Allergy, Allergens & Allergen Management for the Food Industry

Romer Labs – Food Allergen Seminars

Georgina Christensen – Auckland, 27 September 2017
Kirsten Grinter – Sydney, 3 October 2017
The Allergen Bureau

~ Established in 2005 due to industry demand, a ‘Not for Profit’ organisation

~ Manage VITAL® Program, continues to invest & engage broadly

~ Our members steer the resources & projects
  • 31 Full members
  • 23 Associate members
  • 21 Individual members

Our reason for being to share information & experience across the food industry on the management of food allergens to ensure consumers receive relevant, consistent & easy to understand food allergen information

http://allergenbureau.net/
Overview

~ Adverse Reactions to food (food allergy, coeliac disease, intolerance)
~ Global Allergen Regulations
~ Best Industry Practice in Supply Chain Validations
~ The VITAL® Program
Adverse Reactions to Food
Adverse Reactions to Food

Immune Mediated
- IgE Mediated (e.g. food allergy)
- IgE Mediated (e.g. coeliac disease)
- Metabolic (e.g. lactose intolerance)
- Other (e.g. sulphite sensitivity)
Food allergy

A food allergy is an abnormal response to a food that is triggered by the immune system.

The body produces antibodies against the food allergen protein and when it is eaten by the food allergic individual their body will release histamine and other chemicals causing inflammation.
Food allergen

A normally harmless substance that triggers an allergic reaction. Most food allergens are proteins. A food may comprise of one or more allergenic proteins.

For example ~ cow’s milk contains allergenic proteins in the whey fraction and different allergenic proteins in the casein fraction. Individuals may be allergic to only one milk protein or more.
Predominant food allergens

- peanuts
- tree nuts
- soy
- milk
- egg
- fish
- cereals containing gluten
- crustacea
- sesame
- lupin
- mustard
- celery
The allergic reaction

- **Dermal** – skin breaks out in hives or eczema
- **Gastrointestinal** – nausea, cramps, diarrhoea
- **Respiratory** – struggle for air
- **Circulatory** – blood pressure drops, lose consciousness

Anaphylaxis is an acute allergic reaction ~ in rare cases, multiple organ systems are affected and death can occur in as little as ten minutes
Some symptoms of an allergic reaction to a food

- Urticaria
- Atopic Dermatitis
- Anaphylaxis
Coeliac disease

The immune system reacts abnormally to gluten (a protein found in wheat, rye, barley and oats) causing small bowel damage.

Wheat allergy (allergic response to wheat protein) is different to coeliac disease (immune response to gluten proteins)
Food intolerance

Detrimental reaction to food – not a food allergy. Symptoms are generally less serious than true food allergy and often limited to digestive problems.

Lactose intolerance is an example where a person is intolerant to the lactose carbohydrate in milk which is different to an allergy to milk protein.
Sulphite intolerance

Sulphites are a family of preservatives permitted for use in some food and drinks. (Additives 220-228)

Sulphite intolerance can trigger asthma symptoms in individuals with underlying asthma.

Wheezing is the most common reaction to sulphites. In very rare cases however, anaphylaxis can occur.
Impact of food allergy

~ there is currently no cure

~ sensitivity differs between individuals and depends on type of food, amount ingested and other activities at time of ingestion

~ people with food allergy do not know when their next allergic reaction will occur or how severe it will be

Avoidance of the food is the only protection
Food allergy rates are increasing in Australia and New Zealand

- rapid increase in food allergic disease in last 30 years in mainly the Western world
- 80% of children outgrow milk, egg, soy and wheat allergy by age 5
- individuals allergic to peanuts, tree nuts, sesame or seafood will have this for life

food allergy affects*
- ~ 10% infants (up to 12 months old)
- ~ 4-8% children (up to 5 years)
- ~ 2% adults (approx.)

*ASCIA 2015
www.allergy.org.au
Global Allergen Regulation
Section 1.2.3-4  Mandatory declaration of certain foods or substances in food sets out further requirements for declaring these foods or substances if present in a food.

