

MANAGING FOOD ALLERGENS:

Understanding food hypersensitivity,
allergen cross-contact, labelling
and testing to aid the production
of safe food



eBook

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I

INTRODUCTION

Many individuals have food hypersensitivity, where they experience an adverse reaction to specific foods, ranging from mild irritation to potentially life-threatening anaphylaxis. Of the different types of food hypersensitivity, IgE-mediated food allergies cause the most severe symptoms, which can be fatal. They are widespread, too — food allergies affect 3-10% of adults and 8% of children globally.¹ To ensure that affected consumers are correctly informed, food labelling and allergen information must be accurate, clear and easy to understand.

In many regions of the world, food business operators are legally obligated to accurately label food products regarding the presence of food allergens, and failing to do so can have serious consequences. Infringements may necessitate product recalls and costly label changes, and in the worst cases can lead to prosecution. Inaccuracies in food labelling and information can significantly damage a

company's reputation, erode consumer trust, and weaken business-to-business relationships.

To ensure the safety of food for those with food hypersensitivities, robust food safety management systems must be in place. Reading this eBook will give you an overview of the following topics to help aid your understanding of dealing with foods that cause food hypersensitivity (including food allergy) reactions:

- What food hypersensitivity is
- How to identify sources of allergen cross-contact and manage them
- The importance of food allergen labelling
- The role of food allergen testing
- How working with a partner can help you to manage food allergens

First, let's explore what food hypersensitivity is in more depth.



2

WHAT IS FOOD HYPERSENSITIVITY?

Food hypersensitivity refers to non-toxic, adverse reactions that take place when susceptible individuals consume, otherwise ingest, or come into contact with, certain food.

Food hypersensitivity can be broadly categorised into two groups — non-immune mediated food intolerances and immune-mediated reactions (see Figure 1).

Non-immune mediated food intolerances include enzymatic intolerances (which occur due to the lack of particular enzymes - as with lactose intolerance, for instance), reactions to sulphites (which can exacerbate asthma symptoms), and pharmacological reactions (such as caffeine sensitivity).

Immune-mediated reactions on the other hand involve the immune system and are further classified into two groups:

- **Non-IgE mediated reactions** - such as coeliac disease and non-IgE-mediated food allergies (symptoms are typically delayed for >2 hours after ingestion)

- **IgE-mediated reactions** - food allergies (symptoms usually occur within 2 hours of ingestion)

Food allergy occurs when the immune system mistakenly treats proteins found in food as a threat and releases chemicals intended to mitigate it, but these chemicals cause the symptoms of an allergic reaction. Since food allergens cannot be removed from products once they are present, and generally cannot be destroyed by treatments typically used for killing microorganisms (for example, heating or high pressure processing), effective food allergen management — and accurate labelling and provision of information — is essential for ensuring the safety of food for consumers with food hypersensitivity, processing for example.



Food allergen management and accurate consumer information are essential for ensuring the safety of food for consumers with food hypersensitivity.”



