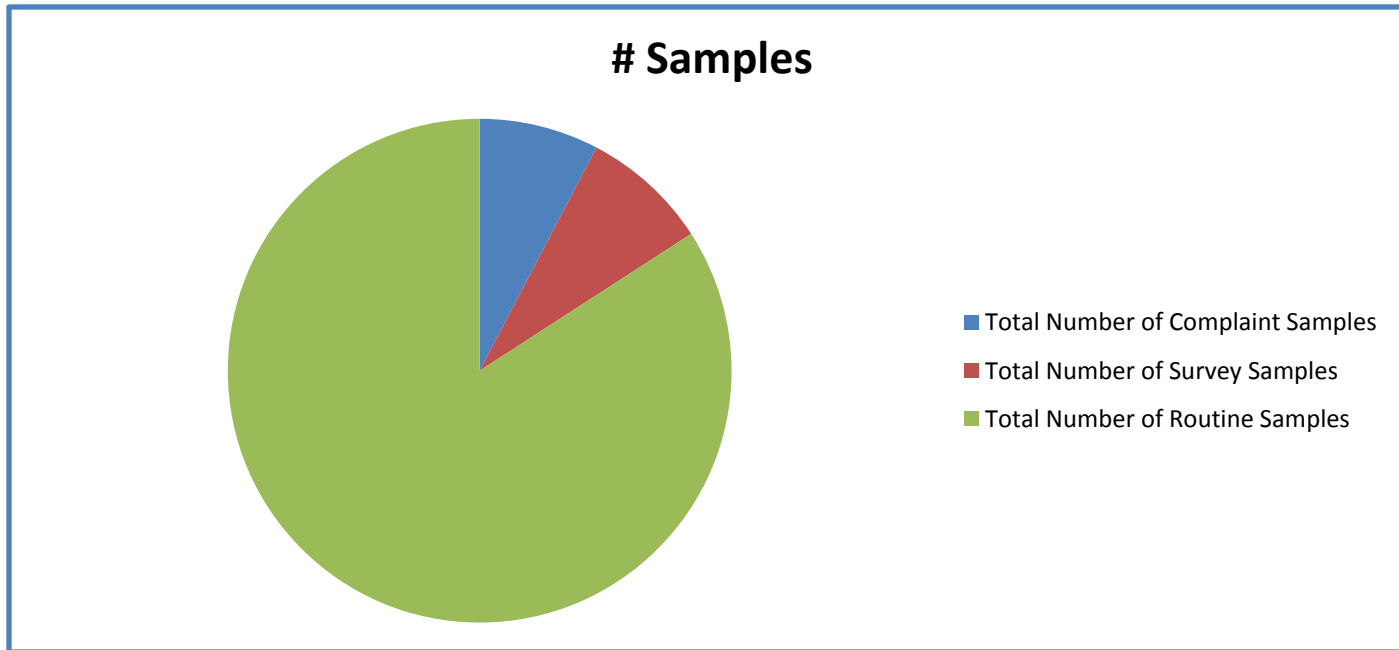


# SAMPLE NUMBERS TESTED AT DTS 2012

**Total Number of Samples for all Council samples tested at DTS in 2012**

**01/01/12 to 31/12/12**

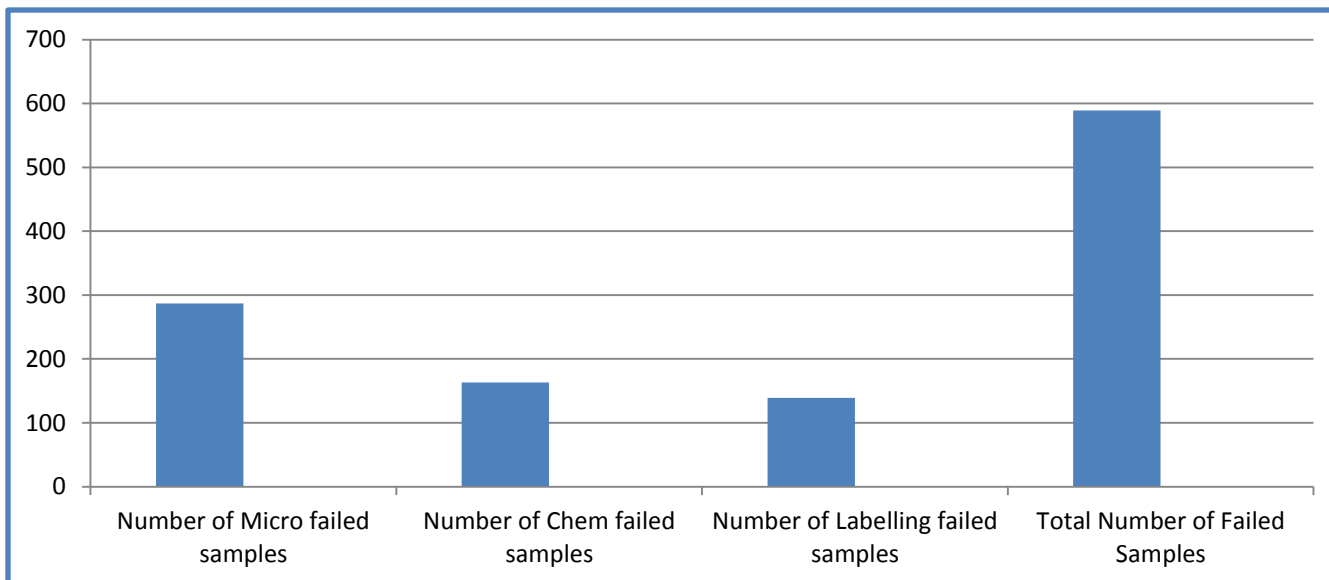
	# Samples	% Samples
Total Number of Complaint Samples	524	8%
Total Number of Survey Samples	559	8%
Total Number of Routine Samples	5744	84%
Total Number of Samples	6827	



## Number of Unsatisfactory Samples in 2012

01/01/12 to 31/12/12

	# Samples	% of total samples
Number of Micro unsatisfactory samples	287	4%
Number of Chem unsatisfactory samples	163	2%
Number of Labelling unsatisfactory samples	139	2%
Total Number of unsatisfactory Samples	589	9%
Total Number of Samples	6827	

