Optimise your allergen control through use of colour

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Allergen control - why is it important?

Allergen management is vital in any food business and integration into your sites' overall food safety management system is required for it to work well. The consequences of ignoring this requirement, or of getting it wrong, could range from causing a consumer discomfort to causing their death.

Allergies of all kinds are on the increase. It is estimated that 1 in 50 children in the UK has a nut allergy. Peanut allergy cases have tripled in the last decade, and hospital admissions related to allergic reactions have increased by 33% in the last 5 years. Every year in the UK there are around 10 deaths as a result of food allergies, with the under 25's being at greatest risk.

It is therefore essential that all those involved with the production of food know what allergens are, why they need to be controlled, and how best this is achieved.

Allergen control
Legal & Global Food Safety Standard requirements

There are 14 allergens listed by the EU currently. They are,

- Gluten
- Sesame
- Nuts
- Crustacean
- Eggs
- Fish
- Mustard
- Milk
- Celery
- Peanuts
- Soya
- Shellfish
- Lupins
- Sulphite

If your site produces foods that contain any of these allergens (allergenic foods), and/or foods that don't (non-allergenic foods), you have a legal responsibility to ensure that those that do are labelled properly, and that those that don't are allergen free (or are labelled appropriately).

- General Food Law Regulation (EC) No. 178/2002
  Prohibits unsafe food being placed on the market.
- EU Food Information for Consumers Regulation (EU) No. 1169/2011. Provides information about the 14 allergens listed by the EU.

Voluntary Global food safety standards also require allergen control.

BRC Global Standard - Food safety, Issue 8 (2018) includes:

Section 5.3 Management of Allergens (Fundamental)
The site shall have a system for the management of allergenic materials, which minimises the risk of allergen contamination of products and meets legal requirements for labelling in the country of sale.

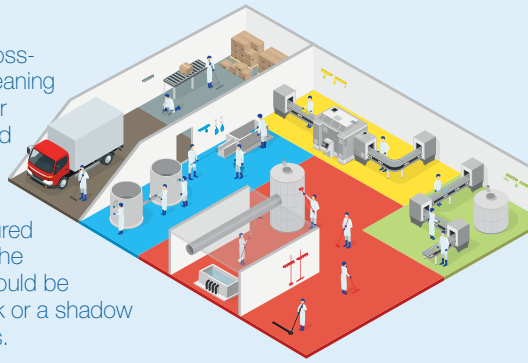
Includes, 5.3.8.
Use of validated cleaning methods and equipment that are identifiable and specified for use with allergenic material, and that are of single use or can be effectively cleaned after use.

Use of equipment that is "Identifiable and specified for use"

Use of colour-coded cleaning equipment and utensils provides a visual check that only equipment colour-coded for use with that allergen is used.

The more unusual colours like Orange, Pink, Purple, and now Lime, are often chosen for use with allergens.

Segregation of allergen production areas by colour provides an easy visual check that only tools and utensils colour-coded for use in that area are used. For example, use of Lime equipment only in the Lime 'allergen' production area shown below.



To minimise the risk of cross-contamination further, cleaning tools and utensils used for allergens should be stored on colour-coded wall racks or shadow boards.

For example, if Lime coloured equipment is used with the allergen sesame, they should be stored on a Lime tool rack or a shadow board with Lime shadows.

Equipment used for each different allergen should be stored on its own separate colour-coordinated rack or board, and no tool used for allergenic food production/cleaning should be stored on the same board as those used for non-allergenic food production/cleaning.

Allergen control – how can it be achieved?

Ideally, on a site that produces foods that contain allergens and foods that don't, production of foods that are allergenic would be done in a physically separated area, using dedicated equipment, facilities and personnel. This would be the best way to minimse the risk of allergen cross-contamination to the non-allergenic products.

However, in reality this situation is very rare and it is more likely that allergenic food production is done on a separate line that is spatially segregated from non-allergenic food production; or on the same line with a deep clean of the equipment between allergenic and non-allergenic food production.