A declaration is required when these foods or substances may be present as:

(a) an ingredient or as an ingredient of a compound ingredient; or
(b) a substance used as a food additive, or an ingredient or component of such a substance; or
(c) a substance or food used as a processing aid, or an ingredient or component of such a substance or food.
Mandatory declaration of certain foods or substances in food

(1) For the labelling provisions, if any of the following foods or substances is present in a food for sale in a manner listed in subsection (2), a declaration that the food or substance is present is required:

(a) added sulphites in concentrations of 10 mg/kg or more;
(b) any of the following foods, or products of those foods:
   (i) cereals containing *gluten, namely, wheat, rye, barley, oats and spelt and their hybridised strains other than:
       (A) where these substances are present in beer and spirits; or
       (B) glucose syrups that are made from wheat starch and that:
           (a) have been subject to a refining process that has removed gluten protein content to the lowest level that is reasonably achievable; and
           (b) have a gluten protein content that does not exceed 20 mg/kg; or
       (C) alcohol distilled from wheat;
   (ii) crustacea;
   (iii) egg;
   (iv) fish, except for isinglass derived from swim bladders and used as a clarifying agent in beer or wine;
   (v) milk, other than alcohol distilled from whey;
   (vi) peanuts;
   (vii) soybeans other than:
       (A) soybean oil that has been degummed, neutralised, bleached and deodorised; or
       (B) soybean derivatives that are a tocopherol or a phytosterol;
   (viii) sesame seeds;
   (ix) tree nuts, other than coconut from the fruit of the palm Cocos nucifera;
   (x) lupin.
Recent Changes to FSC Standard 1.2.3: Lupin

~ Lupin was added to the substances which require mandatory declaration - 25th May 2017

~ Transitional arrangement until 25th May 2018 for compliance

~ No stock-in-trade provision – all products and declarations, including products on shelf, must be compliant by 25th May 2018
Recent Changes to FSC Standard 1.2.3: Exemptions

Exemptions to the requirement for mandatory declaration were added to FSC August 2016

- Glucose syrups made from wheat starch
- Fully refined soy oil
- Soy derivatives (tocopherols and phytosterols)
- Distilled alcohol from wheat or whey
Mandatory allergen declaration requirements vary from country to country

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## International Regulatory Chart
May 25, 2017

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<tr>
<td>Lates (Natural Rubber)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** = Voluntary labeling recommended for Abalone, Mackerel, Squid, Salmon, Salmon Roe, Cashew, Walnut, Matsutake Mushroom, Sesame, Soybean, Yam, Apple, Banana, Kiwifruit, Orange, Peach, Beef, Chicken, Gelatin, Pork.
Best Industry Practice in Supply Chain Validations
Why should the food industry manage food allergens?

~ protect allergic consumers

~ food safety necessity

~ consumers depend on food that is labelled correctly

~ legal requirement for declaring food allergens

~ costly to have non-compliance, allergen issues with consumers, recalls, withdrawals, re-labelling
Food

Ingredient

Ingredient

Ingredient

Ingredient

Ingredient

Ingredient

Food

Imported

Long or direct supply chain

Fresh, frozen, shelf stable

Local or Imported
Confidence in supplier information

Obtaining allergen information from ingredient suppliers should be a key component of your Vendor Assurance program

~ always clarify information from supplier – this exchange will assist in gaining confidence in supplier’s allergen knowledge and handling

~ query anything unusual or unexpected - don’t assume everything is correct

~ keep asking questions until you are satisfied with the response - do not accept data gaps
AFGC Product Information Form (PIF) v6.0

~ a tool developed by the food industry in Australia and New Zealand to obtain and share information in a consistent and standardised manner

~ Version 6.0 will be hosted on business – to- business software

~ Versions for samples, flavours, ingredients and retail ready products
Unexpected Allergens in Food

