emamectin	Methabenzthiazuron	Spiromesifen
Bifenox	Empenthrin	Methacrifos	Spirotetramat
Bifenthrin	Endosulfan I	Methamidophos	Spirotetramat-cis-enol
Bitertanol	Endosulfan II	Methidathion	Spirotetramat-cis-keto-hydroxy
Bixafen	Endosulfan sulfate	Methiocarb	Spirotetramat-enol-glucoside

Boscalid	Endrin	Methomyl	Spirotetramat-mono-hydroxy
Bromacil	Endrin aldehyde	Methoxychlor	Sulfentrazone
Bromophos-ethyl	Endrin ketone	Methoxyfenozide	Sulfotep
Bromopropylate	EPN	Metolachlor	Sulfoxaflor
Bupirimate	Epoxiconazole	Metribuzin	Tebuconazole
Buprofezin	EPTC	Mevinphos	Tebufenozide
Butachlor	Esprocarb	Milbemectin	Tebufenpyrad
Butamifos	Ethion	Molinate	Teflubenzuron
Cadusafos	Ethoprophos	Monocrotophos	Tefluthrin
Captafol	Etoxazole	Myclobutanil	Terbacil
Captan	Etridiazole	Naled	Terbufos
Carbaryl	Etrimfos	Napropamide	Terbumeton
Carbendazim (incl. Benomyl and Thiophanate)	Famphur	Nitrofen	Terbutylazine
Carbofenthiol	Fenamiphos	Nitrothal-isopropyl	Terbutylazine-desethyl
Carbofuran	Fenarimol	Norflurazon	Terbutryn
Carboxin	Fenchlorphos	Omethoate	Tetrachlorvinphos
Carfentrazone-ethyl	Fenhexamid	Oryzalin	Tetraconazole
Chlorantraniliprole	Fenitrothion	Oxadiazon	Tetradifon
Chlorfenapyr	Fenobucarb	Oxadixyl	Thenylchlor
Chlorfenvinphos	Fenoxaprop-ethyl	Oxamyl	Thiacloprid
Chlorfluazuron	Fenoxycarb	Oxychlordane	Thiamethoxam
Chloridazon	Fenpiclonil	Oxyfluorfen	Thifluzamide
Chlorobenzilate	Fenpropathrin	Paclobutrazol	Thiobencarb
Chlorothalonil	Fenpropimorph	Parathion-ethyl	Thiometon
Chlorpropham	Fenpyroximate	Parathion-methyl	Thiophanate-methyl
Chlorpyrifos	Fensulfotihion	Penconazole	Tolclofos-methyl
Chlorpyrifos-methyl	Fenthion	Pencycuron	Tolyfluanid
Chlorthal-dimethyl	Fenvalerate (including Esfenvalerate)	Pendimethalin	Trans-chlordane

Chlortoluron	Fipronil	Permethrin	Triadimefon
Chlozolinate	Fluazifop-butyl	Phenthoate	Triadimenol
cis-Chlordane	Flucythrinate	Phorate	Tri-allate
Clethodim	Fludioxonil	Phosalone	Triazophos
Clofentezine	Flufenoxuron	Phosmet	Trichlorfon
Clomazone	Flumioxazin	Phosphamidon	Trifloxystrobin
Coumaphos	Fluometuron	Piperonyl-butoxide	Triflumuron
Cyanazine	Flusilazole	Pirimicarb	Trifluralin
Cyanophos	Flutolanil	Pirimiphos-methyl	Uniconazole
Cyantraniliprole	Flutriafol	Prochloraz	Vinclozolin
Cyflufenamid			

3.2.2 Carbon disulphide (CS₂) screen in the 2016 NZTDS

A separate screen is run for carbon disulphide (CS₂) in fruits, nuts and vegetables. This analysis is for a common chemical marker for the nine dithiocarbamate fungicides listed in table 3. The screen however is unable to distinguish between the nine chemicals and may also show false positives from natural sulphur containing compounds present in some plants (such as in brassica vegetables):

3.2.2.1 Table 3 – Dithiocarbamate fungicides detected in the CS₂ residue screen in the 2016 NZTDS

Ferbam	Metiram	Thiram
Mancozeb	Nabam	Zineb
Maneb	Propineb	Ziram

3.2.3 Herbicide screen in the 2016 NZTDS

A phenoxy acid and aromatic acid herbicide screen is run for all cereal grains and vegetables. This analysis covers the twenty one herbicides in table 4.

3.2.3.1 Table 4 – Phenoxy and aromatic acid herbicides analysed in the 2016 NZTDS

Acibenzolar acid	Dichloroprop	Mecoprop
Aminopyralid	Fluazifop	1-Naphthylacetic acid (NAA)
Bentazone	Fluoxypyr	Picloram
4-Chlorophenoxyacetic acid (4-CPA)	Haloxypop	Quizalofop
Clopyralid	loxylinil	2,4,5-Trichlorophenoxyacetic acid (2,4,5-T)

Dicamba	MCPA	2,4,5-Trichlorophenoxypropionic acid (2,4,5-TP)
2,4 Dichlorophenoxyacetic acid (2,4-D)	MCPB	Triclopyr

4 Analytical Results

4.1 ELEMENTS

For the elements and speciated forms of elements analysed, results are reported per analyte for all foods analysed in this quarter.

All elemental results reported are on a 'foods as consumed' basis.

Elements are naturally occurring and ubiquitous in our environment. As such, if the concentration of a certain element in a food is 'not quantified' it is highly likely that it is present, but at levels less than the limit of quantification. In this report, 'not quantified' test results in the following tables are designated as a value of '<LOQ' using the associated limit of quantification given for each element. This can vary dependent on analyte and food matrix type (dry/fatty, fresh, liquid, water).

The tables do not include entries where samples were 'not analysed' for a particular food/analyte combination.

4.1.1 Aluminium

4.1.1.1 Table 5 - Aluminium content (mg/kg) of foods in Q2 of 2016 NZTDS, reported to one decimal place except for water

Food	Brand 1	Brand 2	Brand 3	Brand 4
Almonds	5.4	3.9	3.8	4.2
Apple-based juice	<0.1	0.6	0.3	<0.1
Bananas	0.3	0.6	<0.2	<0.2
Beans, baked, canned	0.3	0.7	0.6	0.6
Beer	<0.1	<0.1	<0.1	<0.1
Beetroot, canned	<0.2	<0.2	<0.2	<0.2
Biscuits, chocolate	5.1	5.8	3.6	2.1
Biscuits, cracker	21.6	1.0	1.5	<1.0
Biscuits, plain sweet	<1.0	<1.0	<1.0	<1.0
Bran flake cereal, mixed	2.6	1.6	2.5	3.7
Caffeinated beverage	0.3	0.2	0.3	0.3
Carbonated drink	<0.1	<0.1	0.1	<0.1
Cheese	<1.0	<1.0	<1.0	<1.0
Chicken	<0.2	<0.2	<0.2	<0.2
Chocolate beverage	4.4	1.4	3.0	2.4
Coconut cream, canned	<0.1	<0.1	<0.1	<0.1
Coffee, instant	<0.1	<0.1	<0.1	0.1
Confectionery	4.9	<1.0	<1.0	<1.0
Corn, frozen	<0.2	<0.2	<0.2	<0.2
Cornflakes	<1.0	<1.0	<1.0	<1.0
Dairy dessert	1.3	0.5	1.1	0.7
Fish cakes	3.1	0.9	1.3	0.7

