ANNUAL FOOD TESTING REPORT 2015 - 2016

NSW GOVERNMENT Food Authority

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Introduction

DTS Food Laboratories (DTS) is the primary testing provider for the NSW Food Authority (the Food Authority). Testing services provided by DTS include microbiological, chemical, foreign object identification, allergen contamination, nutritional composition and testing for genetically modified organisms (GMO). DTS has had accreditation from the National Association of Testing Authorities (NATA) since 1961.

At the conclusion of each financial year, the Food Authority prepares a report outlining testing conducted by the Food Authority's primary testing provider. This report does not include testing conducted by other laboratories.

Why test?

Samples are submitted for testing due to reasons such as hygiene assessment, foodborne illness investigation, verification of food safety programs and for research purposes. The testing results are then used to:

- ensure compliance to regulatory requirements
- assist with any required enforcement action
- respond to any incidents that occur in the industry
- provide scientifically based industry communication, training and advice
- provide scientifically based consumer advice and information
- assist with any local government concerns and complaints
- assist with the development of food regulatory framework
- assist with the evaluation and review of regulations
- assist with the development of emergency management framework

A year in review

Between July 2015 and June 2016, a total of 4389 samples were sent to DTS for testing. The diversity of foods analysed include raw and processed meats, seafood, fruit and vegetables, dairy products, and other processed and packaged foods. Samples are often submitted for multiple tests that may include both chemical profiling and microbiological assessment.

Table 1. Number of samples per category

Category	Number of samples
Verification programs	1441
Research and targeted surveys	1254
Food safety compliance	1694
Total	4389

Verification programs

Food safety schemes verification program for ready to eat products

The Food safety schemes verification program monitors ready-to-eat (RTE) food that is produced in NSW under one of the Food Authority's Food Safety Schemes. Schemes currently included in this program are dairy, meat, plant products and seafood. RTE foods that were manufactured or packaged under a Scheme were purchased from retail or purchased directly from the manufacturer and tested against set requirements as prescribed by each Scheme. When a sample was found to be non-compliant to these requirements such as microbiological limits, the manufacturer was inspected by an authorised officer from the Food Authority and appropriate action taken if required.

Between July 2015 and June 2016, a total of 411 samples were randomly collected from 104 businesses and submitted for testing (Table 2).

A total of eight products were found to be non-compliant due to the following reasons:

- two samples of bean sprouts were contaminated with *Salmonella*
- one sample of crème anglaise was contaminated with *Listeria monocytogenes*
- three samples of smallgoods were contaminated with *Listeria monocytogenes*
- one sample of RTE meat contained a high level of *E. coli*
- one sample of cheese contained a high level of *E. coli*

Table 2. Number of samples analysed for the microbiological verification program

Scheme	No. of samples tested	No. of non-compliant samples (%)
meat	89	4 (4.5%)
dairy	138	2 (1.4%)
plant products	160	2 (1.3%)
seafood	24	0 (0%)
Total	**411**	**8 (1.9%)**

Raw poultry verification program

In January 2015 the Food Authority commenced a new microbiological testing program for raw poultry. Samples of raw poultry are collected from processing facilities and retailers in NSW and tested for *Campylobacter* and *Salmonella*. This verification program was introduced due to the commencement of *Standard 4.2.2 Primary production and processing standard for poultry meat*, the increased growth of the poultry industry in NSW and the inherent food safety risks associated with the poultry industry.

Between July 2015 and June 2016, a total of 105 chicken carcases and chicken portions were collected from processors and 299 chicken portions were collected from retailers. *Salmonella* was detected in 20%[1] of samples from

[1] Originally reported as 21%

processing plants and *Campylobacter* was detected in 100% of samples with 23% of samples above the limit of quantification. At retail, 23% of samples tested positive for *Salmonella* while *Campylobacter* was detected in 84% of samples with 6.7% above the limit of quantification.

Detection of *Salmonella* and/or *Campylobacter* in poultry meat is not unexpected. The aim of this program is to gather ongoing data on the prevalence and levels of these organisms so that any changes over time can be monitored and the effect of the Standard can be analysed.

Egg farm and egg grading facility surveillance program

The egg farm and egg grading facility surveillance program aims to gather information on the prevalence of *Salmonella* in these premises.

Results are compared to baseline data acquired prior to the introduction of *Standard 4.2.5 Primary productions and processing standard for eggs and egg product* in 2012. Results will be used for assessing future impacts of *Standard 4.2.5* and for monitoring any changes to the composition and activities of the NSW egg industry.

Between July 2015 and June 2016, a total of 437 environmental (boot swabs, stock feed and faecal) and egg samples were collected from thirteen businesses. *Salmonella* was detected in 33 environmental samples collected from nine businesses. Detection of *Salmonella* in the poultry environment is not unexpected.

Kilojoule menu labelling verification program

Food labelling laws in NSW require specific take away and fast food businesses to state the kilojoule information of products at the point of sale. These requirements are in response to increased consumer demand for information and part of the NSW Government's broad set of responses to tackle the obesity epidemic. The laws apply to 'standard food outlets' (retail businesses that sell standard food items) with 20 or more locations in NSW or 50 or more locations nationally.

To ensure that companies remain diligent about the accuracy between the labelled kilojoule value and the actual value, the Food Authority conducts an ongoing verification program. Each year, one outlet from each business that falls within the scope of the law is visited by an authorised officer and the accuracy of labelling is tested for approximately 5% of their standard food items.