- Questions to ask suppliers
- Available on the Allergen Bureau website

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soy Sauce</td>
<td>Does it contain <strong>wheat</strong> (in addition to <strong>soy</strong>)?</td>
</tr>
<tr>
<td>Spices</td>
<td>Does they contain any bases, carriers, free flowing agents (e.g. maltodextrin, flour, oleoresins, emulsifiers). If yes, what are they derived from e.g. <strong>wheat</strong>, maize, <strong>soy</strong>, <strong>egg</strong>?</td>
</tr>
<tr>
<td>Stabilisers</td>
<td>What are they derived from (e.g. <strong>soy</strong>, <strong>egg</strong>)?</td>
</tr>
</tbody>
</table>
Importing and exporting products and ingredients ~ some considerations

~ different exemptions and limits for ‘gluten free’
~ different allergens for different jurisdictions
~ some jurisdictions allow exemptions (e.g. highly refined ingredients, others don’t)
~ translation challenges
~ lack of understanding of different jurisdiction legislative needs
Allergen challenges in the manufacturing environment

- Raw materials
- Processing aids
- Cross contact allergens
- Product development
- Right label right pack
- Allergen declared on label
- Processing environment
- Processing design
- Processing equipment
- Human error
- Production staff
- Training and communication
- Cleaning
- Scheduling
- Rework
What is allergen management?

The sum of policies, procedures and practices which contribute towards controlling allergens in a company.

Allergen management is applicable to all levels and all areas of a company and sets the approach to the control and management of allergens.
The VITAL® Program
Allergen Bureau - Why

~ May contain ....... Inconsistent use of Allergen Risk Assessment

~ Proliferation of cross contact statements across the industry, survey of 350 products in 2005 revealed 42 creative statements!
  • Made in the same factory/facility.....
  • Made on the same line.....

~ Allergic consumers were ignoring cross contact statements

~ Action levels varied between manufacturers, no consistency

So...

Industry Guidance and Standards were needed
Voluntary Incidental Trace Allergen Labelling

The VITAL® (Voluntary Incidental Trace Allergen Labelling) Program is a standardised allergen risk assessment process for food industry.

Developed by industry for industry and is adopted on a voluntary basis.
The VITAL® Program

The VITAL Program can be used to assist food producers in presenting allergen advice accurately and consistently for allergic consumers using a single simple standardised precautionary statement

The VITAL precautionary statement is:
May be present: [insert cross contact allergens]
Why do allergen risk assessment?

Carrying out a VITAL® risk assessment using the tools provided ensures a food company understands:

- the allergen status of its ingredients
- impact of allergen cross contact from processing
- the allergen status of its finished products

Allergen risk assessment contributes towards due diligence
The VITAL® Program must be part of …

An established allergen management plan

which includes…

a HACCP based food safety program that is adapted for allergen control
The VITAL® Program tools

- VITAL Procedure
- Decision Tree
- Interactive VITAL Action Level Grid
- VITAL Online (calculator)
- VITAL training materials
- Guidance documents & FAQs
Imagine a world without VITAL®

~ proliferation of inconsistent cross contact statements
~ people with allergy confused and taking risks
~ clinicians unable to provide consistent advice
~ industry confusion, no clear consistent guidance

VITAL was developed to respond to industry needs for a uniform approach for determining when to use precautionary labelling
VITAL® Program overall objective

To ensure manufactured food is safe to consume for the vast majority of food allergic consumers by providing consistent food labels that declare the presence of allergens, due to documented, unavoidable and sporadic cross contact thus enabling allergic consumers and their carers to avoid purchasing foods that may present a personal risk.
The VITAL® Procedure

1. Determination of relevant allergens
2. Identification of intentionally added allergens
3. Identification and quantification of cross contact allergens due to ingredients
4. Identification & quantification of cross contact allergens due to processing
5. Calculation of total cross contact allergen in finished product
6. Determination of Action Levels
7. Review of labelling recommendations and sources of cross contact
8. Recording of Assumptions
9. Validation of VITAL assessment
10. Ongoing Monitoring
The key concepts of the VITAL® Program

Overview
- Reference Dose
- Reference Amount or Serving Size
- Action Levels
- Precautionary Labelling
Reference Dose

The total protein from an allergic food below which only the most sensitive individual (between 1 and 5% depending on the quality of the data) in the allergic population are likely to experience an adverse reaction.