Food	Brand 1	Brand 2	Brand 3	Brand 4
Fish fingers	2.5	1.6	<0.2	<0.2
Fish, canned	1.4	<0.2	0.9	<0.2
Fruit drink	<0.1	1.3	<0.1	<0.1
Honey	<1.0	<1.0	8.9	<1.0
Hummus	2.3	0.9	0.7	1.5
Ice cream	<0.2	<0.2	<0.2	<0.2
Infant/Follow-on formula	<1.0	<1.0	<1.0	<1.0
Infant weaning food, cereal based	0.3	0.6	0.3	0.5
Infant weaning food, custard/fruit dish	0.8	<0.2	<0.2	0.5
Infant weaning food, savoury dish	0.4	0.5	<0.2	0.5
Jam	<1.0	<1.0	1.3	1.7
Milk chocolate	<1.0	3.2	1.2	3.6
Mixed berries, frozen	2.8	1.8	1.7	0.4
Mixed vegetables, frozen	0.6	0.5	0.4	0.9
Muesli	<1.0	1.2	<1.0	1.3
Noodles, instant	0.8	1.3	0.3	0.3
Oats, rolled	<0.2	<0.2	<0.2	<0.2
Oil	<1.0	<1.0	<1.0	<1.0
Orange juice	<0.1	<0.1	<0.1	<0.1
Other cereals	1.6	<1.0	7.0	2.9
Pasta, dried	<1.0	9.0	1.1	<1.0
Peaches, canned	<0.2	<0.2	<0.2	<0.2
Peanut butter	8.1	<1.0	1.0	1.3
Peanuts	<1.0	4.0	3.5	<1.0
Peas, frozen	0.7	0.9	0.9	1.1
Pineapple, canned	<0.2	1.1	<0.2	<0.2
Potato crisps	4.8	1.4	18.4	<1.0
Prawns/shrimps	0.6	0.7	0.6	8.4
Prunes	5.3	<1.0	<1.0	<1.0
Raisins/sultanas	4.2	4.6	2.7	4.4
Rice, white	<1.0	<1.0	<1.0	<1.0
Salad dressing	<1.0	<1.0	<1.0	<1.0
Simmer sauce, bottled	1.7	1.8	1.9	1.7
Snack bars	4.2	2.3	1.3	2.2
Snacks, flavoured	<1.0	29.5	1.8	4.5
Soup, vegetable	0.3	<0.1	0.8	1.6
Soya milk	0.4	1.0	0.4	0.5
Spaghetti in sauce, canned	2.6	1.2	2.5	0.7
Sugar	<1.0	<1.0	<1.0	<1.0
Table spreads	<1.0	<1.0	<1.0	<1.0
Taro	0.5	1.0	Not sampled	Not sampled
Tea	9.9	11.2	3.8	5.3
Tomato sauce	0.9	1.9	2.0	1.1
Tomatoes in juice, canned	1.0	<0.2	1.3	3.6
Water, bottled	<0.003	<0.003	<0.003	0.009
Wheat biscuit cereal	1.6	3.0	1.5	2.7
Wine, still red	0.9	0.2	0.3	0.5
Wine, still white	0.8	0.4	1.9	0.7
Yeast extract	1.2	5.1	5.4	1.3

Food	Brand 1	Brand 2	Brand 3	Brand 4
Yoghurt	0.4	0.3	0.4	0.3

4.1.2 Arsenic (Total and Inorganic)

4.1.2.1 Table 6 - Total Arsenic content (mg/kg) of foods in Q2 of 2016 NZTDS, reported to three decimal places

Food	Brand 1	Brand 2	Brand 3	Brand 4
Almonds	<0.010	<0.010	<0.010	0.013
Apple-based juice	0.002	0.004	0.007	<0.001
Bananas	<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	0.002
Beetroot, canned	<0.002	<0.002	<0.002	<0.002
Biscuits, chocolate	<0.010	<0.010	<0.010	<0.010
Biscuits, cracker	<0.010	<0.010	<0.010	0.119*
Biscuits, plain sweet	<0.010	<0.010	<0.010	<0.010
Bran flake cereal, mixed	0.033*	0.019	<0.010	0.016
Caffeinated beverage	0.001	0.001	0.001	0.002
Carbonated drink	<0.001	0.001	0.001	0.001
Cheese	<0.010	<0.010	<0.010	<0.010
Chicken	<0.020	<0.020	<0.020	<0.020
Chocolate beverage	0.001	<0.001	<0.001	0.001
Coconut cream, canned	<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, frozen	<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 cakes	1.396*	0.279*	0.225*	0.528*
Fish fingers	0.992*	0.933*	1.120*	0.870*
Fish, canned	0.332*	1.108*	0.295*	0.561*
Fruit drink	<0.001	0.009	<0.001	<0.001
Honey	<0.010	<0.010	<0.010	<0.010
Hummus	<0.040	<0.020	<0.020	<0.020
Ice cream	0.002	0.003	<0.002	<0.002
Infant/Follow-on formula	<0.010	<0.010	<0.010	<0.010
Infant weaning food, cereal based	0.018	<0.010	<0.010	<0.010
Infant weaning food, custard/fruit dish	<0.002	<0.002	<0.002	0.003
Infant weaning food, savoury dish	<0.010	<0.010	<0.010	0.011
Jam	<0.010	<0.010	<0.010	<0.010
Milk chocolate	<0.010	<0.010	<0.010	<0.010
Mixed berries, frozen	0.004	0.005	<0.002	0.003
Mixed vegetables, frozen	<0.002	<0.002	<0.002	<0.002
Muesli	<0.010	<0.010	<0.010	<0.010
Noodles, instant	<0.002	<0.002	<0.002	<0.002
Oats, rolled	<0.002	<0.002	<0.002	<0.002
Oil	<0.092	<0.091	<0.092	<0.093
Orange juice	<0.001	<0.001	<0.001	<0.001

Food	Brand 1	Brand 2	Brand 3	Brand 4
Other cereals	0.013	0.139*	0.019	0.142*
Pasta, dried	<0.010	<0.010	<0.010	<0.010
Peaches, canned	<0.002	<0.002	<0.002	<0.002
Peanut butter	<0.010	<0.010	<0.010	<0.009
Peanuts	<0.010	<0.010	<0.010	<0.010
Peas, frozen	<0.002	<0.002	<0.002	<0.002
Pineapple, canned	<0.002	0.003	<0.002	<0.002
Potato crisps	<0.010	<0.010	<0.010	<0.010
Prawns/shrimps	0.217*	0.149*	0.116*	0.191*
Prunes	0.012	<0.010	<0.010	<0.010
Raisins/sultanas	<0.010	0.014	0.021*	0.021*
Rice, white	0.040*	0.038*	0.060*	0.038*
Salad dressing	0.010	<0.009	<0.010	<0.010
Simmer sauce, bottled	<0.002	<0.002	<0.002	<0.002
Snack bars	<0.010	0.016	0.011	0.016
Snacks, flavoured	<0.010	<0.010	<0.010	<0.010
Soup, vegetable	<0.001	<0.001	0.001	0.001
Soya milk	0.002	<0.010	<0.010	<0.010
Spaghetti in sauce, canned	<0.002	<0.002	<0.002	<0.002
Sugar	<0.010	<0.010	<0.010	<0.010
Table spreads	<0.010	<0.010	<0.010	<0.010
Taro	<0.002	0.019	Not sampled	Not sampled
Tea	<0.001	<0.001	<0.001	<0.001
Tomato sauce	<0.002	<0.002	0.003	<0.002
Tomatoes in juice, canned	<0.002	<0.002	<0.002	<0.002
Water, bottled	<0.001	<0.001	<0.001	0.009
Wheat biscuit cereal	0.028*	0.025*	0.027*	0.020*
Wine, still red	0.002	0.002	0.002	0.002
Wine, still white	0.006	0.006	0.002	0.004
Yeast extract	0.088	<0.010	0.070	0.085
Yoghurt	<0.002	0.002	<0.002	<0.002

* Samples with >0.02mg/kg Total arsenic that were further analysed for Inorganic arsenic content

4.1.2.2 Table 7 – Inorganic Arsenic content (mg/kg) of foods in Q2 of 2016 NZTDS, reported to two decimal places

Food	Brand 1	Brand 2	Brand 3	Brand 4
Biscuits, cracker	Not analysed	Not analysed	Not analysed	0.05
Bran flake cereal, mixed	<0.02	Not analysed	Not analysed	Not analysed
Fish cakes	0.03	<0.02	<0.02	<0.02
Fish fingers	<0.02	<0.02	0.02	<0.02
Fish, canned	<0.02	0.02	<0.02	0.02
Other cereals	Not analysed	0.05	Not analysed	0.05
Prawns/shrimps	<0.02	<0.02	<0.02	0.02
Raisins/sultanas	Not analysed	Not analysed	<0.02	<0.02
Rice, white	0.03	0.03	0.04	0.03
Wheat biscuit cereal	0.03	<0.02	0.02	0.02

4.1.3 Cadmium

4.1.3.1 Table 8 - Cadmium content (mg/kg) of foods in Q2 of 2016 NZTDS, reported to four decimal places for all foods except water