2.1. Classification of reactions to food

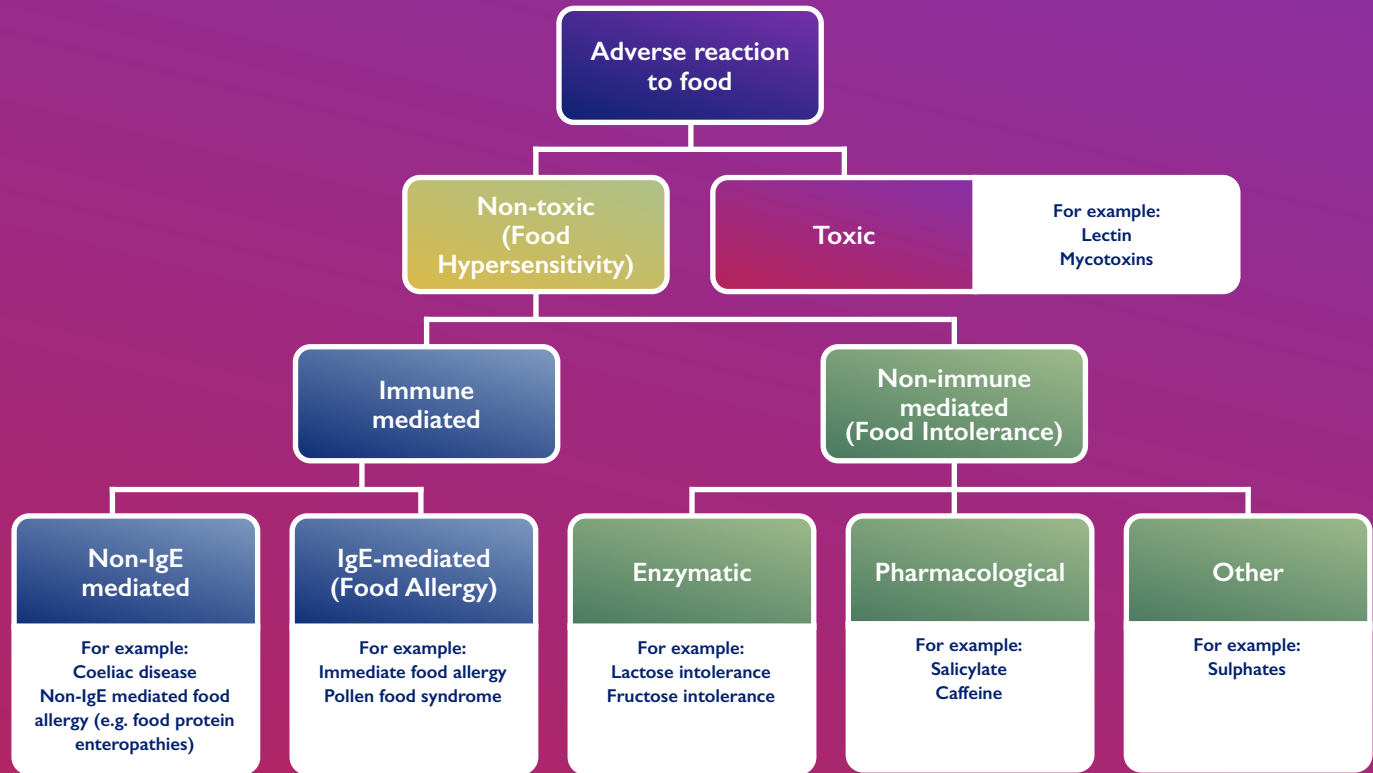


Figure 1: Classification of adverse reactions to food.

Food allergens may already be present in food or can be introduced in multiple ways throughout the food supply chain.

Scenarios where allergens could be present include those:

- Intentionally included as an ingredient, or a constituent of a compound ingredient, food additive or processing aid, which must be stated on the product label
- Unintentionally present due to contamination of a product with a food allergen introduced by cross-contact at some point within the food supply chain
- Unintentionally present due to inaccurate or lacking information passed through the supply chain
- Presence unknown to the consumer due to improper labelling or by a product having the incorrect packaging or label applied to it

Food allergen cross-contact is a serious issue — 70% of food and drink industry professionals that responded to a poll considered it to be the biggest challenge when dealing with food allergens.² What's more, cross-contact or misinformation can occur at any stage of food production.

Therefore, food business operators must assess, manage and communicate the various food allergen risks present throughout the entire process.

3.1. Sources of cross-contact by supply chain step

For the following example of a typical supply chain, just some of the ways that food allergen issues can occur at each step are illustrated in sections 3.1.1 to 3.1.5.

3.1.1. Field and farm

Food allergen cross-contact can occur even at the agricultural stage of food production. Remnants of crops can persist in the field and contaminate other produce grown during crop rotation, for example.