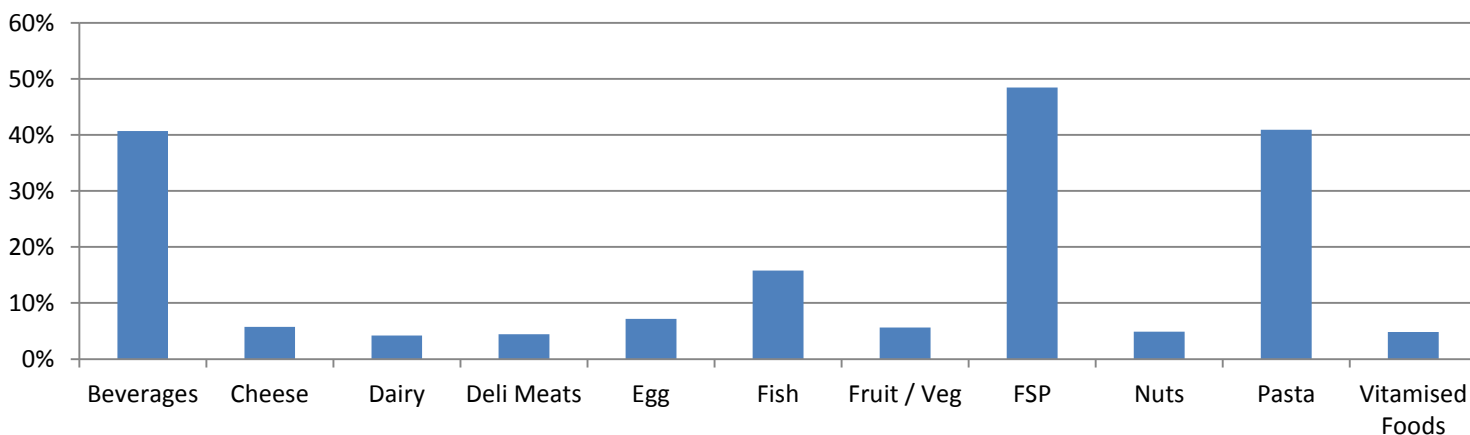


## Number of Unsatisfactory Samples per food category in 2012

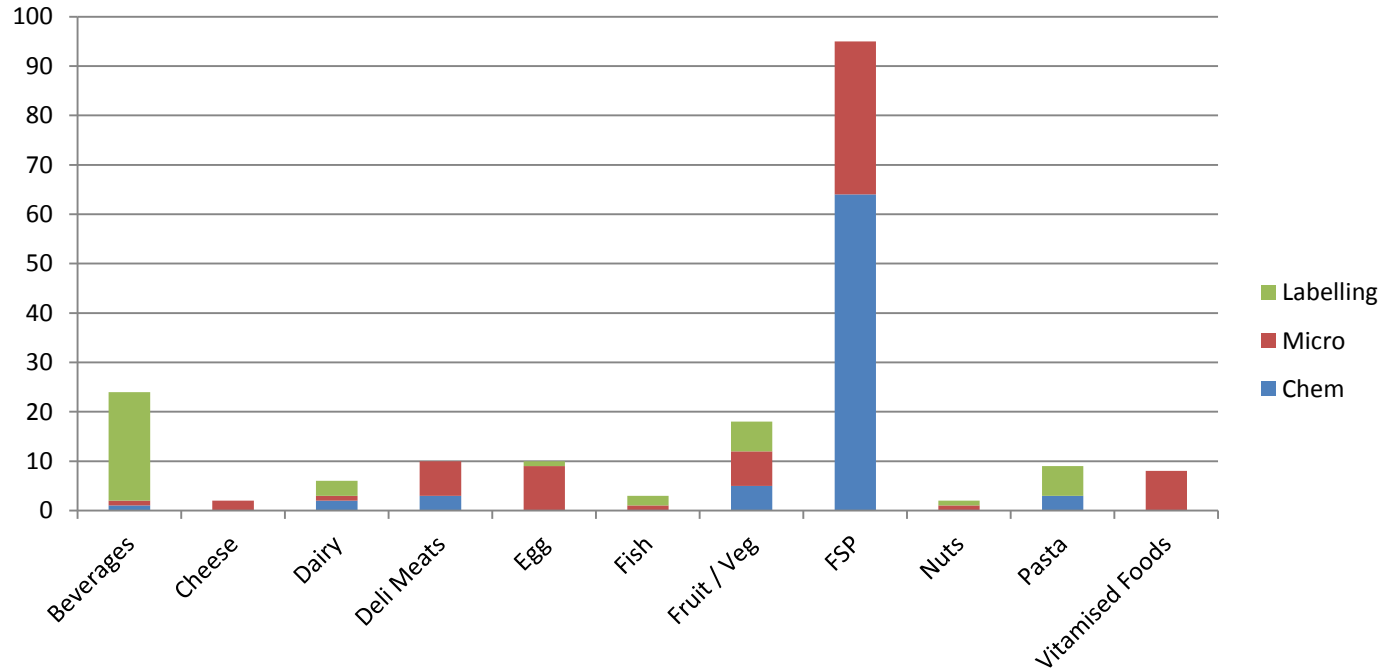
01/01/12 to 31/12/12

	# Samples	Number samples - unsatisfactory				
		Total %	Total	Chem	Micro	Labelling
Beverages	59	41%	24	1	1	22
Cheese	35	6%	2	0	2	0
Dairy	143	4%	6	2	1	3
Deli Meats	226	4%	10	3	7	0
Egg	140	7%	10	0	9	1
Fish	19	16%	3	0	1	2
Fruit / Veg	321	6%	18	5	7	6
FSP	196	48%	95	64	31	0
Nuts	41	5%	2	0	1	1
Pasta	22	41%	9	3	0	6
Vitamised Foods	165	5%	8	0	8	0

### Percent unsatisfactory samples per food category (other than RTE composite)



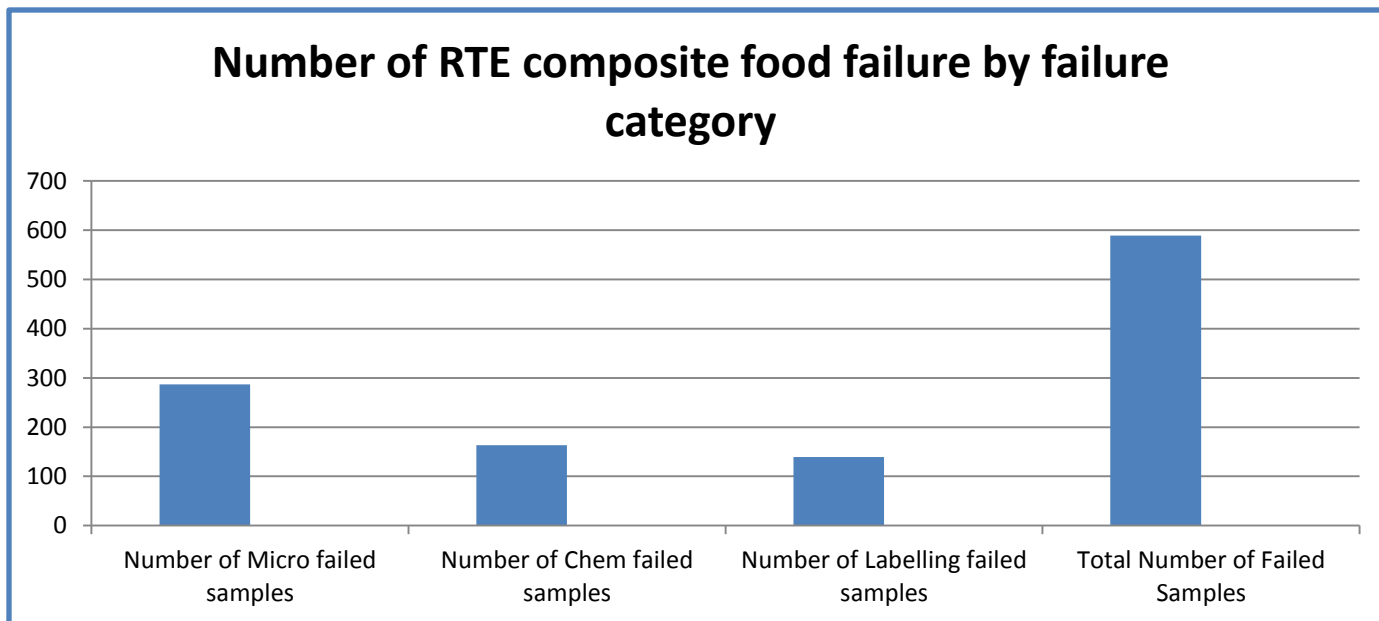
## Number of unsatisfactory samples per food category and type of failure