Approx. 8900mg protein in a 70g raw whole egg

Greater than 0.03mg of egg protein may trigger an allergic reaction.
What is the science behind VITAL®?

The VITAL Program determines appropriate precautionary labelling based on risk by using Action Levels that are underpinned by scientific evidence.

The science is recognised internationally and is increasingly referenced by experts throughout the world.

A collaboration of international food allergen experts established the science that underpins VITAL.
The VITAL® Scientific Expert Panel (VSEP)

- over 1800 clinical data points were collated
- used statistical modelling to look at the implication for the allergic population
- set Reference Doses based on established principles
- validated using probabilistic modelling for the population
Reference Doses are available from the Allergen Bureau website.

<table>
<thead>
<tr>
<th>Allergen</th>
<th>Reference Dose (mg of total protein)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peanut</td>
<td>0.2</td>
</tr>
<tr>
<td>Milk</td>
<td>0.1</td>
</tr>
<tr>
<td>Egg</td>
<td>0.03</td>
</tr>
<tr>
<td>Tree nuts</td>
<td>0.1</td>
</tr>
<tr>
<td>Soy</td>
<td>1</td>
</tr>
<tr>
<td>Wheat</td>
<td>1</td>
</tr>
<tr>
<td>Mustard</td>
<td>0.05</td>
</tr>
<tr>
<td>Lupin</td>
<td>4</td>
</tr>
<tr>
<td>Sesame</td>
<td>0.2</td>
</tr>
<tr>
<td>Crustacea (shrimp)</td>
<td>10</td>
</tr>
<tr>
<td>Fish</td>
<td>0.1</td>
</tr>
</tbody>
</table>

Reference Doses are available from the Allergen Bureau website, www.allergenbureau.net.
Reference Dose

Only applicable for the allergens within the VITAL® Action Level Grid

- no Reference Dose for mollusc
- no Reference Dose for celery

Not applicable for people who have heightened sensitivity to food allergens

- foods for infants
- food for special medical purposes
Reference Amount

The **maximum** amount of a food eaten in a typical eating occasion (never the less than the serving size)

What is a typical eating occasion?

One cake slice or two?
One mini choc bar or a king size bar?
Two scoops ice cream or more?
Action Levels

Are the concentrations (of protein) which define the labelling outcomes from a cross contact allergen

Action Level transition point* (ppm) =

\[
\frac{\text{Reference Dose} \ (\text{mg}) \times 1000}{\text{Reference Amount} \ (\text{g})}
\]

* With the exception of cereals containing gluten where it is either the result from this formula or 20ppm, whichever is smaller
Action Levels guide labelling recommendations

Action Level 1
a low concentration of allergen protein and a low chance of adverse reaction.
No precautionary statement is required.

Action Level 2
a significant concentration of allergen protein and a significant chance of adverse reaction.
A precautionary statement is required.
Example ~ Calculating Action Levels for product with peanut cross contact

Peanut Reference Dose = 0.2 mg protein

5g Reference Amount or Serving Size:
(Transition = 0.2 x 1000/5 = 40ppm)
Action Level 1: <40ppm
Action Level 2: ≥40ppm

50g Reference Amount or Serving Size:
(Transition = 0.2 x 1000/50 = 4ppm)
Action Level 1: <4ppm
Action Level 2: ≥4 ppm
Example of a VITAL® Online Labelling Outcome Summary