Food	Brand 1	Brand 2	Brand 3	Brand 4
Almonds	0.0119	0.0084	0.0080	0.0079
Apple-based juice	<0.0002	<0.0002	<0.0002	<0.0002
Bananas	0.0005	<0.0004	0.0012	<0.0004
Beans, baked, canned	0.0067	0.0016	0.0068	0.0021
Beer	<0.0002	<0.0002	<0.0002	<0.0002
Beetroot, canned	0.0082	0.0089	0.0113	0.0134
Biscuits, chocolate	0.0400	0.0279	0.0161	0.0121
Biscuits, cracker	0.0056	0.0157	0.0199	0.0282
Biscuits, plain sweet	0.0142	0.0036	0.0165	0.0131
Bran flake cereal, mixed	0.0244	0.0356	0.0084	0.0055
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	<0.0019	<0.0019
Chicken	<0.0004	<0.0004	<0.0004	0.0007
Chocolate beverage	0.0072	0.0087	0.0164	0.0103
Coconut cream, canned	0.0025	0.0027	<0.0019	<0.0020
Coffee, instant	<0.0002	<0.0002	<0.0002	<0.0002
Confectionery	<0.0020	<0.0020	<0.0020	<0.0020
Corn, frozen	0.0015	0.0038	0.0018	0.0060
Cornflakes	<0.0020	<0.0020	<0.0020	0.0026
Dairy dessert	0.0094	0.0078	0.0026	0.0051
Fish cakes	0.0065	0.0121	0.0051	0.0133
Fish fingers	0.0033	0.0071	0.0044	0.0043
Fish, canned	0.0018	0.0221	0.0037	0.0146
Fruit drink	<0.0002	0.0025	<0.0002	<0.0002
Honey	<0.0020	<0.0020	<0.0020	0.0025
Hummus	0.0017	0.0024	0.0014	0.0021
Ice cream	<0.0004	<0.0004	<0.0004	<0.0004
Infant/Follow-on formula	<0.0020	<0.0020	<0.0020	<0.0020
Infant weaning food, cereal based	0.0022	0.0017	0.0009	0.0010
Infant weaning food, custard/fruit dish	<0.0004	<0.0004	<0.0004	<0.0004
Infant weaning food, savoury dish	0.0084	0.0098	0.0017	0.0021
Jam	0.0053	<0.0020	0.0028	<0.0020
Milk chocolate	0.0147	0.019	0.0256	0.0206
Mixed berries, frozen	0.0011	0.0017	0.0018	0.0192
Mixed vegetables, frozen	0.0064	0.0117	0.0197	0.0135
Muesli	0.0169	0.0112	0.0114	0.0298
Noodles, instant	0.0083	0.0090	0.0032	0.0034
Oats, rolled	0.0038	0.0024	0.0029	0.0023
Oil	<0.0020	<0.0020	<0.0019	<0.0019
Orange juice	<0.0002	<0.0002	<0.0002	<0.0002
Other cereals	0.0111	0.0033	0.0326	0.0192
Pasta, dried	0.0026	0.0107	0.0087	0.0088
Peaches, canned	0.0006	0.0006	0.0004	0.0023
Peanut butter	0.0167	0.0371	0.0488	0.1573

Food	Brand 1	Brand 2	Brand 3	Brand 4
Peanuts	0.1301	0.0468	0.1020	0.0352
Peas, frozen	0.0008	0.0017	0.0043	0.0010
Pineapple, canned	0.0009	0.0009	0.0004	<0.0004
Potato crisps	0.2190	0.1607	0.2349	0.0614
Prawns/shrimps	0.0007	0.0044	0.0006	0.0014
Prunes	<0.0020	<0.0020	<0.0020	<0.0020
Raisins/sultanas	<0.0020	<0.0020	<0.0020	<0.0020
Rice, white	0.0110	0.0075	0.0064	0.0050
Salad dressing	0.0051	<0.0019	0.0022	<0.0020
Simmer sauce, bottled	0.0151	0.0129	0.0155	0.0082
Snack bars	0.0182	0.0125	0.0101	0.0111
Snacks, flavoured	<0.0020	<0.0020	0.0071	<0.0020
Soup, vegetable	0.0003	0.0023	0.0103	0.0074
Soya milk	0.0012	0.0016	0.0015	0.0017
Spaghetti in sauce, canned	0.0082	0.0119	0.0045	0.0092
Sugar	<0.0020	<0.0020	<0.0020	<0.0020
Table spreads	<0.0020	<0.0020	<0.0020	<0.0020
Taro	0.0484	0.0054	Not sampled	Not sampled
Tea	<0.0002	<0.0002	<0.0002	<0.0002
Tomato sauce	0.0213	0.0108	0.0045	0.0193
Tomatoes in juice, canned	0.0117	0.0099	0.0142	0.0074
Water, bottled	<0.00005	<0.00005	<0.00005	<0.00005
Wheat biscuit cereal	0.0099	0.0087	0.0122	0.0134
Wine, still red	<0.0004	0.0002	<0.0004	<0.0004
Wine, still white	0.0002	<0.0002	0.0004	0.0003
Yeast extract	0.0047	0.0025	0.0116	0.0061
Yoghurt	<0.0004	<0.0004	0.0004	<0.0004

4.1.4 Fluoride

4.1.4.1 Table 9 - Fluoride content (mg/kg) of foods in Q2 of 2016 NZTDS, reported to two decimal places

Food	Brand 1	Brand 2	Brand 3	Brand 4
Almonds	6.82	5.47	14.18	5.33
Apple-based juice	0.21	0.68	<0.17	<0.18
Bananas	<0.24	<0.23	<0.20	<0.24
Beans, baked, canned	<0.22	<0.22	<0.24	<0.25
Beer	0.52	0.49	0.47	0.56
Beetroot, canned	<0.21	<0.25	<0.23	<0.24
Biscuits, cracker	<1.00	<1.22	<1.19	<1.00
Biscuits, plain sweet	<1.03	<1.11	<1.21	<1.21
Bran flake cereal, mixed	<1.09	<1.23	<1.23	<1.13
Caffeinated beverage	<0.18	<0.18	0.64	0.60
Carbonated drink	<0.17	<0.17	<0.17	<0.17
Coconut cream, canned	0.29	<0.25	<0.45	<0.24
Coffee, instant	<0.17	<0.17	<0.17	<0.17
Corn, frozen	<0.24	<0.45	<0.40	<0.33
Cornflakes	<1.17	<1.22	<1.22	<1.19
Fruit drink	<0.18	<0.18	<0.18	<0.18

Food	Brand 1	Brand 2	Brand 3	Brand 4
Mixed berries, frozen	<0.25	<0.23	<0.23	<0.25
Mixed vegetables, frozen	<0.25	<0.24	<0.22	<0.23
Muesli	<1.08	<1.21	<1.17	<1.13
Noodles, instant	<0.48	<0.45	<0.50	<0.45
Oats, rolled	<0.24	<0.25	<0.23	<0.24
Orange juice	<0.17	0.68	<0.18	<0.17
Other cereals	<1.23	<1.22	<1.18	<1.17
Pasta, dried	<1.00	<1.00	<1.00	<1.00
Peaches, canned	<0.24	<0.24	<0.25	<0.2
Peas, frozen	<0.47	<0.47	<0.46	<0.39
Pineapple, canned	<0.22	<0.23	<0.24	<0.23
Potato crisps	<1.21	<1.21	<1.21	<1.21
Prunes	<1.00	<1.00	<1.18	<1.14
Raisins/sultanas	1.52	<1.00	<1.00	<1.00
Rice, white	<1.00	<1.00	<1.00	<1.00
Soup, vegetable	<0.20	<0.20	<0.24	<0.20
Soya milk	0.57	0.63	1.22	1.40
Spaghetti in sauce, canned	<0.25	<0.24	<0.24	<0.24
Taro	<0.49	<0.50	Not sampled	Not sampled
Tea	5.27	6.48	1.23	3.11
Tomato sauce	<0.24	<0.24	<0.24	<0.24
Tomatoes in juice, canned	<0.24	<0.23	<0.24	<0.25
Water, bottled	<0.10	<0.10	<0.10	<0.10
Wheat biscuit cereal	<1.22	<1.21	<1.23	<1.21
Wine, still red	0.24	0.21	<0.18	<0.20
Wine, still white	0.23	<0.19	0.18	0.20

4.1.5 Iodine

4.1.5.1 Table 10 - Iodine content (mg/kg) of foods in Q2 of 2016 NZTDS, reported to three decimal places

Food	Brand 1	Brand 2	Brand 3	Brand 4
Almonds	<0.010	<0.010	<0.010	<0.010
Apple-based juice	0.012	0.007	0.003	<0.001
Bananas	<0.002	<0.002	<0.002	<0.002
Beans, baked, canned	0.009	0.004	0.012	0.004
Beer	0.005	0.004	0.005	0.004
Beetroot, canned	0.007	0.004	0.004	0.006
Biscuits, chocolate	0.081	0.040	0.106	0.119
Biscuits, cracker	<0.010	0.010	0.014	<0.010
Biscuits, plain sweet	<0.010	<0.010	0.015	<0.010
Bran flake cereal, mixed	<0.010	<0.010	<0.010	<0.010
Caffeinated beverage	<0.001	<0.001	<0.001	0.004
Carbonated drink	<0.001	<0.001	<0.001	<0.001
Cheese	0.053	0.053	0.040	0.032
Chicken	<0.019	<0.020	<0.020	<0.020
Chocolate beverage	0.021	0.001	<0.001	0.051
Coconut cream, canned	0.044	<0.010	0.037	<0.010
Coffee, instant	<0.001	<0.001	<0.001	0.008