**Number of unsatisfactory RTE composite foods failed 2012**

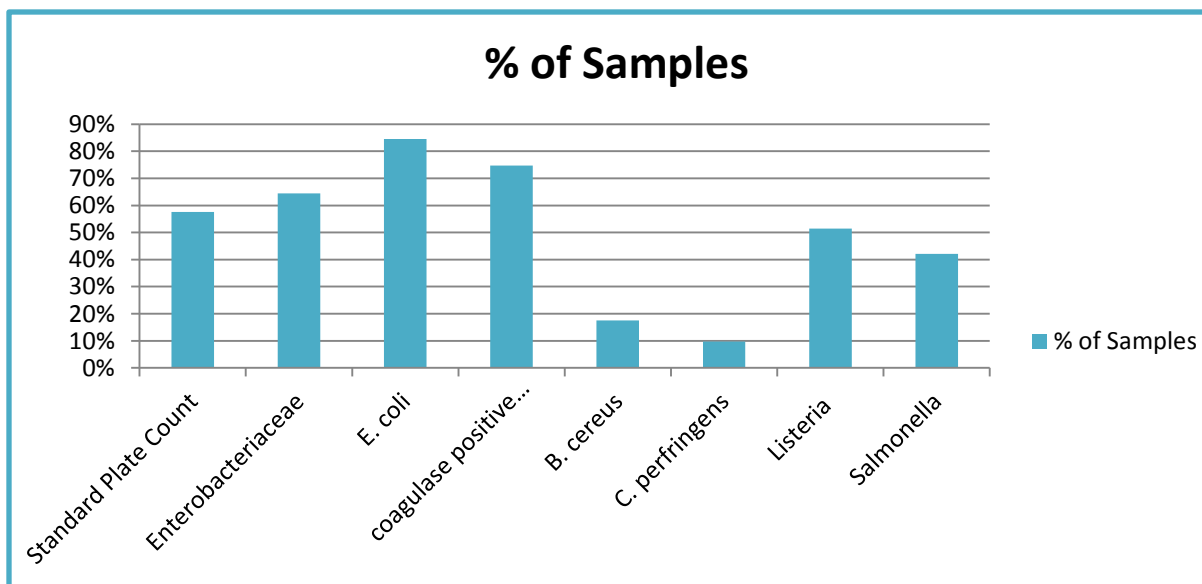
**01/01/12 to 31/12/12**

	# Samples	Total % unsatisfactory
Number of Micro unsatisfactory	287	4%
Number of Chem unsatisfactory	163	2%
Number of Labelling unsatisfactory	139	2%
Total Number of unsatisfactory Samples	589	9%
Total Number of Samples	6827	



**Number of RTE composite foods by microbiological test type 2012**  
**01/01/12 to 31/12/12**

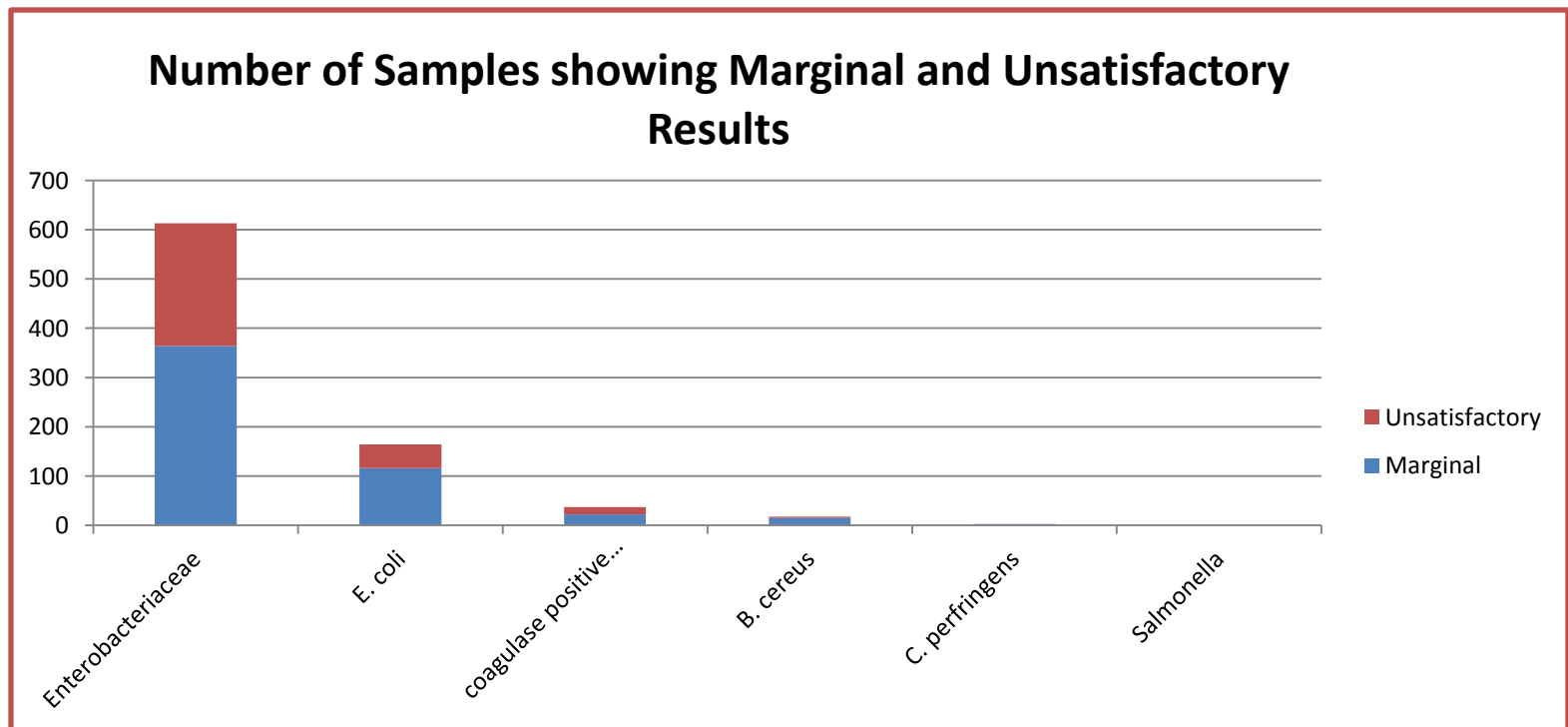
	# Samples Tested	% of Samples
Standard Plate Count	3931	58%
<i>Enterobacteriaceae</i>	4395	64%
<i>E. coli</i>	5767	84%
coagulase positive Staphylococci	5102	75%
<i>B. cereus</i>	1200	18%
<i>C. perfringens</i>	660	10%
Listeria	3513	51%
Salmonella	2876	42%
Total Number of Samples	6827	



Number of RTE composite foods that failed by test type 2012  
01/01/12 to 31/12/12

	Number of samples			% Samples	
	# Samples	Marginal	Unsatisfactory	Marginal	Unsatisfactory
<i>Enterobacteriaceae</i>	4395	364	249	8%	6%
<i>E. coli</i>	5767	116	48	2%	1%
coagulase positive Staphylococci	5102	22	15	0.4%	0.3%
<i>B. cereus</i>	1200	15	3	1.3%	0.3%
<i>C. perfringens</i>	660	3	0	0.5%	0.0%
Salmonella	2876	0	0	0%	0.0%

	Detected in 25g		
Listeria species	3513	80	2.3%
<i>L. monocytogenes</i>	3513	23	0.7%
L. mono enumeration			