Where variations between the labelled and actual value are greater than 20%, two additional samples are collected from two different outlets (to take into account handling variability at each outlet). The average of the three results is then calculated and compared to the labelled value. If the discrepancy is still greater than 20% the head office is contacted to investigate.

Between July 2015 and June 2016, a total of 97 food products from 37 chains were tested (this represents 69% of chains under the Regulation in 2015/16). During initial testing 34% of products tested had a kilojoule content discrepancy of more than 20% between the labelled value and the actual value. After further sampling, 19.6% (from the original sample size) from twelve chains still had a discrepancy of more than 20% between the labelled value and actual value. Three of these products had a lower energy content than labelled and sixteen had a higher energy content than labelled. All issues identified were discussed directly with the relevant head office and rectified. This is an improvement from last year which found 25.6% of products tested had a discrepancy of more than 20%

Research and targeted projects

The Food Authority conducted a number of research projects in 2015-2016 (listed below). The aim of these projects is to gather data to inform the Food Authority's future risk assessment work. These projects are continuing into the 2016-2017 financial year.

- Microbiological quality of ready-to-eat (RTE) chilled foods
- *Campylobacter* in non-poultry products
- Undeclared Allergens in food
- Rice based desserts sold at room temperature
- Sulphur dioxide in sausages
- Microbiological quality and handling practices of cut melon and papaya at retail

Food safety compliance

The Food Safety Compliance Unit is responsible for conducting audits and inspections of food businesses, investigating breaches in compliance to the *Australia New Zealand Food Standards Code*, suspected food borne illness, labelling complaints and compliance as well as issues identified by Food Safety Officers during audits. These investigations can result in the analysis of food for a wide variety of tests. Enforcement action is instigated for any non-compliant samples. Between July 2015 and June 2016, a total of 1694 samples were submitted to DTS by the Compliance Unit (Table 3).

Table 3. Samples submitted for compliance

Category	Number of samples
Samples taken during audits and inspections	80
Food borne illness investigations	1139
Complaints and investigations	475
Total	**1694**

Samples taken during audits and inspections

Samples taken during audits are usually raw meat samples that have failed a field test for sulphur dioxide (SO_2) which is not permitted in raw meat (SO_2 is permitted in sausages). If a field test is positive, a three-part sample is then taken and submitted to DTS for SO_2 analysis. Occasionally sausage samples are also submitted for analysis to ensure they are under the maximum permitted level and for correct meat speciation. Between July 2105 and June 2016, 2755 audits of licensed meat businesses were conducted and 30 samples of raw meat were submitted for SO_2 testing as a result of positive field tests from eight butchers. Twenty nine of these samples were positive, ranging from 36 to 1400 mg/kg. Appropriate enforcement action was taken for these samples.

Also, from July 2015 to June 2016, 172 sausages were tested for SO_2 as part of a targeted project and during audits. A total of 37 samples were over the maximum level permitted in *Schedule 15* of the Australia and New Zealand Food Standards Code, ranging from 510 to 2700 mg/kg. As a result, penalty notices were issued to four businesses.

Food borne illness investigations

The Food Authority investigates suspected cases of foodborne illness in partnership with NSW Health, local councils, and interstate agencies. Between July 2015 and June 2016, a total of 1139 food and environmental samples were submitted for testing in response to foodborne illness investigations and their follow up activities.

Salmonella and *Listeria monocytogenes* continued to be the two most common microorganisms of concern. Outbreaks of foodborne illness linked to the use of raw egg continued to be the single most common type of incident investigated by the Food Authority. Three notable outbreaks are outlined below:

Bakery Outbreak

The Food Authority investigated an outbreak where 203 people were ill after eating at a hot bread shop. A total of 66 food and environmental samples were collected and 14 of 35 food samples were positive for *Salmonella Typhimurium* (Chicken roll, red & white ham, 6 vegetable ingredients) and 9 of 31 swab samples were also positive for *S*. Typhimurium (bootswabs, trays, shelves, sinks, taps, door handles). MLVA typing confirmed a match between the clinical samples and the isolates collected from positive samples from the bakery.

Sushi outbreak

The Food Authority investigated an outbreak of *Salmonella* linked to sushi. There were 10 known cases and an unknown amount of others ill. Environmental swabs (47) and food samples (9) were collected and sent for analysis. *Salmonella* was detected in a handwash basin and on the floor of the sushi rolling area. MLVA typing confirmed a match between the clinical samples and the isolates collected as well as matching samples collected from the egg supplier.

Cake outbreak

The Food Authority investigated an outbreak linked to a cake manufacturer. There were four confirmed *Salmonella* cases from two separate groups. *Salmonella* was detected in a cake retained by a customer and the whipped cream stored by the manufacturer. None of the environmental swabs collected at the manufacturer contained *Salmonella*.

Complaints and Investigations

Complaint samples usually result from a complaint from a member of the general public either through the Food Authority's helpline or local council. Samples may be acquired from the complainant or from retail outlets, manufacturers or importers. Common complaints include unlabelled allergens, allergen contamination or poor labelling.

Between July 2015 and June 2016, 475 samples were submitted due to a complaint or investigation.

Significant investigations this year include unlabelled dairy in coconut water (59 samples tested resulting in two recalls), *Salmonella* in raw onions (40 samples) and preservative use in fresh noodles and rice cakes (45 samples).