Food	Brand 1	Brand 2	Brand 3	Brand 4
Confectionery	0.066	<0.010	<0.010	<0.010
Corn, frozen	<0.002	<0.002	<0.002	<0.002
Cornflakes	<0.010	<0.010	<0.010	<0.010
Dairy dessert	0.014	0.039	0.043	0.051
Fish cakes	0.138	0.016	0.027	0.025
Fish fingers	0.030	0.133	0.044	0.036
Fish, canned	0.305	0.075	0.505	0.073
Fruit drink	<0.001	0.002	<0.001	<0.001
Honey	<0.010	<0.010	<0.010	<0.010
Hummus	<0.040	<0.019	<0.020	<0.020
Ice cream	0.063	0.077	0.043	0.096
Infant/Follow-on formula	0.129	0.132	0.129	0.127
Infant weaning food, cereal based	<0.010	<0.010	0.041	<0.010
Infant weaning food, custard/fruit dish	<0.002	0.084	0.062	0.002
Infant weaning food, savoury dish	0.019	<0.009	<0.010	<0.009
Jam	<0.010	<0.010	<0.010	<0.010
Milk chocolate	0.097	0.248	0.165	0.268
Mixed berries, frozen	<0.002	<0.002	<0.002	<0.002
Mixed vegetables, frozen	<0.002	<0.002	<0.002	<0.002
Muesli	<0.010	0.030	0.011	<0.010
Noodles, instant	0.267	0.208	0.248	0.237
Oats, rolled	<0.002	<0.002	<0.002	<0.002
Oil	<0.092	<0.091	<0.092	<0.093
Orange juice	0.007	0.004	<0.001	<0.001
Other cereals	0.026	<0.010	0.058	<0.010
Pasta, dried	<0.010	0.142	<0.010	<0.010
Peaches, canned	<0.002	<0.002	0.011	0.004
Peanut butter	<0.010	<0.010	0.021	0.014
Peanuts	<0.010	<0.010	<0.010	<0.010
Peas, frozen	<0.002	<0.002	<0.002	<0.002
Pineapple, canned	0.060	0.030	<0.002	0.037
Potato crisps	<0.010	<0.010	0.010	<0.010
Prawns/shrimps	0.089	0.063	0.050	0.079
Prunes	<0.010	0.014	<0.010	0.013
Raisins/sultanas	<0.010	0.014	0.013	0.022
Rice, white	<0.010	<0.010	<0.010	<0.010
Salad dressing	<0.010	0.028	0.045	0.011
Simmer sauce, bottled	0.011	0.011	0.013	0.027
Snack bars	0.041	0.014	0.042	0.014
Snacks, flavoured	0.371	<0.010	0.061	0.442
Soup, vegetable	0.011	0.002	0.007	0.014
Soya milk	0.010	<0.0010	0.099	0.111
Spaghetti in sauce, canned	0.010	0.014	0.003	0.010
Sugar	<0.010	<0.010	<0.010	<0.010
Table spreads	<0.010	<0.010	<0.010	<0.010
Taro	0.023	0.038	Not sampled	Not sampled
Tea	<0.001	<0.001	<0.001	<0.001
Tomato sauce	0.027	0.003	0.012	0.021
Tomatoes in juice, canned	0.006	0.004	0.006	0.002

Food	Brand 1	Brand 2	Brand 3	Brand 4
Water, bottled	0.001	0.002	<0.001	<0.001
Wheat biscuit cereal	<0.010	<0.010	<0.010	<0.010
Wine, still red	0.009	0.008	0.010	0.010
Wine, still white	0.010	0.002	0.004	0.005
Yeast extract	0.083	0.013	0.026	0.030
Yoghurt	0.035	0.034	0.029	0.032

4.1.6 Lead

4.1.6.1 Table 11 - Lead content (mg/kg) of foods in Q2 of 2016 NZTDS, reported to three decimal places for all foods except water

Food	Brand 1	Brand 2	Brand 3	Brand 4
Almonds	<0.010	<0.010	<0.010	<0.010
Apple-based juice	<0.001	0.003	0.003	0.001
Bananas	<0.002	<0.002	<0.002	<0.002
Beans, baked, canned	<0.002	0.002	<0.002	0.003
Beer	<0.001	<0.001	<0.001	<0.001
Beetroot, canned	<0.002	0.003	<0.002	<0.002
Biscuits, chocolate	0.133	0.016	<0.010	<0.010
Biscuits, 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	<0.010	<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	<0.002	<0.002	<0.002	<0.002
Chocolate beverage	0.006	0.003	0.005	0.006
Coconut cream, canned	<0.010	<0.010	<0.010	<0.010
Coffee, instant	<0.001	<0.001	<0.001	<0.001
Confectionery	<0.010	0.028	<0.010	<0.010
Corn, frozen	<0.002	<0.002	<0.002	0.005
Cornflakes	<0.010	<0.010	<0.010	<0.010
Dairy dessert	0.004	<0.002	<0.002	<0.002
Fish cakes	0.009	0.004	0.003	0.003
Fish fingers	<0.002	0.007	<0.002	<0.002
Fish, canned	<0.002	0.003	<0.002	<0.002
Fruit drink	<0.001	0.001	<0.001	<0.001
Honey	<0.010	<0.010	<0.010	<0.010
Hummus	0.003	<0.002	<0.002	0.003
Ice cream	<0.002	<0.002	<0.002	<0.002
Infant/Follow-on formula	<0.010	<0.010	<0.010	<0.010
Infant weaning food, cereal based	<0.002	0.003	<0.002	0.005
Infant weaning food, custard/fruit dish	0.021	<0.002	<0.002	0.002
Infant weaning food, savoury dish	0.002	<0.002	<0.002	<0.002
Jam	<0.010	0.016	<0.010	<0.010
Milk chocolate	<0.010	<0.010	<0.010	<0.010
Mixed berries, frozen	<0.002	0.003	<0.002	0.005
Mixed vegetables, frozen	<0.002	0.004	0.004	0.003

Food	Brand 1	Brand 2	Brand 3	Brand 4
Muesli	<0.010	<0.010	<0.010	<0.010
Noodles, instant	<0.002	0.004	<0.002	<0.002
Oats, rolled	<0.002	<0.002	<0.002	<0.002
Oil	<0.001	<0.001	<0.001	<0.001
Orange juice	<0.001	<0.001	<0.001	<0.001
Other cereals	0.013	<0.010	0.013	0.018
Pasta, dried	<0.010	<0.010	<0.010	<0.010
Peaches, canned	0.011	0.006	0.025	0.124
Peanut butter	0.013	<0.001	<0.001	<0.001
Peanuts	<0.010	<0.010	<0.010	<0.010
Peas, frozen	<0.002	<0.002	<0.002	0.002
Pineapple, canned	0.012	0.028	0.005	0.008
Potato crisps	<0.010	<0.010	<0.010	<0.010
Prawns/shrimps	0.005	0.004	0.009	0.031
Prunes	<0.010	<0.010	<0.010	<0.010
Raisins/sultanas	0.011	0.011	<0.010	0.015
Rice, white	<0.010	<0.010	<0.010	<0.010
Salad dressing	<0.010	<0.010	<0.010	<0.010
Simmer sauce, bottled	0.003	0.004	0.004	0.007
Snack bars	0.014	<0.010	<0.010	<0.010
Snacks, flavoured	<0.010	<0.010	<0.010	<0.010
Soup, vegetable	0.001	0.001	0.002	0.002
Soya milk	0.001	0.001	0.002	0.002
Spaghetti in sauce, canned	<0.002	<0.002	0.003	<0.002
Sugar	<0.010	<0.010	<0.010	<0.010
Table spreads	<0.010	<0.010	<0.010	<0.010
Taro	0.018	0.003	Not sampled	Not sampled
Tea	<0.001	<0.001	<0.001	<0.001
Tomato sauce	0.002	0.003	0.004	<0.002
Tomatoes in juice, canned	0.004	0.004	0.022	0.020
Water, bottled	<0.0001	<0.0001	<0.0001	<0.0001
Wheat biscuit cereal	<0.010	<0.010	<0.010	<0.010
Wine, still red	0.004	0.004	<0.002	0.004
Wine, still white	0.014	0.009	0.014	0.012
Yeast extract	<0.010	<0.010	0.015	<0.010
Yoghurt	<0.002	<0.002	0.002	<0.002

4.1.7 Mercury (Total and Methyl Mercury)

4.1.7.1 Table 12 – Total mercury content (mg/kg) of foods in Q2 of 2016 NZTDS, reported to three decimal places

Food	Brand 1	Brand 2	Brand 3	Brand 4
Almonds	<0.010	<0.010	<0.010	<0.010
Apple-based juice	<0.001	<0.001	<0.001	<0.001
Bananas	<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