Microorganism	Sample Number	cfu/g	Sample Description
<i>Enterobacteriaceae</i>	20APR12/4011 166	>15000	Sliced ham
	30MAR12/3960 608	>15000	Cooked rice
	11DEC12/4646 194	>15000	Chopped cooked chicken
	13SEP12/43837 06	>15000	Chicken
	14SEP12/43857 37	>15000	Chicken
	27NOV12/4600 981	>15000	Chicken
<i>E. coli</i>	03FEB12/38098 28	>49000	Egg salad
	03MAY12/4042 678	>49000	Egg salad
	23FEB12/38636 48	>49000	Meat stew

Microorganism	Sample Number	cfu/g	Sample Description
<i>B. cereus</i>	06JUN12/41293 66	5200	Pumpkin cous cous
	11OCT12/44647 54	600	Vitamised fish
	14AUG12/42974 90	800	Fried rice
<i>C. perfringens</i>	21SEP12/440643 5	2500	Lamb Kebab meat
	07SEP12/436778 3	1200	Lamb
	14SEP12/438792 7	1200	Kebab
Coagulase positive Staphylococci	24OCT12/45028 31	>49000	Steamed rice
	08AUG12/42806 77	>49000	Chicken kebab
	08AUG12/42807 14	>49000	Kebab

Microorganism	Sample Number	cfu/g	Sample Description
<i>L. monocytogenes</i>	4082429	PRESENT/25g; <100/g	Smoked leg ham
	4082452	PRESENT/25g; <100/g	Corned silverside - shaved
	4082539	PRESENT/25g; <100/g	Shaved leg ham
	4323810	PRESENT/25g; <100/g	Spinach - cooked
	4020762	PRESENT/25g; >15000/g	Cooked pork (follow up sample)

Microorganism	Information
Standard Plate Count	<p>(Total Plate Count, Aerobic Plate Count)</p> <p>Allocated to Heat processed foods - useful in determining the overall quality of the food, e.g. spoilage, but SPC results should not be the determining parameter - should be used in conjunction with other microbial test results.</p> <p>Not suitable for food in which a high background count is expected, e.g. raw foods like salads, or fermented foods</p>

<i>Enterobacteriaceae</i>	<p>Enterobacteriaceae include the Coliform group and in particular E. coli and Salmonella. Allocated to Heat processed foods. Enterobacteriaceae are generally not heat tolerant and so are useful in determining: Inadequate processing and / or post-process recontamination (cross contamination from raw materials, dirty equipment or insanitary handling).</p> <p>Not suitable for food in which a high background count is expected, e.g. raw foods like salads.</p>
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Microorganism	Information
<i>E. coli</i>	<p>Found in the enteric tract of warm blooded animals, thus its presence in foods generally indicates direct or indirect contamination of faecal origin. Raw materials that may be contaminated with <i>E. coli</i> can result in contamination of the finished product if inadequate heat treatment was applied. Post-process contamination can also occur.</p>

Coagulase positive Staphylococci	<p>The presence of these organisms indicates contamination from human / animal contact but cross contamination can also occur from inadequately cleaned equipment or raw animal products and poor temperature /time control.</p> <p>Detection of high number of coagulase positive staphylococci is of concern, as these organisms can produce heat stable toxins that cause food poisoning. - A Staph enterotoxin test is then performed when levels of 10,000 cfu/g are attained (or for food poisoning complaint samples where onset of symptoms is short)</p>
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Microorganism	Information
<i>B. cereus</i>	<p><i>Bacillus cereus</i> spores are common in starchy foods such as rice and cereals (including noodles, pasta), potatoes and dishes containing these foods, and in some spices. They can be carried through into the final product through inadequate cooking and/or cross-contamination. In particular, slow cooling allows for the spores to germinate and subsequently multiply to high levels.</p>

<i>C. perfringens</i>	<p>This organism has been isolated from soil, animals, spices and herbs, dehydrated foods and faecal material. Like <i>Bacillus</i>, these spores can survive cooking and then germinate when the temperature drops and so slow cooling will then allow further growth.</p>
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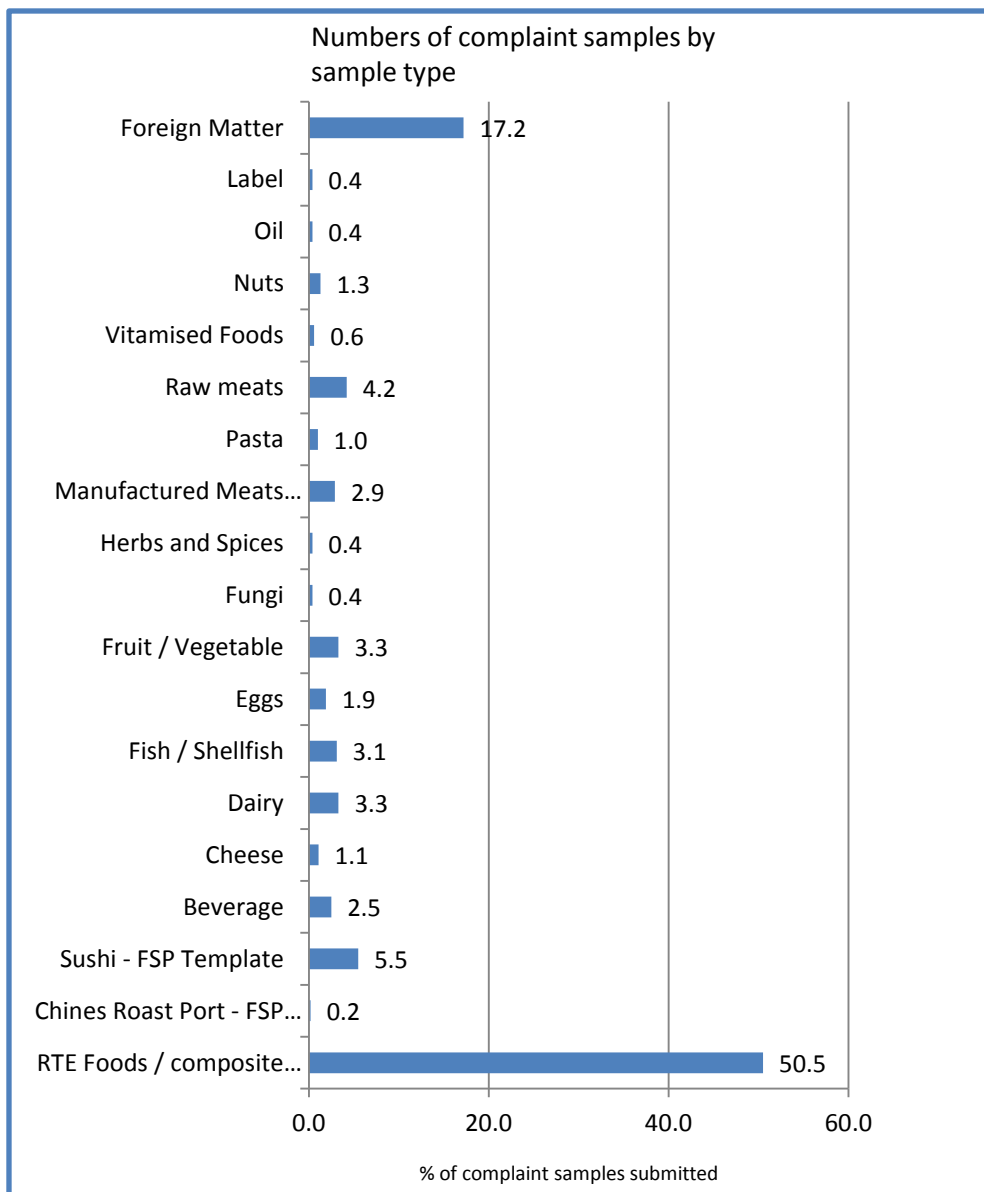
Microorganism	Information
Listeria	Listeria species, including <i>L. monocytogenes</i> are widely spread in the environment and have been associated with raw meats and vegetables, and are often present in processed dairy products, usually associated with some type of post-production abuse, e.g. cross-contamination or failure to adequately clean holding/dispensing equipment such as soft serve ice cream machines.
<i>Salmonella</i>	<i>Salmonella</i> are found in the intestinal tract of vertebrates and are widely spread in the environment. Salmonella may be present due to inadequate thawing prior to cooking, inadequate cooking or heating, or cross contamination of cooked foods from raw foods or unclean equipment. Delays between preparation and consumption and temperatures between 7°C and 46°C <sup>(1)</sup> allows Salmonella to multiply.
Campylobacter	Campylobacter can be found in the intestinal tract of animals and can also survive in environmental waters (lake, rivers, streams etc). Some of the causes of illness include consumption of contaminated water, unpasteurised milk, undercooked poultry, and cross contamination from raw food. <sup>(1)</sup>
References:	(1) Food borne Microorganisms of Public Health Significance - AIFST (NSW Branch) Food Microbiology Group, Sixth Ed.