VITAL labelling outcomes will appear like this

<table>
<thead>
<tr>
<th>Substances</th>
<th>Reference dose (mg)</th>
<th>Action level 1</th>
<th>Action level 2</th>
<th>Cross contact amount Particulate</th>
<th>Readily dispersible (ppm)</th>
<th>Labelling outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Celery</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cereals containing gluten (Total)</td>
<td>1</td>
<td>&lt; 12.5 ppm</td>
<td>≥ 12.5 ppm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carrot</td>
<td>1</td>
<td>&lt; 12.5 ppm</td>
<td>≥ 12.5 ppm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oats</td>
<td>1</td>
<td>&lt; 12.5 ppm</td>
<td>≥ 12.5 ppm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rye</td>
<td>1</td>
<td>&lt; 12.5 ppm</td>
<td>≥ 12.5 ppm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spelt</td>
<td>1</td>
<td>&lt; 12.5 ppm</td>
<td>≥ 12.5 ppm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wheat</td>
<td>1</td>
<td>&lt; 12.5 ppm</td>
<td>≥ 12.5 ppm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cressiog</td>
<td>10</td>
<td>&lt; 12.5 ppm</td>
<td>≥ 12.5 ppm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eggs</td>
<td>0.03</td>
<td>&lt; 0.375 ppm</td>
<td>≥ 0.375 ppm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fennel</td>
<td>0.1</td>
<td>&lt; 1.25 ppm</td>
<td>≥ 1.25 ppm</td>
<td>24</td>
<td></td>
<td>Action Level 2</td>
</tr>
<tr>
<td>Lupin</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milk</td>
<td>0.1</td>
<td>&lt; 1.25 ppm</td>
<td>≥ 1.25 ppm</td>
<td>0.9</td>
<td></td>
<td>Action Level 1</td>
</tr>
<tr>
<td>Mustard</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peanut</td>
<td>0.2</td>
<td>&lt; 2.5 ppm</td>
<td>≥ 2.5 ppm</td>
<td>yes</td>
<td></td>
<td>Action Level 2</td>
</tr>
<tr>
<td>Sesame</td>
<td>0.2</td>
<td>&lt; 2.5 ppm</td>
<td>≥ 2.5 ppm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shellfish/Molluscs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soy</td>
<td>1</td>
<td>&lt; 12.5 ppm</td>
<td>≥ 12.5 ppm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulphites</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tree nuts (Total)</td>
<td>0.1</td>
<td>&lt; 1.25 ppm</td>
<td>≥ 1.25 ppm</td>
<td></td>
<td></td>
<td>Intentionally added</td>
</tr>
</tbody>
</table>

Source: VITAL Online
Welcome to VITAL® Online

VITAL Online is an improved and user-friendly, web-based update of the Allergen Bureau VITAL® Calculator. VITAL Online is for the Australian and New Zealand and international food industry.

VITAL Online allows you to:

- assess likely sources of allergen cross contact from raw materials and the processing environment
- evaluate the amount of allergen present
- review the ability to reduce allergenic material from all contributing sources
- use a particular precautionary allergen statement according to the level of allergen cross contact identified

Support for the development of VITAL® Online has been provided by Food Innovation Australia Ltd (FIAL) through the SME Solution Centre program. www.fial.com.au
Welcome Georgina!

Recipe quick links

<table>
<thead>
<tr>
<th>RECIPE NAME</th>
<th>ACTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frozen Mango</td>
<td>VIEW</td>
</tr>
<tr>
<td></td>
<td>EDIT</td>
</tr>
<tr>
<td></td>
<td>COPY</td>
</tr>
<tr>
<td>Recipe code: FROZMANGO</td>
<td></td>
</tr>
<tr>
<td>Apple Pie</td>
<td>VIEW</td>
</tr>
<tr>
<td></td>
<td>EDIT</td>
</tr>
<tr>
<td></td>
<td>COPY</td>
</tr>
<tr>
<td>Recipe code: PAL007</td>
<td></td>
</tr>
<tr>
<td>Flourless Chocolate Cake</td>
<td>VIEW</td>
</tr>
<tr>
<td></td>
<td>EDIT</td>
</tr>
<tr>
<td></td>
<td>COPY</td>
</tr>
<tr>
<td>Recipe code: Cake1</td>
<td></td>
</tr>
</tbody>
</table>

Account details

Organisation: VITAL User Group
Organisation created: 28 Apr 2015, 9:03 a.m.
User accounts: 10 users in this organisation.
Last login: 20 Sep 2017, 10:53 p.m.

