

Survey of undeclared allergens in dips and ice cream from Victorian dairy manufacturers – 2018

Executive summary

A market basket survey was undertaken on dip and ice cream products made by Victorian dairy manufacturers to investigate the prevalence of undeclared allergens. Products from four dip and four ice cream manufacturers were selected based on whether there was a precautionary label on the product and whether there was a potential at the site for cross-contact contamination by allergens not declared on the label.

The presence of undeclared allergens in products may suggest cross-contact contamination or other failures in the allergen management program, such as labelling errors.

No undeclared allergens were observed in any of the 41 dip or 16 ice cream products tested. This information assists in verifying that the allergen management programs at these sites are operating effectively.

A further aim of this survey was to identify issues which may affect the feasibility or logistics of a larger scale survey to monitor a wider range of dairy products. Issues identified included the use of appropriate methodology and awareness of matrix impacts on the accuracy of the tests, and the use of precautionary labelling outside industry guidelines.

Background

A recent survey conducted by the Murdoch Children's Institute (Zurzolo et.al.2018) has shown that many cases of anaphylaxis are caused by the presence of unlisted ingredients in packaged foods. Of these reactions, 50 per cent were from foods that did not have precautionary allergen labelling (PAL). DFSV has also recently addressed several allergen-related incidents amongst its licensees.

Manufacturers are required to identify allergens intentionally added to food products according to Section 1.2.3—4 of the Australia New Zealand Food Standards Code (the Code). There is no requirement under the Code to label products which may contain allergens that are unintentionally present (due to failures in the allergen management program such as cross-contact). However, industry guidelines offer a common approach to labelling of allergens which may be unintentionally present.

These guidelines promote the use of the precautionary statement 'May contain' where a risk assessment, such as the Voluntary Incidental Trace Allergen Labelling (VITAL) Program¹ indicates that the allergen may be present above a certain level. This level is known as the reference dose, which is the amount of total protein from an allergic food below which only the most sensitive individuals (between one and five per cent) in the allergic population are likely to experience an adverse reaction. This corresponds to Action Level 2 in the VITAL system and signifies that a precautionary label is required.

This pilot survey was designed to examine the presence of undeclared allergens in dips and ice creams manufactured by DFSV licence holders.

¹ The [VITAL Program](#) is a standardised allergen risk assessment process for the food industry provided by the Allergen Bureau.

Methods

Selection of products to be assessed

The survey focused on dips and ice creams because a large number of different allergen containing ingredients are used in these products and hence a range of different allergens are likely to be present in the processing area. These factors pose a potential increased risk of the unintentional presence of allergen in products originating from these facilities.

At the time of the survey, four dip manufacturers were licensed with DFSV and products from all four were tested. Of the 33 licensed ice cream manufacturers, four were selected to be included in the survey. These were chosen based on feedback from DFSV food safety managers.

The selection of products to be tested was based on a targeted approach in which an assessment of each dip or ice cream manufacturer (in conjunction with relevant food safety managers) was undertaken. This identified which allergens were present on site, which allergens were present as ingredients and which allergens were represented on a precautionary allergen label statement. This information was used to develop a matrix to assist in identifying product and allergen combinations for testing.

Forty-one dip samples were identified in this way, purchased from retail stores and tested for one or more relevant allergen. Sixteen ice cream samples were purchased and tested for relevant allergens based on food safety manager feedback. One sample of each product was sent to the National Measurement Institute (NMI), Port Melbourne for testing. A total of 219 tests were undertaken on the 57 products.

Results and discussion

Dips

The results for dip samples are shown in Table 1. No undeclared allergens were detected in any sample, with the exception of sulphites in four samples from Manufacturer 4. This result prompted an investigation by the manufacturer and laboratory. The investigation identified that incorrect testing methodology was used by the laboratory. Subsequent re-testing was undertaken using an alternative method, more suitable for the product matrix. This testing produced negative results.