Additionally, animals intended for consumption can also be subject to food allergen cross-contact. For example, cereals located in the crop (a muscular pocket where food is stored after swallowing) of poultry can potentially pose a cross-contact risk.³



AGRICULTURAL CROSS-CONTACT

In many fields, garlic and peanuts are grown on the same land during crop rotation cycles,⁵ risking contamination of garlic with a food allergen. The risk of allergen cross-contact is increased in scenarios where these crops are co-stored and co-transported.

Prevention and investigation of allergen cross-contact, and the application of corrective actions, require a great deal of knowledge and expertise.

In 2021, for example, many products prepared with wheat flour were found to contain mustard.⁶ However, further investigations — including analytical testing — identified that there did not always seem to be reliable results for mustard contamination or in some cases a clear route for cross-contact of the wheat to have occurred.⁷ In the absence of reference methods for the analytical detection of mustard in food, it is hard to rule out the possibility of false positives. Further investigations in this field are ongoing.

To mitigate such risks in the EU, Regulation (EU) No 825/2004, as amended, details good agricultural and hygienic practices for food allergen management.⁴

3.1.2. Fraudulent and malicious contamination of raw materials

Fraudulent activities are a significant threat to any food producer. Adulteration of raw materials may be used in fraudulent attempts to boost profits through lower costs or increased bulk. Many adulterating agents are used, including those that are allergenic, putting allergic consumers at risk.

Recent events have exacerbated this trend; in response to the Covid-19 pandemic, adulteration cases increased by 30% globally in the first half of 2020 compared to the same period in 2019.⁸



Challenging times are when we must be most aware of potential triggers and drivers for risks, such as adulteration and other fraudulent activities, that may affect our supply chains.”

THE CUMIN CONTAMINATION ISSUE

In 2015, there was a significant global issue with the supply of cumin due to contamination with undeclared peanut.⁹ Reports of peanut traces in cumin appeared in various regions across the world, and many products containing cumin were rapidly taken off the shelves.

Around the same time of the contamination, soaring temperatures in Gujarat, India, led to a very poor cumin harvest — crop yields were halved, and prices skyrocketed.¹⁰ One potential route investigated, therefore, was food fraud. Peanut and almond shells are extremely low cost and can be ground up to look like cumin, thereby artificially bulking the product and introducing a food allergen risk to consumers.



3.1.3. Transport

Once a food product leaves the farm, it may be subject to further cross-contact from other goods that are transported alongside it. Shipping containers, for example, are used to transport different cereal grains — both gluten-containing and non-gluten containing — posing a cross-contact risk.

In the EU, hygiene legislation has been amended to implement a consistent, transparent hygiene policy for foodstuffs.¹¹ Transporters must therefore take care to consider what products are being transported and to clean and check at least for the absence of any visible debris after allergenic foodstuffs have been transported, to mitigate the risk of cross-contact.





3.1.4. Processing

Within a manufacturing environment, there are many opportunities for allergen cross-contact to occur. Processing machinery, personnel and equipment can all act as vectors.

The nature and form of the food allergen (for example, whether it is a liquid, powder or particulate) must be considered with respect to the risk of cross-contact.

3.1.5. Rework

Rework — that is, food that is moved from processing to add back at a later stage — can also become contaminated with food allergens. Particular care must be taken not to add the rework to a batch that has a different food allergen profile. Additionally, you must identify all food allergens that are present in the rework, including those intentionally added as part of a recipe, as well as any food allergens that may be present from cross-contact.

A food allergen product and scheduling matrix can be helpful, as it allows you to clearly set out any information that will inform decisions on future use of the rework.

3.2. Food allergen management

To mitigate or eliminate risks of food allergen cross-contact and inaccurate labelling issues, food allergen management systems should be in place. They should form part of good hygiene practices (GHPs) and, where appropriate, HACCP systems.¹²



Food allergen management systems should be part of good hygiene practices and, where appropriate, HACCP systems.”

Some considerations for food allergen management include, but are not limited to, equipment, segregation, cleaning and training.