VITAL Action Level Grid

Create a VITAL Action Level Grid report. [CREATE]
Create a new recipe

Create recipe

Recipe name*

Recipe code*

Reference Amount*

Reference Amount assumptions*

Legislation*

Step 1: Setup
Step 2: Yield
Step 3: Ingredients
Step 4: Processing
Step 5: Report

Help and Support

To begin creating a recipe, allocate a recipe code and assign the appropriate legislation.
Recipe & Raw Material Allergen Status

Yield 85% (Water loss is 15%)  
Serving size is 80g

<table>
<thead>
<tr>
<th>Reference</th>
<th>Raw Material</th>
<th>Ingoing %</th>
<th>Intentional</th>
<th>Cross Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>RM1</td>
<td>Liquid whole egg</td>
<td>30</td>
<td>Egg</td>
<td></td>
</tr>
<tr>
<td>RM2</td>
<td>Cooking fat</td>
<td>30</td>
<td></td>
<td>Milk (3ppm), fish (80ppm)</td>
</tr>
<tr>
<td>RM3</td>
<td>Sugar</td>
<td>30</td>
<td>None declared</td>
<td></td>
</tr>
<tr>
<td>RM4</td>
<td>Dark compound chocolate</td>
<td>10</td>
<td>Soy</td>
<td>Peanut pieces (particulate)</td>
</tr>
</tbody>
</table>

Processing Cross Contact

- Hang Up is 2kg
- Batch size exposed to Hang Up is 200kg
- Raw Vegan Cake contains whole sesame seeds
- Honey Almond Cake contains almond flour (40% almond in cake, 20.4% protein in almond)
Enter the allergen information for RM4

**Add a new ingredient**

- Name: Dark Compound Chocolate
- Reference code: RM4

**Assumptions**

- Supplier specification: ABCDEF ddmmyy
Enter the percentage of each ingredient
### Table 1: Summary of labelling outcomes

**Reference amount or serving size information**

**Reference amount or serving size:** 80g  
**Assumptions:** 80g represents a typical slice

<table>
<thead>
<tr>
<th>Substances</th>
<th>Reference dose (mg)</th>
<th>Action level 1</th>
<th>Action level 2</th>
<th>Cross contact amount</th>
<th>Labelling outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Particulate</td>
<td>Readily dispersible (ppm)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eggs</td>
<td>0.03</td>
<td>&lt; 0.375 ppm</td>
<td>≥ 0.375 ppm</td>
<td></td>
<td>Intentionally added</td>
</tr>
<tr>
<td>Finfish</td>
<td>0.1</td>
<td>&lt; 1.25 ppm</td>
<td>≥ 1.25 ppm</td>
<td>28.2352941</td>
<td>Action Level 2</td>
</tr>
<tr>
<td>Milk</td>
<td>0.1</td>
<td>&lt; 1.25 ppm</td>
<td>≥ 1.25 ppm</td>
<td>1.0588235</td>
<td>Action Level 1</td>
</tr>
<tr>
<td>Peanut</td>
<td>0.2</td>
<td>&lt; 2.5 ppm</td>
<td>≥ 2.5 ppm</td>
<td>yes</td>
<td>Particulate</td>
</tr>
<tr>
<td>Sesame</td>
<td>0.2</td>
<td>&lt; 2.5 ppm</td>
<td>≥ 2.5 ppm</td>
<td>yes</td>
<td>Particulate</td>
</tr>
<tr>
<td>Soy</td>
<td>1</td>
<td>&lt; 12.5 ppm</td>
<td>≥ 12.5 ppm</td>
<td></td>
<td>Intentionally added</td>
</tr>
<tr>
<td>Tree nuts (Total)</td>
<td>0.1</td>
<td>&lt; 1.25 ppm</td>
<td>≥ 1.25 ppm</td>
<td>960</td>
<td>Action Level 2</td>
</tr>
<tr>
<td>Almonds</td>
<td></td>
<td></td>
<td></td>
<td>960</td>
<td></td>
</tr>
</tbody>
</table>
The Outcome Summary shows the cumulative cross contact allergen levels from the recipe ingredients.