Example of how tests are allocated to sample types

	RTE Composite Foods			FSP	Manufactured Meats	Special Purpose Foods
	Cooked foods	Containing raw ingredients (e.g. salad)	Kebabs	Sushi	Pickled / cured, e.g. ham	Vitamised Foods
Standard Plate Count	√					√
<i>Enterobacteriaceae</i>	√		√		√	√
<i>E. coli</i>	√	√	√	√	√	√
coagulase positive Staphylococci	√	√	√		√	
<i>B. cereus</i>	Yes if contains rice, pasta, etc	Yes if contains rice, pasta, etc		√		
<i>C. perfringens</i>			√			Yes if contains roast meats
Listeria	Yes if contains dairy, seafood, or deli style meats, otherwise optional	Optional		Optional	√	√
Salmonella	Yes if contains cooked crustacea, otherwise optional	Optional	Optional	Optional	Optional	Optional
Vibrio	Yes if contains cooked crustacea					
Other				pH		



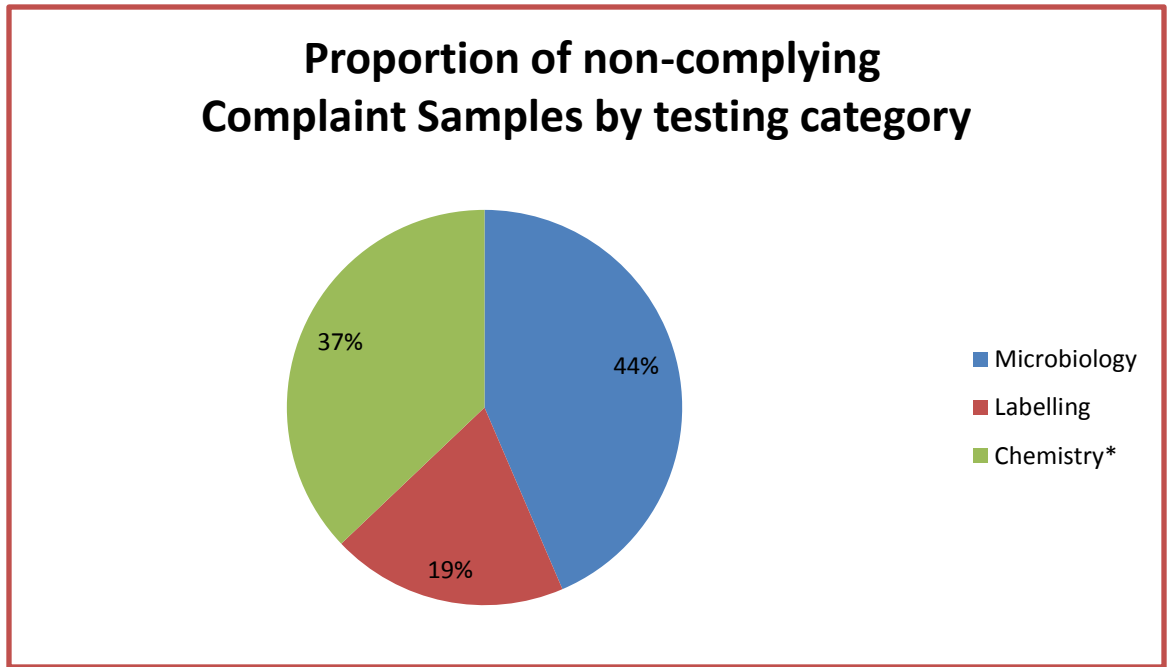
All complaint samples by sample type	
Sample Type	% of all Complaints
RTE Foods / composite foods	50.5
Chines Roast Port - FSP Template	0.2
Sushi - FSP Template	5.5
Beverage	2.5
Cheese	1.1
Dairy	3.3
Fish / Shellfish	3.1
Eggs	1.9
Fruit / Vegetable	3.3
Fungi	0.4
Herbs and Spices	0.4
Manufactured Meats /Deli	2.9
Pasta	1.0
Raw meats	4.2
Vitamised Foods	0.6
Nuts	1.3
Oil	0.4
Label	0.4
Foreign Matter	17.2



Total Number of Complaints	523
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	% Samples	# Samples	% non-complying samples
Food Complaints with unsatisfactory results	11.85%	62	
Microbiology	5.16%	27	44%
Labelling	2.29%	12	19%
Chemistry*	4.40%	23	37%

\*not including foreign objects

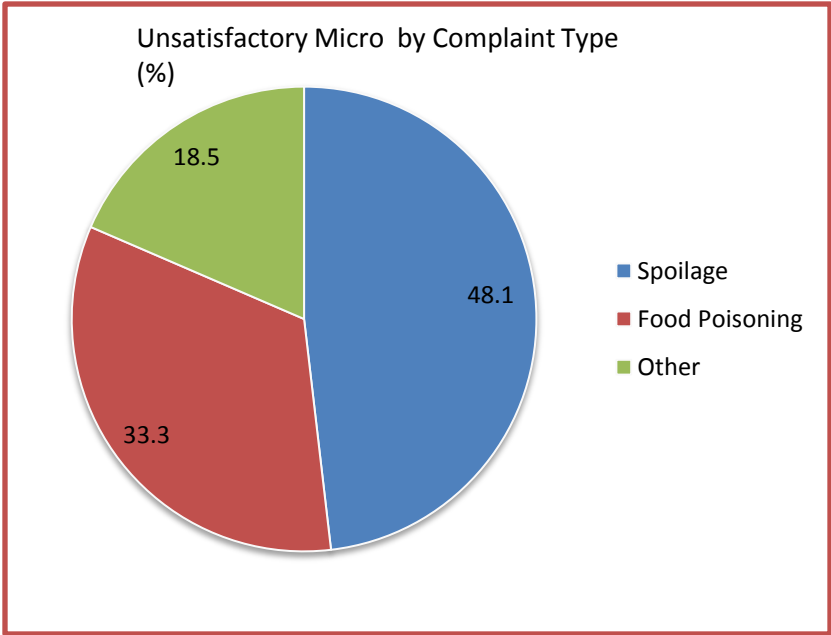


<b>Micro Complaints</b>		Unsatisfactory
<b>Complaint - Product Spoilage</b>		
<b>Product</b>	<b>Issue</b>	<b>Results</b>
Vitasoy Milk	Lumpy	high SPC
Halloumi Cheese	off'	High entero
Manufactured Meats x 3	slimy	High SPC, entero, Yeasts and Pseudomonas
Sweet Gherkin Spread	blown product	High Yeasts and LAB
Cinnamon Bark	mouldy	mould present
Lemon Butter	mouldy	mould present
Safron Rice	off'	High SPC, entero
Fried Rice	odour	High SPC, entero
Rice Paper Roll	odour	High, SPC, entero, yeasts
Sweet Chilli Dip	mouldy	mould present
Gur Masala (jaggery)	mouldy	mould present