Food	Brand 1	Brand 2	Brand 3	Brand 4
Biscuits, chocolate	<0.010	<0.010	<0.010	<0.010
Biscuits, 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	<0.010	<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	<0.002	<0.002	<0.002	<0.002
Chocolate beverage	<0.001	<0.001	<0.001	<0.001
Coconut cream, canned	<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, frozen	<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 cakes	0.033*	0.029*	0.027*	0.053*
Fish fingers	0.094*	0.021*	0.095*	0.055*
Fish, canned	0.017*	0.052*	0.022*	0.051*
Fruit drink	<0.001	<0.001	<0.001	<0.001
Honey	<0.010	<0.010	<0.010	<0.010
Hummus	<0.002	<0.002	<0.002	<0.002
Ice cream	<0.002	<0.002	<0.002	<0.002
Infant/Follow-on formula	<0.010	<0.010	<0.010	<0.010
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 dish	<0.002	<0.002	<0.002	<0.002
Jam	<0.010	<0.010	<0.010	<0.010
Milk chocolate	<0.010	<0.010	<0.010	<0.010
Mixed berries, frozen	<0.002	<0.002	<0.002	<0.002
Mixed vegetables, frozen	<0.002	<0.002	<0.002	<0.002
Muesli	<0.010	<0.010	<0.010	<0.010
Noodles, instant	<0.002	<0.002	<0.002	<0.002
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	<0.001	<0.001
Other cereals	<0.010	<0.010	<0.010	<0.010
Pasta, dried	<0.010	<0.010	<0.010	<0.010
Peaches, canned	<0.002	<0.002	<0.002	<0.002
Peanut butter	<0.010	<0.010	<0.010	<0.010
Peanuts	<0.010	<0.010	<0.010	<0.010
Peas, frozen	<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
Prawns/shrimps	0.010*	0.004*	0.007*	0.006*
Prunes	<0.010	<0.010	<0.010	<0.010
Raisins/sultanas	<0.010	<0.010	<0.010	<0.010
Rice, white	<0.010	<0.010	<0.010	<0.010
Salad dressing	<0.010	<0.010	<0.010	<0.010
Simmer sauce, bottled	<0.002	<0.002	<0.002	<0.002

Food	Brand 1	Brand 2	Brand 3	Brand 4
Snack bars	<0.010	<0.010	<0.010	<0.010
Snacks, flavoured	<0.010	<0.010	<0.010	<0.010
Soup, vegetable	<0.001	<0.001	<0.001	<0.001
Soya 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	<0.010
Table spreads	<0.010	<0.010	<0.010	<0.010
Taro	<0.002	<0.002	Not sampled	Not sampled
Tea	<0.001	<0.001	<0.001	<0.001
Tomato sauce	<0.002	<0.002	<0.002	<0.002
Tomatoes in juice, canned	<0.002	<0.002	<0.002	<0.002
Water, bottled	<0.002	<0.002	<0.002	<0.002
Wheat biscuit cereal	<0.010	<0.010	<0.010	<0.010
Wine, still red	<0.002	<0.001	<0.002	<0.002
Wine, still white	<0.001	<0.001	<0.001	<0.001
Yeast extract	<0.010	<0.010	<0.010	<0.010
Yoghurt	<0.002	<0.002	<0.002	<0.002

*Samples further analysed for methyl mercury content

4.1.7.2 Table 13 - Methyl Mercury content (mg/kg) of foods in Q2 of 2016 NZTDS, reported to three decimal places

Food	Brand 1	Brand 2	Brand 3	Brand 4
Fish cakes	0.032	0.022	0.028	0.055
Fish fingers	0.094	0.024	0.080	0.045
Fish, canned	0.009	0.049	0.019	0.053
Prawns/shrimps	0.008	<0.004	0.006	0.005

4.1.8 Selenium

4.1.8.1 Table 14 –Selenium content (mg/kg) of foods in Q2 of 2016 NZTDS, reported to three decimal places

Food	Brand 1	Brand 2	Brand 3	Brand 4
Almonds	<0.020	<0.020	<0.020	<0.020
Apple-based juice	<0.002	<0.002	<0.002	<0.002
Bananas	0.013	0.006	<0.004	<0.004
Beans, baked, canned	0.011	0.014	0.011	0.016
Beer	<0.002	<0.002	<0.002	<0.002
Beetroot, canned	<0.004	<0.004	<0.004	0.004
Biscuits, chocolate	<0.020	<0.020	<0.020	0.032
Biscuits, cracker	0.067	<0.020	<0.020	<0.020
Biscuits, plain sweet	0.025	0.062	<0.020	<0.020
Bran flake cereal, mixed	0.078	0.066	0.125	0.079
Caffeinated beverage	<0.002	<0.002	<0.002	<0.002
Carbonated drink	<0.002	<0.002	<0.002	<0.002
Cheese	0.093	0.092	0.090	0.097
Chicken	0.277	0.241	0.263	0.252
Chocolate beverage	0.008	<0.002	0.002	0.006

Food	Brand 1	Brand 2	Brand 3	Brand 4
Coconut cream, canned	<0.020	<0.019	<0.019	<0.019
Coffee, instant	<0.002	<0.002	<0.002	<0.002
Confectionery	<0.020	<0.020	<0.020	<0.020
Corn, frozen	<0.004	0.018	<0.004	<0.004
Cornflakes	0.023	0.036	0.031	0.038
Dairy dessert	0.009	0.007	0.006	0.008
Fish cakes	0.170	0.112	0.099	0.208
Fish fingers	0.293	0.192	0.260	0.245
Fish, canned	0.231	0.782	0.306	0.574
Fruit drink	<0.002	<0.002	<0.002	<0.002
Honey	<0.020	<0.020	<0.020	<0.020
Hummus	<0.080	<0.039	<0.039	<0.040
Ice cream	<0.004	0.010	<0.004	<0.017
Infant/Follow-on formula	0.021	0.027	0.025	0.021
Infant weaning food, cereal based	<0.020	<0.019	<0.020	<0.020
Infant weaning food, custard/fruit dish	<0.004	0.005	<0.004	<0.004
Infant weaning food, savoury dish	<0.018	<0.018	<0.019	<0.019
Jam	<0.020	<0.020	<0.020	<0.020
Milk chocolate	0.029	0.033	0.025	0.022
Mixed berries, frozen	<0.004	<0.004	<0.004	<0.004
Mixed vegetables, frozen	<0.004	<0.004	0.007	0.009
Muesli	0.042	0.071	0.085	0.048
Noodles, instant	0.078	0.077	0.025	0.012
Oats, rolled	0.021	<0.004	0.005	0.004
Oil	<0.184	<0.182	<0.184	<0.187
Orange juice	<0.002	<0.002	<0.002	<0.002
Other cereals	0.183	0.024	0.062	0.059
Pasta, dried	0.027	0.034	0.104	0.139
Peaches, canned	<0.004	<0.004	<0.004	<0.004
Peanut butter	<0.020	0.108	0.027	0.019
Peanuts	0.034	0.126	0.090	0.118
Peas, frozen	<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
Prawns/shrimps	0.261	0.177	0.204	0.21
Prunes	<0.020	<0.020	<0.020	<0.020
Raisins/sultanas	<0.020	<0.020	<0.020	<0.020
Rice, white	<0.020	<0.020	<0.020	<0.020
Salad dressing	0.073	<0.019	<0.019	<0.019
Simmer sauce, bottled	0.011	0.025	0.017	<0.004
Snack bars	0.061	<0.020	0.030	<0.020
Snacks, flavoured	0.030	0.027	0.056	0.034
Soup, vegetable	<0.002	<0.002	0.006	0.009
Soya milk	0.009	<0.019	<0.019	<0.020
Spaghetti in sauce, canned	0.007	0.005	0.006	0.006
Sugar	<0.020	<0.020	<0.020	<0.020
Table spreads	<0.020	<0.020	<0.020	<0.020
Taro	<0.004	<0.004	Not sampled	Not sampled
Tea	<0.002	<0.002	<0.002	<0.002

Food	Brand 1	Brand 2	Brand 3	Brand 4
Tomato sauce	<0.004	<0.004	<0.004	<0.004
Tomatoes in juice, canned	<0.004	<0.004	<0.004	0.004
Water, bottled	<0.001	<0.001	<0.001	<0.001
Wheat biscuit cereal	0.181	0.180	0.188	0.210
Wine, still red	<0.002	<0.002	<0.002	<0.002
Wine, still white	<0.002	<0.002	<0.002	<0.002
Yeast extract	0.113	0.073	0.029	0.189
Yoghurt	0.013	0.008	0.010	0.011

