



Undeclared Hazelnut and Almond in Milk Alternative Products - April 1, 2016 to March 31, 2017

Food allergen - Targeted surveys



Summary

Targeted surveys provide information on potential food hazards and enhance the Canadian Food Inspection Agency's (CFIA's) routine monitoring programs. These surveys provide evidence regarding the safety of the food supply, identify potential emerging hazards, and contribute new information and data to food categories where it may be limited or non-existent. We often use them to focus surveillance on potential areas of higher risk. Surveys can also help to identify trends and provide information about how industry complies with Canadian regulations.

Food allergies can affect people of all ages but are particularly common in children. Food allergens can represent a serious or life threatening health risk for allergic individuals. Allergens can be found in food due to their presence in the raw ingredients or they can be accidentally introduced along the food production chain due to cross contamination. Regardless of the source of the allergens, industry must ensure that the food produced is safe for human consumption, either by complying with specific Canadian regulations where applicable or by keeping the levels as low as reasonably possible.

The main objective of this survey was to obtain baseline information regarding the presence and levels of undeclared hazelnut and almond in milk alternative products. 400 samples were tested and none of the samples was found to contain undeclared hazelnut and almond.

What are targeted surveys

Targeted surveys are used by the CFIA to focus its surveillance activities on areas of higher health risk. The information gained from these surveys provides support for the allocation and prioritization of the Agency's activities to areas of greater concern. Targeted surveys are a valuable tool for generating information on certain hazards in foods, identifying and characterizing new and emerging hazards, informing trend analysis, prompting and refining health risk assessments, highlighting potential contamination issues, as well as assessing and promoting compliance with Canadian regulations.

Food safety is a shared responsibility. The Agency works with federal, provincial, territorial and municipal governments and provides regulatory oversight of the food industry to promote safe handling of foods throughout the food production chain. The food industry and retail sectors in Canada are responsible for the food they produce and sell, while individual consumers are responsible for the safe handling of the food they have in their possession.

Why did we conduct this survey

Approximately 7% of Canadians have self-reported as having at least 1 food allergy, but the actual number of medically diagnosed food allergies is expected to be slightly lower¹. It is believed that the rate of food allergies is increasing, particularly among children. Food allergies are estimated to affect up to 5% of adults and up to 8% of children in developed countries². Food allergens are food proteins that can cause a reaction of the body's immune system, and can represent a serious or life threatening health risk for allergic individuals or contribute to chronic health issues for those with pre-existing health conditions like celiac disease.

The priority food allergens are the 10 most common food components associated with severe allergic reactions in Canada. These allergens consist of peanuts, tree nuts, sesame, seafood (fish, shellfish and crustaceans), eggs, milk, soy, mustard, sulphites, and wheat³. This report presents the results of a survey conducted to look at the levels of undeclared hazelnut and almond in milk alternative products.

Undeclared allergens can be found in foods due to their presence in the raw ingredients, or can be accidentally introduced along the food production chain through cross contamination. Regardless of the source of the allergens, industry must ensure that the food they produce is safe for human consumption. This can be achieved by complying with specific Canadian regulations where applicable, or by keeping the levels as low as reasonably possible.

Food allergens can represent a serious or life threatening health risk for allergic individuals or contribute to chronic health issues for those with pre-existing health conditions like celiac disease. Reactions to food allergens depend on the individual's sensitivity and can range from mild to severe or life threatening. This makes proper identification and labeling of allergens in food by the manufacturer essential. The following types of products were sampled for this survey: beverage, frozen desserts, and other products, such as dairy free cheese, etc. All products were tested "as sold," meaning that they were not prepared as per manufacturer's instructions or as they would typically be consumed.

This was the first survey conducted by the Agency for undeclared hazelnut and almond in milk alternative products. The main objective of this survey was to obtain baseline information

regarding the presence and levels of undeclared hazelnut and almond in these types of products.

What did we sample

All products were sampled from April 2016 to March 2017. Samples were collected from local and regional grocery stores located in 6 major cities across Canada. These cities encompassed 4 geographical areas: Atlantic (Halifax), Quebec (Montreal), Ontario (Toronto, Ottawa) and the West (Vancouver, Calgary). The number of samples collected from these cities was in proportion to the relative population of the respective areas.

The following products were not included in the survey:

- products with milk or dairy ingredients (such as cream, butter, cheese) present in the list of ingredients
- products with any of the following allergens in the list of ingredients: hazelnut, almond and tree nuts
- products missing a required list of ingredients
- products with a precautionary statement for all priority allergens
- products packaged in-store or bulk products
- products past the “use by” or “best before” date
- popsicles, fruit based bars and ice pops
- protein powders
- infant formula

Table 1. Distribution of samples based on product type and origin

Product type	Domestic	Import	Unspecified origin ^a	Total
Beverages	72	43	60	175
Frozen desserts	25	127	18	170
Other	35	17	3	55
Total	132	187	81	400

^aUnspecified refers to those samples for which a country of origin could not be determined from the product label or available sample information.

How were samples analyzed and assessed

Samples were analyzed by an ISO/IEC 17025 accredited food testing laboratory under contract with the Government of Canada. The samples were tested as sold, meaning that the product was tested as-is and not as prepared according to package instructions.

In Canada, food allergens must be declared in the list of ingredient if they are present in the prepackaged product in order to comply with the requirements of [Food and Drug Regulations Section B.01.010.1](#). A prepackaged product will be deemed non-compliant if any level of undeclared allergens is detected.

What were the survey results

All milk alternative products sampled and tested in this survey were found to be free of any detectable levels of undeclared almond and hazelnut. No published literature could be found on the similar topic for results comparison.

What do the survey results mean

Based on this survey, 100% of the products tested were compliant with allergen labelling regulations in Canada. No samples were shown to contain any detectable levels of undeclared hazelnut and almond.

The extent of the follow-up actions taken by Agency is based on the level of contamination and the resulting health concern as determined by a health risk assessment. Appropriate follow-up actions can include additional sample testing, facility inspection and product recall. The health risk assessment is based on exposure to the allergens and gluten through consumption. The exposure is calculated by using the typical serving sizes for each food. Assessment based on serving size means not all detectable levels of undeclared allergens in food will cause a reaction in an allergic individual.

This survey generated new information on the background level of undeclared hazelnut and almond in milk alternative products collected from 6 cities across Canada. A follow-up survey will be conducted in the future in order to increase the sample size. The combined surveys will be used to determine an overall background level of allergens in milk alternative products. Information gathered in this survey, in conjunction with other data including the Canadian Total Diet Study, and Statistics Canada's Canadian Health Measures Survey food consumption data, are critical in assessing the health risk that our food supply poses to Canadian consumers. The results of CFIA's surveillance activities are also used to inform the Canadian public and stakeholders by raising consumer awareness and to help build public confidence in their food supply by removing non-compliant products.

References

1. Soller, L., Ben-Shoshan, M., Harrington, D. W., Fragapane, J., Joseph, L., Pierre, Y. S., Clarke, A. E. (2012). Overall prevalence of self-reported food allergy in Canada. *Journal of Allergy and Clinical Immunology*, 130(4), pp. 986-988.
2. Sicherer, S. H., & Sampson, H. A. (2014). Food allergy: Epidemiology, pathogenesis, diagnosis, and treatment. *Journal of Allergy and Clinical Immunology*, 133(2), pp. 291-307.e5.
3. [Common food allergens](#). (2018, May 14). Canada. Health Canada.