Great tool for assessing impact of individual ingredients within a recipe!
Example of allergen labelling using VITAL®

**Ingredient List**
- Water
- Potato
- Carrots
- Celery
- Brown rice
- Oats
- Peanut oil
- Yeast extract (barley)

**Allergen Summary Statement**
Contains cereals containing gluten, peanut.

**The VITAL Precautionary Statement**
May be present: wheat.
Comparing Reference Amounts

<table>
<thead>
<tr>
<th>Substances</th>
<th>Reference dose (mg)</th>
<th>Action level 1</th>
<th>Action level 2</th>
<th>Cross contact amount</th>
<th>Labelling outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Particulate</td>
<td>Readily dispersible (ppm)</td>
<td></td>
</tr>
<tr>
<td>Flourless Chocolate Cake 80g Reference Amount</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milk</td>
<td>0.1</td>
<td>&lt; 1.25 ppm</td>
<td>≥ 1.25 ppm</td>
<td>1.0588235</td>
<td>Action Level 1</td>
</tr>
<tr>
<td>Flourless Chocolate Cake 160g Reference Amount</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milk</td>
<td>0.1</td>
<td>&lt; 0.625 ppm</td>
<td>≥ 0.625 ppm</td>
<td>1.0588235</td>
<td>Action Level 2</td>
</tr>
</tbody>
</table>
Comparing different Hang Up amounts

<table>
<thead>
<tr>
<th>Substances</th>
<th>Reference dose (mg)</th>
<th>Action level 1</th>
<th>Action level 2</th>
<th>Cross contact amount</th>
<th>Labelling outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Particulate</td>
<td>Readily dispersible (ppm)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&lt; 1.25 ppm</td>
<td>≥ 1.25 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tree nuts (Total)</td>
<td>0.1</td>
<td></td>
<td></td>
<td>960</td>
<td>Action Level 2</td>
</tr>
<tr>
<td>Almonds</td>
<td></td>
<td></td>
<td></td>
<td>960</td>
<td></td>
</tr>
</tbody>
</table>

Hang Up from Honey Almond Cake is 2kg (2000g)

Hang Up from Honey Almond Cake is 3g (3g)
VITAL® Training

~ VITAL Training is available through training providers who are endorsed by the Allergen Bureau

~ to obtain a VITAL training certificate you will need to attend the training course

~ a list of endorsed training providers is available on the Allergen Bureau website
Allergen labelling using the VITAL® Program

~ consistent approach to assessing cross contact allergen risk
~ clear, consistent and accurate allergen declaration
~ assists consumers in making safer food choices
~ encourages the elimination of cross contact allergens where possible within manufacturing or via material supplier
~ standard precautionary statement is used
VITAL® Precautionary Statement

The ‘May be present: XXX’ statement is the only precautionary statement to be used with VITAL.

Only to be used where the VITAL Program has been applied and the allergen has a VITAL labelling outcome at Action Level 2.
VITAL® Best Practice Labelling Guide
(Australia and New Zealand)

~ a VITAL risk assessment using VITAL Online will produce a VITAL labelling outcome

~ this guide provides examples of how to declare food allergens and cross contact allergens using the VITAL labelling outcome

~ available on the Allergen Bureau website
The Allergen Bureau exists to support the food industry by

~ providing a pre-competitive space to share information

~ providing information resources, practical tools and industry contacts for the better management of food allergens

~ helping to save time and money because food allergen issues are addressed in a professional and informed way
Allergen Bureau Management

Allergen Bureau (‘Not for Profit’)

The Board of Directors
~ Kirsten Grinter (Nestlé)
~ Robin Sherlock (DTS)
~ Julie Newlands (Unilever)
~ Karen Robinson (Invited Director)
~ David Henning (Invited Director)

Our support network
~ VITAL® Coordinator /support (Georgina Christensen & Lisa Warren)
~ Technical expertise (Simon Brooke Taylor & Lyn Davies)
~ VITAL® Scientific Expert Panel (VSEP)

Funded Secretariat