4.1.9 Sodium

4.1.9.1 Table 15 – Sodium content (mg/kg) of foods in Q2 of 2016 NZTDS, reported to whole numbers in all foods except for bottled water

Food	Brand 1	Brand 2	Brand 3	Brand 4
Almonds	<50	<50	<50	<50
Apple-based juice	25	32	16	140
Bananas	<10	<10	<10	<10
Beans, baked, canned	4780	4068	4385	3032
Beer	19	18	24	24
Beetroot, canned	2080	3156	2092	2149
Biscuits, chocolate	3453	883	2550	1596
Biscuits, cracker	9469	6419	8774	3855
Biscuits, plain sweet	3811	3659	4290	3268
Bran flake cereal, mixed	2443	2382	3710	2384
Caffeinated beverage	872	361	397	142
Carbonated drink	9	11	72	97
Cheese	6991	7184	6883	6714
Chicken	522	603	649	863
Chocolate beverage	430	6	<5	178
Coconut cream, canned	179	155	287	131
Coffee, instant	<5	<5	<5	145
Confectionery	452	171	209	<50
Corn, frozen	<10	<10	<10	<10
Cornflakes	6274	4438	6120	4240
Dairy dessert	526	524	570	525
Fish cakes	7785	5482	2872	4066
Fish fingers	2394	5801	2990	3449
Fish, canned	2924	4797	2941	4432
Fruit drink	115	11	168	135
Honey	<50	54	<50	56
Hummus	4489	5031	3731	5353
Ice cream	407	556	413	555
Infant/Follow-on formula	261	249	216	230
Infant weaning food, cereal based	174	21	60	27
Infant weaning food, custard/fruit dish	15	169	150	20
Infant weaning food, savoury dish	156	95	72	109
Jam	268	<50	144	<50
Milk chocolate	663	604	715	593

Food	Brand 1	Brand 2	Brand 3	Brand 4
Mixed berries, frozen	<10	<10	<10	<10
Mixed vegetables, frozen	103	113	73	126
Muesli	732	397	<50	1757
Noodles, instant	4932	4950	5715	3654
Oats, rolled	<10	<10	<10	<10
Oil	<49	<49	<49	<49
Orange juice	11	13	13	5
Other cereals	3522	5400	1237	3370
Pasta, dried	<50	98	<50	<50
Peaches, canned	21	22	40	47
Peanut butter	3385	4894	4159	4703
Peanuts	3102	3577	<50	5049
Peas, frozen	12	<10	<10	<10
Pineapple, canned	80	20	<10	55
Potato crisps	4519	7568	5618	4960
Prawns/shrimps	4540	6954	3595	6846
Prunes	<50	<50	<50	<50
Raisins/sultanas	147	59	187	57
Rice, white	<50	<50	<50	<50
Salad dressing	6383	8282	8605	7081
Simmer sauce, bottled	3809	3947	3570	5759
Snack bars	2071	812	600	864
Snacks, flavoured	7244	10695	5295	8122
Soup, vegetable	3024	1685	2640	2450
Soya milk	345	280	321	310
Spaghetti in sauce, canned	4419	3069	1613	4530
Sugar	<50	<50	<50	<50
Table spreads	3437	2930	3509	5558
Taro	22	<10	Not sampled	Not sampled
Tea	<5	<5	<5	<5
Tomato sauce	4939	9754	7803	6062
Tomatoes in juice, canned	40	2299	92	59
Water, bottled	9.1	9.4	0.4	23.5
Wheat biscuit cereal	2661	2656	2835	2614
Wine, still red	36	28	29	44
Wine, still white	36	25	15	27
Yeast extract	43432	49317	33724	33733
Yoghurt	361	340	348	366

4.1.10 Tin

4.1.10.1 Table 16 – Tin content (mg/kg) of foods in Q2 of 2016 NZTDS, reported to two decimal places for all foods except beverages, vegetable soup and bottled water

Food	Brand 1	Brand 2	Brand 3	Brand 4
Almonds	<0.05	<0.05	<0.05	<0.05
Apple-based juice	<0.005	<0.005	<0.005	<0.005
Bananas	<0.01	0.01	<0.01	<0.01
Beans, baked, canned	55.09	1.22	35.00	0.31

Food	Brand 1	Brand 2	Brand 3	Brand 4
Beer	<0.005	<0.005	<0.005	<0.005
Beetroot, canned	1.17	2.32	0.56	1.27
Biscuits, chocolate	<0.05	<0.05	<0.05	<0.05
Biscuits, cracker	<0.05	<0.05	<0.05	<0.05
Biscuits, plain sweet	<0.05	<0.05	<0.05	<0.05
Bran flake cereal, mixed	<0.05	<0.05	<0.05	<0.05
Caffeinated beverage	<0.005	<0.005	<0.005	<0.005
Carbonated drink	<0.005	<0.005	<0.005	<0.005
Cheese	<0.05	<0.05	<0.05	<0.05
Chicken	<0.01	<0.01	<0.01	<0.01
Chocolate beverage	<0.005	<0.005	<0.005	0.008
Coconut cream, canned	<0.05	<0.05	<0.05	<0.05
Coffee, instant	<0.005	<0.005	<0.005	<0.005
Confectionery	<0.05	<0.05	<0.05	<0.05
Corn, frozen	<0.01	<0.01	<0.01	<0.01
Cornflakes	<0.05	<0.05	<0.05	<0.05
Dairy dessert	<0.01	<0.01	<0.01	<0.01
Fish cakes	<0.01	<0.01	<0.01	<0.01
Fish fingers	<0.01	<0.01	<0.01	<0.01
Fish, canned	0.03	<0.01	0.03	<0.01
Fruit drink	<0.005	<0.005	<0.005	<0.005
Honey	<0.05	<0.05	<0.05	<0.05
Hummus	<0.01	<0.01	<0.01	<0.01
Ice cream	<0.01	<0.01	<0.01	<0.01
Infant/Follow-on formula	<0.05	<0.05	<0.05	<0.05
Infant weaning food, cereal based	<0.01	63.95	<0.01	54.11
Infant weaning food, custard/fruit dish	32.92	<0.01	<0.01	<0.01
Infant weaning food, savoury dish	<0.01	0.07	0.05	<0.01
Jam	<0.05	<0.05	<0.05	<0.05
Milk chocolate	<0.05	<0.05	<0.05	<0.05
Mixed berries, frozen	<0.01	<0.01	<0.01	<0.01
Mixed vegetables, frozen	<0.01	<0.01	<0.01	<0.01
Muesli	<0.05	<0.05	<0.05	<0.05
Noodles, instant	<0.01	<0.01	<0.01	<0.01
Oats, rolled	<0.01	<0.01	0.02	<0.01
Oil	<0.05	<0.05	<0.05	<0.05
Orange juice	<0.005	<0.005	<0.005	<0.005
Other cereals	<0.05	<0.05	<0.05	<0.05
Pasta, dried	<0.05	<0.05	<0.05	<0.05
Peaches, canned	35.53	29.13	48.23	94.13
Peanut butter	<0.05	<0.05	<0.05	<0.05
Peanuts	<0.05	<0.05	<0.05	<0.05
Peas, frozen	<0.01	<0.01	<0.01	<0.01
Pineapple, canned	86.14	162.09	69.97	105.47
Potato crisps	<0.05	<0.05	<0.05	<0.05
Prawns/shrimps	<0.01	<0.01	<0.01	<0.01
Prunes	<0.05	<0.05	<0.05	<0.05
Raisins/sultanas	<0.05	<0.05	<0.05	<0.05
Rice, white	<0.05	<0.05	<0.05	<0.05

Food	Brand 1	Brand 2	Brand 3	Brand 4
Salad dressing	<0.05	<0.05	<0.05	<0.05
Simmer sauce, bottled	0.19	0.56	0.72	0.03
Snack bars	<0.05	<0.05	<0.05	<0.05
Snacks, flavoured	<0.05	<0.05	<0.05	<0.05
Soup, vegetable	<0.005	<0.005	0.088	0.108
Soya milk	<0.005	<0.005	<0.005	<0.005
Spaghetti in sauce, canned	47.24	42.17	0.56	50.25
Sugar	<0.05	<0.05	<0.05	<0.05
Table spreads	<0.05	<0.05	<0.05	<0.05
Taro	0.02	<0.01	Not sampled	Not sampled
Tea	<0.005	<0.005	<0.005	<0.005
Tomato sauce	0.33	<0.01	0.01	0.12
Tomatoes in juice, canned	7.13	5.44	152.07	121.89
Water, bottled	<0.0005	<0.0005	<0.0005	<0.0005
Wheat biscuit cereal	<0.05	<0.05	<0.05	<0.05
Wine, still red	0.018	<0.005	<0.010	0.015
Wine, still white	<0.005	0.006	<0.005	<0.005
Yeast extract	<0.05	0.21	<0.05	0.08
Yoghurt	<0.01	<0.01	<0.01	<0.01