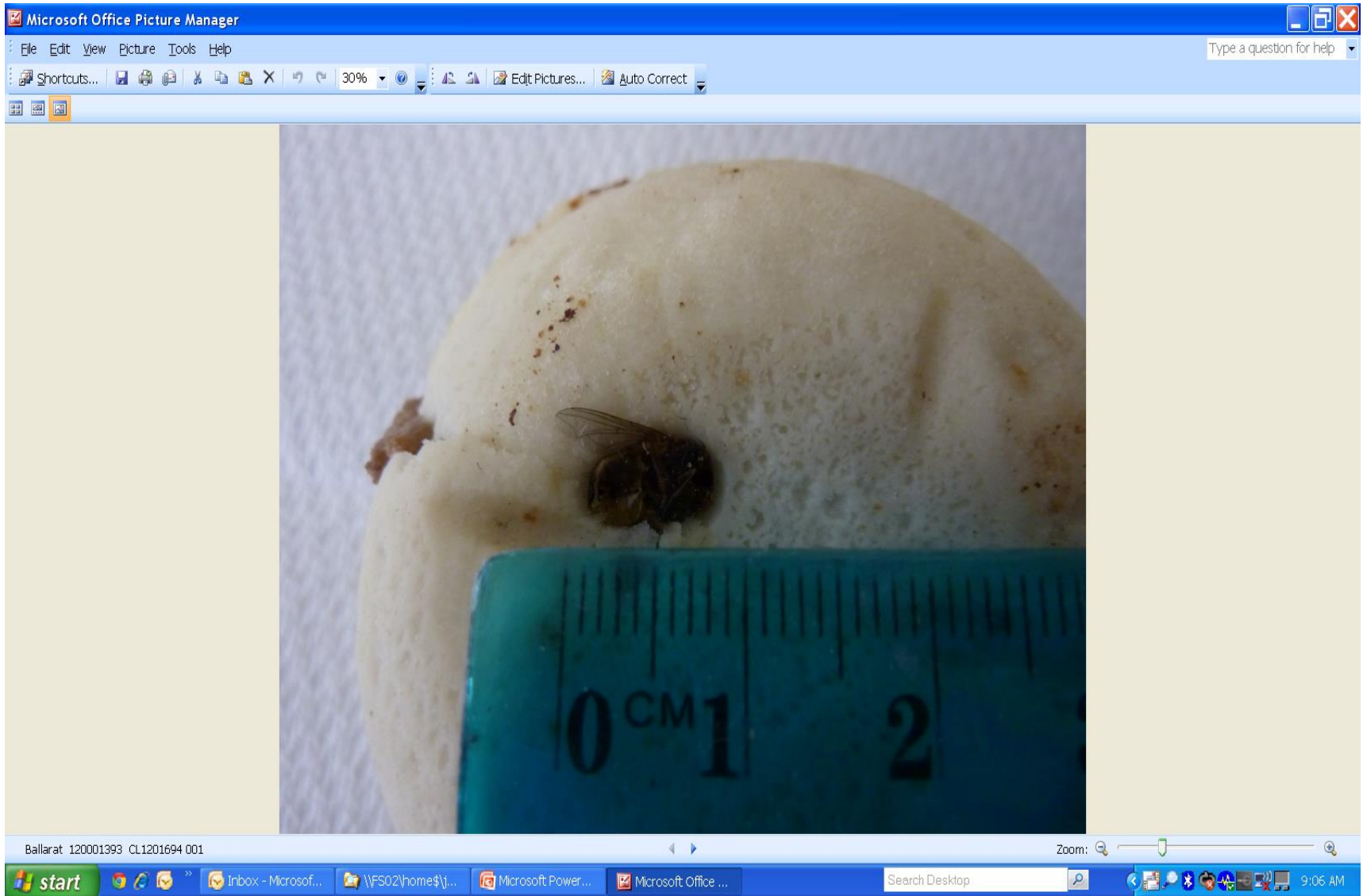
<b>Complaint - Out of Temp Control</b>	
<b>Product</b>	<b>Results</b>
Slice Chicken Loaf	High Entero, Yeasts, Pseudomonas
Hot Dog	High SPC, Yeasts, Pseudomonas
Soft Cheese	High Entero

<b>Complaint - Food Poisoning</b>	
<b>Product</b>	<b>Results</b>
Queso Fresco Cheese	High Entero, B.cereus (2,500/g)
Gravy	High SPC
Cooked Rice	High SPC, entero
Vinegarised Rice	satisfactory micro, pH >4.5
Chopped Chicken	High Entero
Moriwase sushi	Staph enterotoxin present
Jam	High SPC
Berry Cheesecake	High SPC
Fried Rice	High SPC, Entero, E.coli

Unsatisfactory Micro Results by complaint type		
	# Samples	%
Spoilage	13	48.1
Food Poisoning	9	33.3
Other	5	18.5
Total	27	



<b>Chem Failures</b>	
Raw Chicken x 5	Total volatile nitrogen >17mg/100g
Pan Masala x 2	Contain prohibited substance 'Betel nut'
Pan Parag	"
Star Supari	"
Rasily Supari	"
Sweet Supari	"
Gutka	"
Super mint	"
Choc Pan Masala	"
Bombay Sweet Supari	"
Sushi/Vinegarised Rice x 8	pH >4.5