In all cases, the use of colour-coding can help minimse the risk of allergen cross-contamination further. It can also aid compliance with Global food safety standard requirements.

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Use of equipment that can be effectively cleaned after use

Equipment that can be effectively cleaned after use is equipment that incorporates hygienic design. Both the BRC and FSSC 22000 (two of the most widely used GFSI Global food safety Standards) specify the requirement to use cleaning equipment and tools of hygienic design.

BRCv8

4.11.6.
"cleaning equipment should be hygienically designed"

FSSC 22000

ISO/TS 22002-1:2009 Prerequisite programmes on food safety Part 1: Food manufacturing

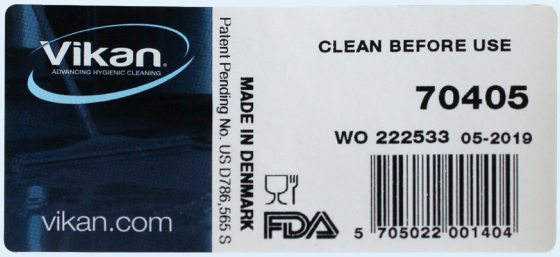
11.2 Cleaning and sanitising agents and tools:
"Tools and equipment shall be of hygienic design…"

Good hygienic design principles have been specified by the European Hygienic Engineering Design Group (EHEDG). They include,

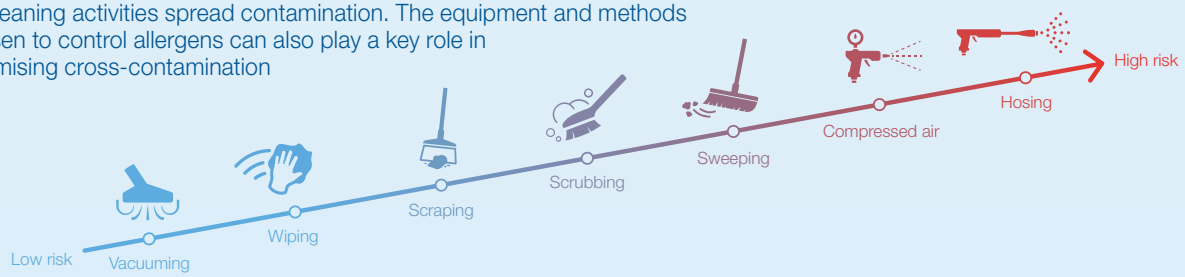
- No sharp internal angles
- All areas accessible for easy cleaning and disinfection
  - avoid deep recesses, nooks and crannie
- Of one-piece construction, or quickly and easily dismantled / re-assembled
- Smooth surface finish
- Made of appropriate materials
  - Food contact compliant

The selection of cleaning tools and utensils of good hygienic design AND their regular inspection, decontamination and replacement are all essential to minimise the risk of allergen cross-contamination.

It is also important to clean equipment to be used in contact with food, prior to first use. Un-wrapped, boxed or even bagged equipment may be contaminated with allergen residues from being handled during production, packing, transport and storage.



All cleaning activities spread contamination. The equipment and methods chosen to control allergens can also play a key role in minimising cross-contamination



- Choose cleaning equipment and methods that maximise allergen removal and minimise its spread
- Don't clean / minimise cleaning during production
- Clean things as far away as possible from open product (spacial segregation)
- Clean in physically segregated areas to protect product from splashes etc. (separate cleaning rooms / screens)
- Allow time for aerosols and particles generated by cleaning activities to settle before cleaning food contact surfaces
- Have dedicated allergen spill kits in the same colour as the allergen cleaning tools and utensils

Top 10 tips for allergen control

1. Understand why it is important
2. Choose equipment of good hygienic design
3. Clean equipment before first use
4. Use colour-coded equipment for allergen use
5. Use colour-coded segregation of areas used for allergenic food production
6. Use methods and equipment that maximise cleaning and minimise spread of contamination
7. Store tools used for allergen cleaning separately and appropriately
8. Regularly inspect, clean and replace your cleaning tools
9. Have dedicated allergen spill kits
10. Train your staff in allergen control

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