4.1.11 Zinc

4.1.11.1 Table 17 –Zinc content (mg/kg) of foods in Q2 of 2016 NZTDS, reported to two decimal places for all foods except bottled water

Food	Brand 1	Brand 2	Brand 3	Brand 4
Almonds	33.28	32.74	28.97	36.28
Apple-based juice	0.14	0.13	<0.10	0.17
Bananas	1.55	1.77	2.09	1.85
Beans, baked, canned	4.93	5.44	5.94	6.47
Beer	<0.10	<0.10	<0.10	<0.10
Beetroot, canned	2.52	1.99	2.13	2.74
Biscuits, chocolate	7.57	6.37	5.29	6.15
Biscuits, cracker	5.71	4.50	6.95	17.14
Biscuits, plain sweet	5.14	4.15	5.31	4.23
Bran flake cereal, mixed	21.35	23.45	64.33	43.33
Caffeinated beverage	<0.10	<0.10	<0.10	<0.10
Carbonated drink	<0.10	<0.10	<0.10	<0.10
Cheese	32.97	36.30	36.42	31.13
Chicken	11.74	11.38	12.25	12.20
Chocolate beverage	4.53	2.01	2.61	2.81
Coconut cream, canned	1.20	<0.99	2.51	1.63
Coffee, instant	<0.10	<0.10	<0.10	0.20
Confectionery	<1.00	<1.00	<1.00	<1.00
Corn, frozen	5.41	4.14	4.39	4.89
Cornflakes	2.04	3.18	2.09	50.14
Dairy dessert	4.08	4.98	3.08	3.40
Fish cakes	6.27	4.26	5.96	3.74
Fish fingers	3.27	5.19	4.59	3.04

Food	Brand 1	Brand 2	Brand 3	Brand 4
Fish, canned	8.57	6.02	8.90	6.33
Fruit drink	<0.10	0.11	<0.10	<0.10
Honey	<1.00	1.36	1.36	1.07
Hummus	6.44	11.07	10.97	12.75
Ice cream	1.32	4.54	1.20	5.42
Infant/Follow-on formula	6.29	5.65	5.27	6.18
Infant weaning food, cereal based	4.43	2.02	2.96	0.92
Infant weaning food, custard/fruit dish	0.64	1.64	1.52	0.42
Infant weaning food, savoury dish	3.56	2.18	5.34	5.05
Jam	<1.00	<1.00	<1.00	<1.00
Milk chocolate	16.54	12.28	8.85	12.27
Mixed berries, frozen	2.03	1.84	1.27	1.77
Mixed vegetables, frozen	5.02	3.85	5.52	4.06
Muesli	21.29	17.90	20.06	22.86
Noodles, instant	21.11	21.97	1.06	1.12
Oats, rolled	5.02	5.60	5.19	5.55
Oil	<0.98	<0.98	<0.97	<0.97
Orange juice	0.32	0.33	0.25	0.30
Other cereals	11.28	12.82	80.45	92.88
Pasta, dried	7.59	9.59	3.59	3.06
Peaches, canned	0.47	0.48	0.50	0.47
Peanut butter	30.10	25.89	26.78	21.77
Peanuts	34.30	29.30	28.21	28.38
Peas, frozen	11.12	8.10	10.64	6.84
Pineapple, canned	0.63	0.57	1.27	0.59
Potato crisps	10.55	13.31	14.19	9.57
Prawns/shrimps	8.24	5.08	5.34	6.18
Prunes	3.98	5.61	4.87	4.53
Raisins/sultanas	1.00	1.73	1.02	3.10
Rice, white	4.83	6.29	5.17	4.76
Salad dressing	1.49	<0.97	<0.98	<0.10
Simmer sauce, bottled	2.14	2.04	2.10	2.26
Snack bars	14.42	11.47	12.21	11.19
Snacks, flavoured	2.37	1.37	15.65	2.44
Soup, vegetable	0.25	2.97	1.50	3.44
Soya milk	1.01	0.91	1.14	1.16
Spaghetti in sauce, canned	5.27	2.38	2.67	1.61
Sugar	<1.00	<1.00	<1.00	<1.00
Table spreads	<1.00	<1.00	<1.00	<1.00
Taro	25.56	30.36	Not sampled	Not sampled
Tea	0.10	0.15	0.13	0.13
Tomato sauce	1.66	1.34	0.67	1.66
Tomatoes in juice, canned	0.98	1.11	1.16	1.13
Water, bottled	0.001	0.002	<0.001	0.020
Wheat biscuit cereal	18.45	19.56	17.30	19.33
Wine, still red	0.92	0.67	0.60	0.94
Wine, still white	1.18	0.54	0.77	0.99
Yeast extract	32.89	29.52	63.69	81.31
Yoghurt	4.69	4.64	4.67	4.29

4.2 AGRICULTURAL COMPOUNDS

For agricultural compounds, results are reported in four sections: compounds in the multi-residue screen that were not detected in any food for Q2 (which are listed collectively); each agricultural compound detected reported on a per compound basis in all foods with positive results; CS₂ detects; and Phenoxy and aromatic acid herbicides.

All agricultural compound results in the NZTDS are reported on a 'foods as consumed' basis. As some agricultural compounds are measured using several marker analytes the reported residue is as the parent agricultural compound with the detected analyte or analytes recorded in brackets.

Agricultural compounds 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 compounds 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 compounds are known to break down rapidly in the environment. Therefore, for most agricultural compounds in most foods, a 'not detected' (ND) result is likely to represent a true zero result.

4.2.1 Agricultural compounds not detected in any food in Q2 of 2016 NZTDS

Of the 301 agricultural compound analytes in the multi-screen for the 2016 NZTDS, 253 analytes were not detected in any of the foods sampled in Q2. No positive residues were detected in foods analysed in the CS₂ analytical screen. Additionally of the 21 analytes in the phenoxy and aromatic acid herbicide screen, 19 were not detected in any of the foods sampled in Q2.

4.2.2 Multi-screen residues detected in Q2 of 2016 NZTDS

4.2.2.1 *Table 18 – Azoxystrobin residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.*

Food	Brand 1	Brand 2	Brand 3	Brand 4
Muesli	ND	ND	0.02	ND
Raisins/sultanas	ND	0.08	ND	0.03

4.2.2.2 *Table 19– Benzalkonium Chloride (C12, C14 and C16) residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.*

Food	Brand 1	Brand 2	Brand 3	Brand 4
Corn, frozen	0.02 ^{a,b}	0.02 ^a	0.01 ^a	0.15 ^{a,b}
Hummus	ND	0.11 ^a	0.34 ^{a,b}	ND
Milk chocolate	ND	ND	ND	0.91 ^{a,b}
Mixed berries, frozen	0.05 ^{a,b}	0.04 ^{a,b}	0.02 ^a	ND
Mixed vegetables, frozen	ND	ND	0.05 ^{a,b}	ND
Orange juice	ND	ND	0.13 ^{b,c}	ND
Peas, frozen	0.04 ^{a,b}	ND	ND	ND
Pineapple, canned	0.13 ^{a,b,c}	ND	ND	ND
Prawns/shrimps	ND	ND	ND	0.14 ^{a,b}
Snacks, flavoured	ND	ND	0.06 ^a	ND
Soup, vegetable	ND	ND	ND	0.01 ^a

^a contains Benzalkonium Chloride (C12), ^b contains Benzalkonium Chloride (C14), ^c contains Benzalkonium Chloride (C16)

4.2.2.3 Table 20 – Bifenthrin residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Infant weaning food, cereal based	ND	ND	0.01	ND

4.2.2.4 Table 21 – Boscalid residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Bran flake cereal, mixed	0.02	ND	ND	0.21
Mixed berries, frozen	ND	0.06	ND	ND
Muesli	ND	0.03	ND	ND
Raisins/sultanas	0.01	0.15	ND	0.13

4.2.2.5 Table 22 – Captan residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Mixed berries, frozen	ND	0.10	ND	ND

4.2.2.6 Table 23 – Carbendazim (including benomyl and thiophanate) residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Mixed berries, frozen	ND	0.02	ND	0.01
Simmer sauce, bottled	0.08	0.05	0.06	ND

4.2.2.7 Table 24 – Chlorantraniliprole residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Raisins/sultanas	0.03	ND	ND	ND

4.2.2.8 Table 25 – Chlorothalonil residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Mixed berries, frozen	ND	0.05	ND	ND

4.2.2.9 Table 26– Chlorpropham residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Fish cakes	ND	0.03	0.01	ND

4.2.2.10 Table 27 – Chlorpyrifos residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Bran flake cereal, mixed	0.01	ND	ND	0.01
Mixed berries, frozen	ND	0.01	ND	ND

