

Analysis TDS 4th Quarter 2009 – NZFSA

Meriel Watts, PAN ANZ; April 21, 2010

Analysis:

- 25 pesticides found in 33 food types
- of these, 19 are on PAN International's list of Highly Hazardous Pesticides (HHPs)(highlighted in red)
- most common pesticides = piperonyl butoxide (in 15 foods), dithiocarbamate fungicides (in 12 out of 20 foods); and pirimiphos-methyl (in 11 foods).
 - Piperonyl butoxide = possible carcinogen, endocrine disruptor (HHP)
 - Dithiocarbamate fungicides: probable carcinogens, endocrine disruptors (HHPs)
 - Pirimiphos-methyl – oestrogenic activity reported, can cause inflammation and allergic reactions (not on HHP list)
- Most contaminated foods = muesli (10 pesticides), bran flake cereal (8 pesticides), biscuits, plain sweet (7 pesticides).

all results are shown in mg/kg

	Brand 1	Brand 2	Brand 2	Brand 4
<i>Chlorpyrifos (insecticide)</i>				
Bran flake cereal	0.0051			
Muesli	0.0029			0.0023
Rice, white	0.0021			
Snack bars		0.0035		
<i>Cypermethrin (insecticide)</i>				
Bran flake cereal	0.012			
<i>Cyprodinil (fungicide)</i>				
Bran flake cereal	0.008			
Muesli	0.0012			
Wine, still red		0.0079		0.0017
<i>4,4 DDE (insecticide)</i>				
cheese		0.0049		0.0049
ice-cream		0.0141		0.0045
<i>Deltamethrin (insecticide)</i>				
Biscuits, plain sweet		0.0232		
Pasta, dried		0.0208	0.0153	
<i>Diazinon (insecticide)</i>				
Biscuits, plain sweet	0.0028			
<i>Dichlorvos (insecticide)</i>				
Biscuits, chocolate		0.002		
Muesli				0.0076
<i>Dicofol (insecticide)</i>				
Bran flake cereal	0.0069			
<i>Diphenylamine (fungicide)</i>				

Biscuits, plain sweet	0.0012			
Infant weaning food, custard/fruit dish		0.0043		
<i>Diuron (herbicide)</i>				
Cheese			0.0042	
<i>EPN (insecticide)</i>				
Fish fingers				0.0033
<i>Ethion (insecticide)</i>				
Noodles, instant				0.0015
Snacks, flavoured		0.0012		
<i>Fenitrothion (insecticide)</i>				
Biscuits, plain sweet		0.0121		
Muesli	0.0435		0.0524	
Oats, rolled		0.0632		
Pasta, dried		0.0034		
<i>Fludioxonil (fungicide)</i>				
Bran flake cereal	0.0019			
<i>Imazalil (fungicide)</i>				
Infant weaning food, custard/fruit dish		0.0136		
<i>Isoprocarb (insecticide)</i>				
Apricots, canned				0.0104
Muesli	0.0565	0.013		
Wine, still white	0.2041	0.1019		0.0796
<i>Malathion (insecticide)</i>				
Biscuits, chocolate		0.0012		
Biscuits, plain sweet	0.0044		0.0049	0.0036
Snacks, flavoured		0.0062		
<i>Phenthoate (insecticide)</i>				
Muesli		0.0027		
<i>Piperonyl-butoxide (synergist for pyrethroid & carbamate insecticides)</i>				
Biscuits, chocolate	0.0341		0.0049	0.0024
Biscuits, cracker			0.0057	
Biscuits, plain sweet	0.0378	0.2072	0.0448	0.0344
Chocolate, plain milk		0.0044		0.0101
Cornflakes				0.0095
Fish fingers	0.0253	0.022	0.0242	0.004
Muesli	0.0011	0.043	0.0583	0.0055
Pasta, dried	0.0012	0.1631	0.1351	0.0083
Peanut butter		0.0128		
Potato crisps				0.0015
Prune, pitless		0.0023		
Raisins/sultanas	0.0089	0.0123		
Snack bars	0.0273	0.0021	0.0146	0.0375
Snacks, flavoured		0.0069	0.0146	
Spaghetti in sauce, canned	0.0234	0.0046	0.0538	0.0079

<i>Pirimiphos-methyl (insecticide)</i>				
Biscuits, chocolate		0.005	0.0318	0.0375
Biscuits, cracker		0.0196	0.0389	0.0027
Biscuits, plain sweet	0.0674		0.0815	0.039
Bran flake cereal	0.0095			0.0031
Fish fingers	0.0082	0.0148	0.0103	0.0138
Muesli		0.0022	0.0011	
Noodles, instant		0.0031		
Oats, rolled		0.0051		
Snack bars	0.0014		0.0026	0.0062
Snacks, flavoured	0.0147			
Spaghetti in sauce, canned	0.0031			
<i>Procyimidone (fungicide)</i>				
Bran flake cereal	0.0421			
Muesli	0.0124	0.0011	0.0056	0.0052
Raisins/sultanas	0.0059	0.0027		0.0068
Snack bars	0.0078	0.0065	0.0148	0.0019
Tomatoes in juice, canned			0.0024	
<i>Propargite (insecticide)</i>				
Bran flake cereal	0.0032			
Snack bars		0.0042		
<i>Propham (plant growth regulator)</i>				
Potato crisps	0.1103	0.7409	0.1378	0.2829
<i>Propiconazole (fungicide)</i>				
Rice, white	0.0148			
<i>Pyrimethanil (fungicide)</i>				
Muesli	0.0091	0.0024		0.0036
Raisins/sultanas		0.0031		0.0025
Snack bars	0.0013	0.0061	0.0046	0.0068
Wine, still red		0.0035		
<i>Dithiocarbamates (fungicides)</i> <i>(in 12 out of 20 foods)</i>				
Apricots, canned				0.0468
Beans, frozen	0.0173			
Beetroot, canned		0.019		
Corn, canned			0.0147	
Infant weaning food, savoury dish	0.0218	0.0321	0.0102	0.0104
Peaches, canned	0.0127		0.0109	
Peas, frozen	0.0264	0.0208	0.0251	
Potato crisps	0.0198			
Prunes, pitless			0.0288	
Raisins/sultanas	0.0405	0.0863		
Tomato sauce, canned				0.0275
Tomatoes in juice, canned	0.011			