Manufacturer	No of products collected	Gluten	Soy Protein	Egg	Casein (Milk)	Crustacea	Cashew	Sesame Seed	Fish	Pine Nut	Sulphite
Limit of reporting		5mg/kg	2.5mg/kg	1mg/kg	0.26mg/kg	0.05mg/kg	D/ND	0.5mg/kg	D/ND	2mg/kg	10mg/kg
1	14	13 (ND)	13 (ND)	12 (ND)	3 (ND)		12 (ND)	12 (ND)	12 (ND)		
2	12	12 (ND)	11 (ND)	7 (ND)	2 (ND)			10 (ND)	11 (ND)		
3	7	2 (ND)	2 (ND)		3 (ND)	7 (ND)		1 (ND)	1 (ND)	3 (ND)	
4	8	8 (ND)									4 (ND)
Total	41	35	26	19	8	7	12	23	24	3	4

Table 1: The number of products from each of the four dip manufacturers tested for each allergen (ND = allergen not detected).

Ice cream

Sixteen ice cream samples from four different manufacturers were purchased from retail stores. Each sample was tested for one or more allergen. The number of products from each manufacturer that were tested for each allergen are given in Table 2.

No allergens were detected, with the exception of walnut. The three products with walnut detections were from two different manufacturers. One was labelled as '*may contain traces of nuts due to shared equipment*' and the other two were labelled as '*Product is processed on the same line as products containing egg, sesame, soy proteins, tree nuts and peanuts*'.

Manufacturer	No of products collected	Gluten	Soy Protein	Egg	Peanut	Walnut	Hazelnut	Almond	Casein (Milk)	Cashew	Sesame Seed	Pine Nut	Sulphite
Limit of reporting		5mg/kg	2.5mg/kg	1mg/kg	1mg/kg	2.4mg/kg	0.5mg/kg	0.5mg/kg	0.26mg/kg	D/ND	0.5mg/kg	2mg/kg	10mg/kg
1	5 (ND)	5 (ND)	4 (ND)	4 (ND)	2 (ND)	1 (DET)	1 (ND)	1 (ND)	2 (ND)	2 (ND)			
2	5 (ND)	1 (ND)	5 (ND)						1 (ND)		5 (ND)		4 (ND)
3	3 (ND)	3 (ND)	1 (ND)	2 (ND)	2 (ND)	2 (DET)	2 (ND)	1 (ND)		1 (ND)		1 (ND)	
4	3 (ND)	1 (ND)		2 (ND)							1 (ND)		1 (ND)
Total	16	10	10	8	4	3	3	2	3	3	6	1	

Table 2: The number of products from each of the four ice cream manufacturers tested for each allergen (ND = allergen not detected, DET = allergen detected).

Conclusion

This small-scale pilot survey investigated the incidence of undeclared allergens in products produced by a selection of DFSV licenced dip and ice cream manufacturers. No undeclared allergens were detected during the survey, demonstrating that these licensees are effectively managing the presence of undeclared allergens in the test samples.

The survey also provided a proof of concept for this type of monitoring program. A larger scale survey incorporating a wider range of dairy products is planned for 2018–2019 and it will provide further verification of the allergen management processes of Victoria's dairy manufacturer licensees. This pilot survey has also generated valuable logistical information which will assist in the management of a larger-scale survey.

References

Zurzolo G, Allen K, Peters R, Tang M, Dharmage S, de Courten M, Mathai M, Campbell D 2018, 'Anaphylaxis to packaged foods in Australasia', *Journal of Paediatrics and Child Health*, vol 54, pp 465-592 <<https://onlinelibrary.wiley.com/doi/pdf/10.1111/jpc.13823>>

Australia New Zealand Food Standards Code: *Standard 1.2.3, Information requirements – warning statements, advisory statements and declarations* <<https://www.legislation.gov.au/Details/F2011C00610>>

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