Food	Brand 1	Brand 2	Brand 3	Brand 4
Peanuts	0.03	ND	ND	ND
Raisins/sultanas	ND	0.08	ND	0.08

4.2.2.11 Table 28 – Chlorpyrifos-methyl residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Biscuits, cracker	0.13	ND	ND	ND
Muesli	ND	ND	ND	0.02

4.2.2.12 Table 29 – Cyhalothrin residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Raisins/sultanas	ND	0.02	ND	0.02

4.2.2.13 Table 30 – Cypermethrin residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Oil	ND	ND	0.16	0.15
Raisins/sultanas	ND	0.02	ND	0.03
Table spreads	ND	ND	0.02	0.02

4.2.2.14 Table 31– Cyprodinil residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Bran flake cereal, mixed	0.02	ND	ND	0.08
Muesli	ND	0.02	ND	ND
Raisins/sultanas	0.01	0.16	ND	0.10
Wine, still red	ND	0.02	ND	ND

4.2.2.15 Table 32 – Deltamethrin (including Tralomethrin) residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Biscuits, cracker	0.05	ND	ND	ND

4.2.2.16 Table 33 – Didecyldimethylammonium chloride (DDAC) residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Confectionary	0.10	ND	ND	ND
Fish cakes	ND	ND	0.07	ND
Hummus	ND	ND	ND	0.21

4.2.2.17 Table 34 – Difenoconazole residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Hummus	0.01	ND	ND	ND
Raisins/sultanas	ND	0.01	ND	ND

4.2.2.18 Table 35 – Dimethomorph residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Bran flake cereal, mixed	ND	ND	ND	0.01
Raisins/sultanas	ND	0.04	ND	ND

4.2.2.19 Table 36 – Diphenylamine residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Infant weaning food, cereal based	ND	0.04	ND	0.02
Infant weaning food, custard/fruit dish	0.11	ND	ND	ND

4.2.2.20 Table 37 – Diuron residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Prawns/shrimps	ND	ND	0.01	ND

4.2.2.21 Table 38 – Fenpyroximate residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Raisins/sultanas	0.02	ND	ND	ND

4.2.2.22 Table 39 – Fenvalerate (including esfenvalerate) residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Raisins/sultanas	ND	0.02	ND	ND

4.2.2.23 Table 40 – Fludioxonil residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Apple-based juice	0.02	ND	ND	ND
Bran flake cereal, mixed	ND	ND	ND	0.02
Infant weaning food, custard/fruit dish	0.06	ND	ND	ND
Raisins/sultanas	ND	0.04	ND	0.01

4.2.2.24 Table 41 – Flufenoxuron residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Raisins/sultanas	ND	0.01	ND	ND

4.2.2.25 Table 42 – Hexaconazole residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Taro	0.04	ND	Not sampled	Not sampled

4.2.2.26 Table 43 – Hexythiazox residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Raisins/sultanas	ND	0.01	ND	ND

4.2.2.27 Table 44 – Imazalil residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Bananas	0.01	0.07	ND	ND
Infant weaning food, custard/fruit dish	0.02	ND	ND	ND
Orange juice	ND	ND	0.02	ND

4.2.2.28 Table 45 – Imidacloprid residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Raisins/sultanas	0.01	0.03	ND	ND

4.2.2.29 Table 46 – Indoxacarb residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Raisins/sultanas	ND	0.02	ND	0.02

4.2.2.30 Table 47 – Iprodione residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Almonds	ND	ND	ND	0.02
Apple-based juice	0.09	ND	ND	ND
Bran flake cereal, mixed	0.09	ND	ND	0.08
Infant weaning food, cereal based	0.06	0.11	0.07	0.04
Infant weaning food, custard/fruit dish	0.27	ND	ND	ND
Mixed berries, frozen	ND	0.10	0.02	ND
Muesli	ND	0.05	ND	ND
Peaches, canned	0.02	ND	ND	ND
Raisins/sultanas	ND	0.23	0.03	0.59
Wine, still red	ND	ND	0.01	ND
Wine, still white	0.01	0.06	ND	ND

4.2.2.31 Table 48 – Metalaxyl residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Bran flake cereal, mixed	0.01	ND	ND	0.01

Food	Brand 1	Brand 2	Brand 3	Brand 4
Raisins/sultanas	ND	0.04	ND	0.04

4.2.2.32 Table 49 –Methoxyfenozide residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Bran flake cereal, mixed	0.02	ND	ND	0.02
Muesli	ND	0.02	0.01	ND
Raisins/sultanas	0.02	0.10	0.01	0.05
Wine, still white	ND	0.01	ND	ND

4.2.2.33 Table 50 –Myclobutanil residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Raisins/sultanas	0.01	0.02	ND	ND

4.2.2.34 Table 51 –Phosmet residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Mixed berries, frozen	ND	ND	0.02	ND

4.2.2.35 Table 52 – Piperonyl-butoxide residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Almonds	0.23	0.10	0.15	0.27
Biscuits, cracker	0.14	ND	ND	ND
Bran flake cereal, mixed	ND	ND	0.15	0.04
Cornflakes	0.10	ND	ND	ND
Fish cakes	ND	0.02	0.01	0.02
Fish fingers	0.01	ND	ND	ND
Infant weaning food, cereal based	ND	ND	0.05	ND
Other cereals	ND	ND	0.01	ND
Snack bars	0.02	ND	ND	ND
Soup, vegetable	ND	ND	ND	0.04

4.2.2.36 Table 53 – Pirimiphos-methyl residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Biscuits, chocolate	0.22	0.09	0.15	ND
Biscuits, cracker	ND	0.24	0.16	ND
Biscuits, plain sweet	0.17	ND	0.20	0.37
Bran flake cereal, mixed	0.05	0.04	ND	ND
Cornflakes	ND	0.07	0.01	ND
Fish fingers	0.02	ND	0.11	0.09
Snack bars	ND	0.01	ND	ND
Snacks, flavoured	0.08	0.03	2.12	0.03

4.2.2.37 Table 54 –Procymidone residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Simmer sauce, bottled	ND	ND	ND	0.05
Tomatoes in juice, canned	ND	0.02	ND	ND

4.2.2.38 Table 55 –Propargite residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Infant weaning food, cereal based	ND	0.02	ND	ND
Infant weaning food, custard/fruit dish	0.02	ND	ND	ND

4.2.2.39 Table 56 –Propiconazole residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Infant weaning food, cereal based	ND	ND	0.02	ND

4.2.2.40 Table 57 –Pyrethrin residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Almonds	0.06	ND	0.05	0.07

4.2.2.41 Table 58 –Pyrimethanil residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Bran flake cereal, mixed	0.12	0.05	ND	0.20
Muesli	ND	0.03	0.04	0.01
Raisins/sultanas	ND	0.76	ND	0.45
Snack bars	ND	ND	0.06	ND

4.2.2.42 Table 59 –Spirotetramat (Spiroteramat-cis-enol and Spirotetramat-enol-glucoside) residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Raisins/sultanas	0.08 ^{a,b}	0.01 ^b	ND	ND

^a contains Spiroteramat-cis-enol , ^b contains Spirotetramat-enol-glucoside (not a component of the residue definition for MRL enforcement)

4.2.2.43 Table 60 –Tebuconazole residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.

Food	Brand 1	Brand 2	Brand 3	Brand 4
Raisins/sultanas	0.01	0.02	ND	ND

4.2.2.44 *Table 61 – Tetraconazole residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.*

Food	Brand 1	Brand 2	Brand 3	Brand 4
Raisins/sultanas	ND	0.01	ND	ND

4.2.2.45 *Table 62 – Trifloxystrobin residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.*

Food	Brand 1	Brand 2	Brand 3	Brand 4
Oil	ND	0.02	ND	ND

4.2.3 Phenoxy and aromatic acid herbicides detected in Q2 of 2016 NZTDS

4.2.3.1 *Table 63 – Clopyralid residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.*

Food	Brand 1	Brand 2	Brand 3	Brand 4
Beans, baked, canned	ND	0.08	ND	ND
Bran flake cereal, mixed	ND	0.01	ND	ND
Corn, frozen	0.02	ND	ND	ND
Mixed vegetables, frozen	0.02	ND	ND	ND
Muesli	ND	ND	0.03	ND
Oats, rolled	ND	ND	0.02	ND

4.2.3.2 *Table 64 – Fluazifop residues (mg/kg) detected in foods in Q2 of 2016 NZTDS, reported to two decimal places. Foods with no reported residues are not listed.*

Food	Brand 1	Brand 2	Brand 3	Brand 4
Mixed vegetables, frozen	ND	0.01	ND	ND