Table 2: Analysis by foods

Food	Pesticide	Brand 1	Brand 2	Brand 3	Brand 4
Apricots, canned	isoprocarb				0.0104
	dithiocarbamates				0.0468
Beans, frozen	dithiocarbamates	0.0173			
Beetroot, canned	dithiocarbamates		0.019		
Biscuits, chocolate	dichlorvos		0.002		
	malathion		0.0012		
	piperonyl butoxide	0.0341		0.0049	0.0024
	pirimiphos-methyl		0.005	0.0318	0.0375
Biscuits, cracker	piperonyl butoxide			0.0057	
	pirimiphos-methyl		0.0196	0.0389	0.0027
Biscuits, plain sweet	deltamethrin		0.0232		
	diazinon	0.0028			
	diphenylamine	0.0012			
	fenitrothion		0.0121		
	malathion	0.0044		0.0049	0.0036
	piperonyl butoxide	0.0378	0.2072	0.0448	0.0344
	pirimiphos-methyl	0.0674		0.0815	0.039
Bran flake cereal	chlorpyrifos	0.0051			
	cypermethrin	0.012			
	cyprodinil	0.008			
	dicofol	0.0069			
	fludioxonil	0.0019			
	pirimiphos-methyl	0.0095			0.0031
	procymidone	0.0421			
	propargite	0.0032			
Cheese	4,4,-DDE		0.0049		0.0049
	diuron			0.0042	
Chocolate, plain milk	piperonyl butoxide		0.0044		0.0101
Corn, canned	dithiocarbamates			0.0147	
Cornflakes	piperonyl butoxide				0.0095
Fish fingers	EPN				0.0033
	piperonyl butoxide	0.0253	0.022	0.0242	0.004
	pirimiphos-methyl	0.0082	0.0148	0.0103	0.0138
Ice-cream	4,4,-DDE		0.0141		0.0045
Infant weaning food, custard/fruit dish	diphenylamine		0.0043		
Infant weaning food, savoury dish	dithiocarbamates	0.0218	0.0321	0.0102	0.0104

	imazalil		0.0136		
Muesli	chlorpyrifos	0.0028			0.0023
	cyprodinil	0.0012			
	dichlorvos				0.0076
	fenitrothion	0.0435		0.0524	
	isoprocarb	0.0565	0.013		
	phenthoate		0.0027		
	piperonyl butoxide	0.0011	0.043	0.0583	0.0055
	pirimiphos-methyl		0.0022	0.0011	
	procymidone	0.0124	0.0011	0.0056	0.0052
	pyrimethanil	0.0091	0.0024		0.0036
Noodles, instant	ethion				0.0015
	pirimiphos-methyl		0.0031		
Oats, rolled	fenitrothion		0.0632		
	pirimiphos-methyl		0.0051		
Pasta, dried	deltamethrin		0.0208	0.0153	
	fenitrothion		0.0034		
	piperonyl butoxide	0.0012	0.1631	0.1351	0.0083
Peaches, canned	dithiocarbamates	0.0127		0.0109	
Peanut butter	piperonyl butoxide		0.0128		
Peas, frozen	dithiocarbamates	0.0264	0.0208	0.0251	
Potato crisps	piperonyl butoxide				0.0015
	propham	0.1103	0.7409	0.1378	0.2829
	dithiocarbamates	0.0198			
Prune, pitless	piperonyl butoxide		0.0023		
	dithiocarbamates			0.0288	
Raisins/sultanas	piperonyl butoxide	0.0089	0.0123		
	pyrimethanil		0.0031		0.0025
	procymidone	0.0059	0.0027		0.0068
	dithiocarbamates	0.0405	0.0863		
Rice, white	chlorpyrifos	0.0021			
	propiconazole	0.0148			
Snack bars	chlorpyrifos		0.0035		
	piperonyl butoxide	0.0273	0.0021	0.0146	0.0375
	pirimiphos-methyl	0.0014		0.0026	0.0062
	procymidone	0.0078	0.0065	0.0148	0.0019
	propargite		0.0042		
	pyrimethanil	0.0013	0.0061	0.0046	0.0068
Snacks, flavoured	ethion		0.0012		
	malathion		0.0062		
	piperonyl butoxide		0.0069	0.0146	

	pirimiphos-methyl	0.0147			
Spaghetti in sauce, canned	piperonyl butoxide	0.0234	0.0046	0.0538	0.0079
	pirimiphos-methyl	0.0031			
Tomato sauce, canned	dithiocarbamates				0.0275
Tomatoes in juice, canned	procymidone			0.0024	
	dithiocarbamates	0.011			
Wine, still red	cyprodinil		0.0079		0.0017
Wine, still white	isoprocarb	0.2041	0.1019		0.0796
	pyrimethanil		0.0035		