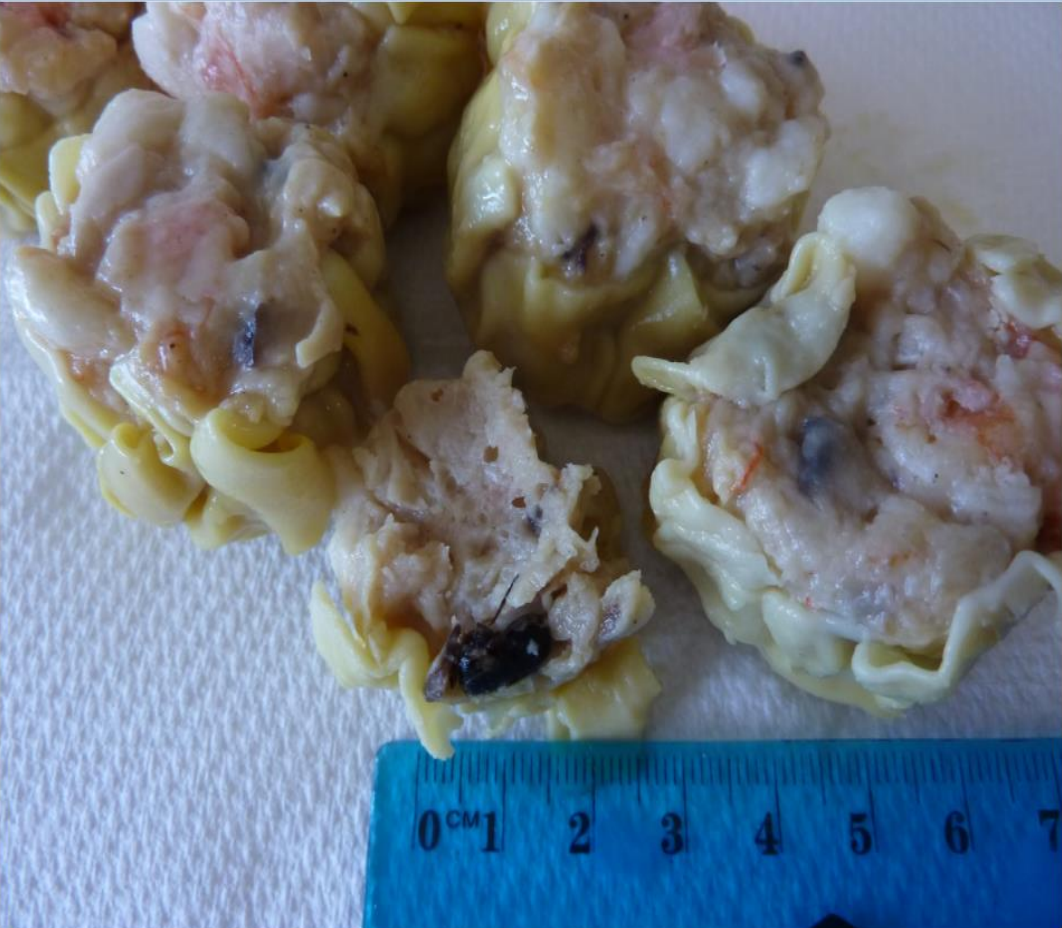


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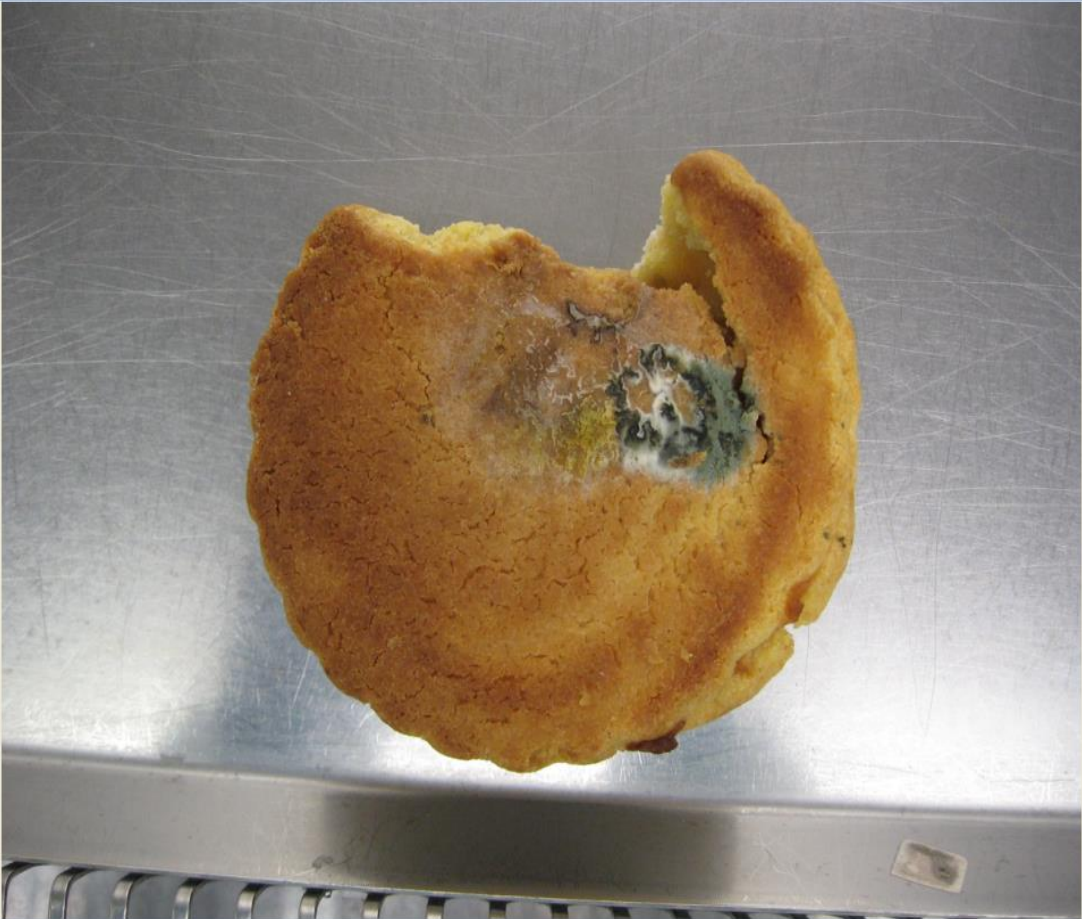
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Microsoft Office Picture Manager

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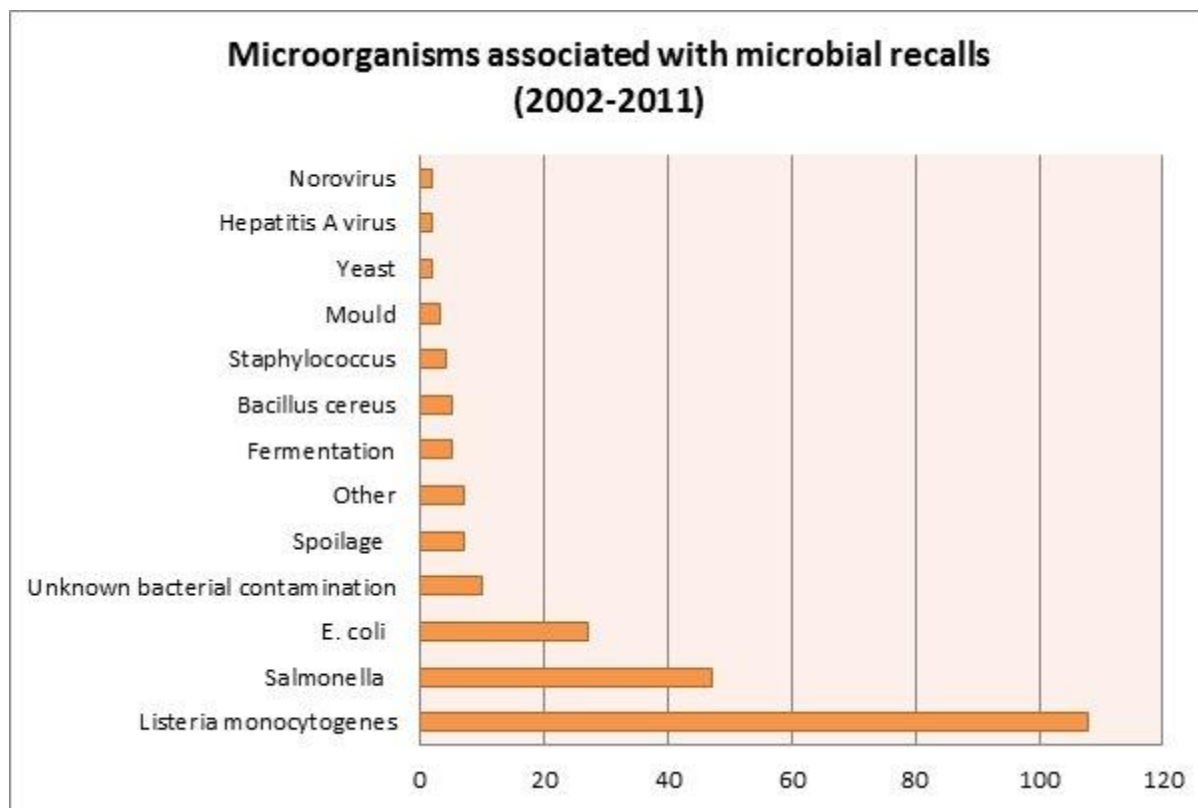
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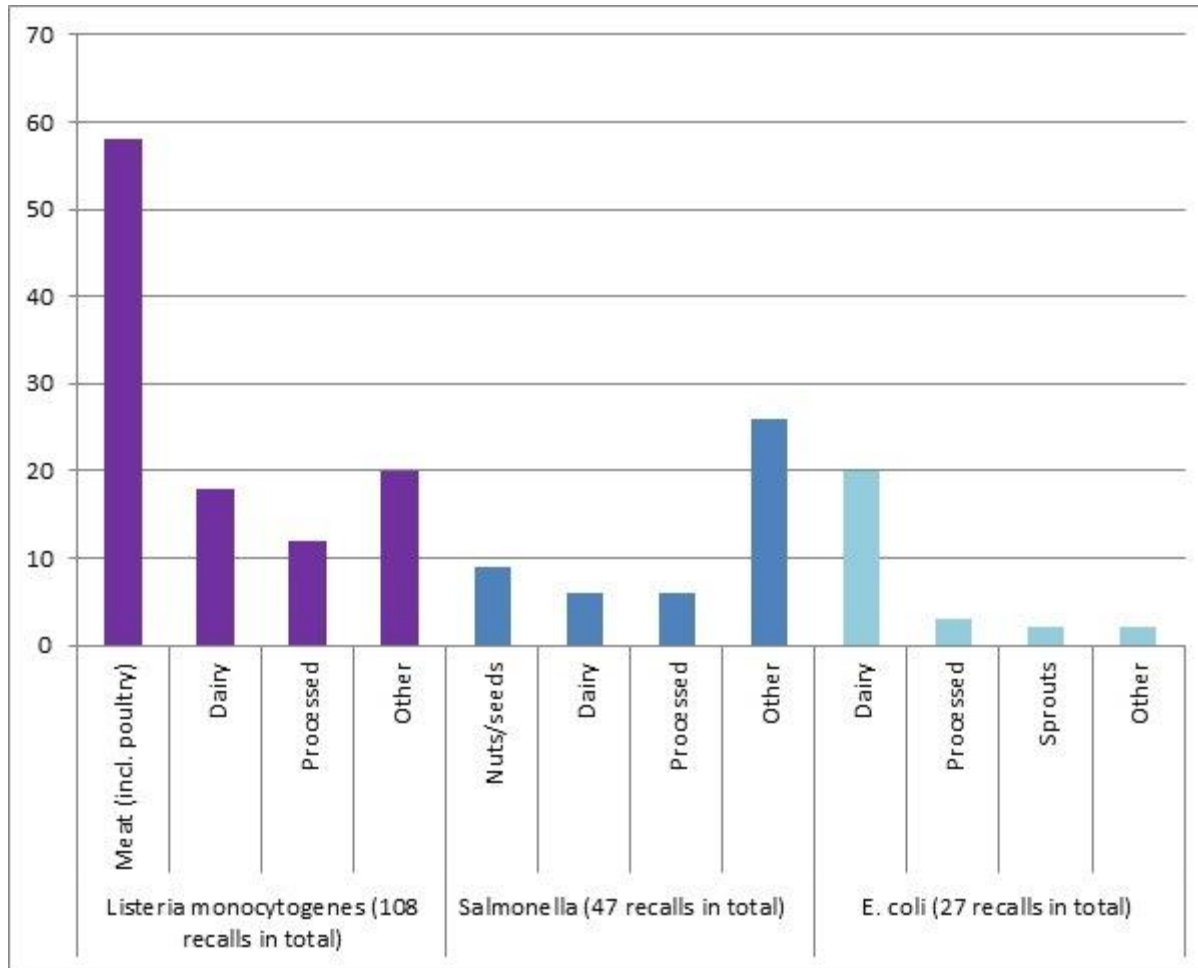
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**Figure 3:** Microorganisms associated with microbial recalls from 1 January 2002 and 31 December 2011.



**Figure 4:** Type of food products recalled for top 3 microorganisms associated with recalls from 1 January 2002 and 31 December 2011



**Australian Government**  
 Department of Agriculture, Fisheries and Forestry

Failing Food Report - September 2012

The following table details food that failed during the reporting month.

The number of lines of imported food inspected under the Imported Food Inspection Scheme during this month: 2106

Date of Fail	Product description	Country of origin	Producer Name	Fail Type	Reason for Fail (including test result)	Standard
29/08/2012	Pont L'èveque and Livarot cheeses	France	SA Graindorge	Micro	<i>E. coli</i> detected in excess of levels permitted. Results: Pont L'èveque 220g: >1500, 540, 240, >1500, 580 cfu/g Pont L'èveque 1.5kg: 20, <10, <10, <10, 130 cfu/g Livarot 1.5kg: <10, >1500, 350, 640, 710 cfu/g Livarot 250g: 360, 100, 10, 10, 40 cfu/g	1.6.1
5/09/2012	Munster cheese	France	Maison Fischer - Fr88.023.001	Micro	<i>E. coli</i> detected in excess of levels permitted. Results: 23, <3, <3, <3, 23 cfu/g	1.6.1
6/09/2012	Confectionery	United States	Cadbury Adams LLC	Composition	Contains Candellilla wax (E902) not permitted in this food	1.3.1
6/09/2012	Ricotta, Treccine, Buffalo milk cheese, and Buffalo milk cheese with chilli	Italy	Coop. Agr. Zoot Salicella ARL	Micro	<i>E. coli</i> detected in excess of levels permitted. Results: Ricotta: >1100, >1100, >1100, >1100, >1100 MPN/g Treccine: 4, 240, 9, 93, 93 MPN/g Buffalo milk cheese: >1100, >1100, >1100, >1100, >1100 MPN/g Buffalo milk cheese with chilli: >1100, >1100, >1100, >1100, >1100 MPN/g	1.6.1
7/09/2012	Dry ricotta cheese	Greece	Karalis SA	Micro	<i>Listeria monocytogenes</i> detected.	1.6.1
7/09/2012	Seaweed	Korea	Ottogi Corporation	Contaminant	Iodine detected in excess of level permitted. Result: 3000 mg/kg	IFN 17/11
7/09/2012	Camembert cheese	France	Gillot SAS - FR61.402.01	Micro	<i>E. coli</i> detected in excess of levels permitted. Results: <3, <3, <3, <3, 460 MPN/g	1.6.1
7/09/2012	French fries crisps	United Kingdom	Walkers Snack Foods Ltd UK	Composition	Saccharin not permitted in this food	1.3.1

T +61 2 6272 3933  
 F +61 2 6272 5161

18 Marcus Clarke Street  
 Canberra City ACT 2601

GPO Box 858  
 Canberra ACT 2601

daff.gov.au  
 ABN 24 113 085 695