3.2.1. Equipment

Residual food allergens can remain on equipment, so cleanable and/or dedicated equipment should be used.

Use fit-for-purpose, hygienically designed equipment that does not allow for food allergens to get stuck or accumulate, and facilitates effective cleaning with appropriate agents.

3.2.2. Segregation

Businesses should segregate their processes according to different aspects, including, where feasible:

- **Space** — Place foodstuffs that do not contain allergens on shelves above those that do contain allergens and, if possible, separate their storage and handling areas. If possible, use dedicated equipment and processing machinery.
- **Time** — Where it is not feasible to have designated processing lines for products of differing allergen profiles, pay attention to the sequence of different processing steps, such as the running order of different products and where cleaning falls within this. Optimal order should minimise the risk of food allergen cross-contact to products not containing those food allergens.
- **Personnel** — Where possible, dedicate different personnel to tasks involving foodstuffs that do not contain allergens and those that do.



3.2.3. Cleaning

Ensure that the cleaning chemicals used are compatible with the equipment and do not cause corrosion or other issues that may lead to harbourage of allergen-containing food soil. Cleaning needs to be effective and repeatable, and its effectiveness at removing relevant allergens must be validated and verified¹² (see chapter 5).

3.2.4. Training

Personnel and their protective clothing can unintentionally act as allergen cross-contact vectors within a food processing environment, so it is vital that personnel are well-trained in, and adhere to, best practice processes and procedures. Training should facilitate awareness and competence in how to take active steps to avoid food allergen cross-contact, and should cover other aspects of allergen management (for example, ensuring that correct labels are applied to every product).

KEY TAKEAWAYS:

- Every stage of the food supply chain, from ‘farm to fork’, carries risk of food allergen cross-contact
- Food business operators must employ food allergen management systems to mitigate or remove potential sources of cross-contact and minimise allergen risks
- Control measures must be validated wherever possible, and be verified, monitored and documented



4

THE IMPORTANCE OF FOOD ALLERGEN LABELLING

In many regions of the world, it is a legal requirement for prepacked food products to declare the presence of major food allergens on their labels.

For example, in harmonised EU legislation (the Food Information to Consumers Regulation (EU) No. 1169/2011 — FIC), which has been retained in UK legislation, there are 14 substances or products causing allergies or intolerances that must be labelled on food and drink packages. Such allergens must be labelled if they have been deliberately included as an ingredient or are contained as part of a compound ingredient or processing aid that is deliberately added to a food.

Over 200 foods have been found to cause allergic reactions in different individuals around the world. Of these, high-priority food allergens recommended by a recent review and validation of Codex Alimentarius priority food allergens (2020) are shown in Figure 2.¹³

Figure 2: High-priority food allergens recommended by a recent review and validation of Codex Alimentarius priority food allergens (2020).¹³



^a Wheat and other Triticum species, rye and other Secale species, barley and other Hordeum species, and their hybridized strains.

^b Hazelnut, cashew, walnut, pistachio, pecan, and almond.



4.1. What does compliant labelling look like?

Most product recalls in the UK, among other jurisdictions, are due to issues with food allergen labelling.¹⁴ As the label is primarily where consumers look to find information about the food they are purchasing, such information must be accurate.

Where legislation applies, companies have a legal obligation to get the correct information on the label so that it accurately represents what the pack contains — but this can be extremely challenging due to the complexity of food supply chains and production processes. To aid accurate labelling for the end consumer, all those involved in the food chain must pass the relevant food allergen information on.



Where legislation applies, companies have a legal obligation to get the right information on the label so that it accurately represents what the pack contains.”

Food allergens must be declared in line with relevant legislation, taking into account guidance applicable in the countries of manufacture and sale. In the EU and UK, for instance, sulphur dioxide (SO₂) and sulphites must be declared as allergens if they are present in food ready for consumption, or reconstituted according to the instructions of the manufacturers, at concentrations above 10mg/kg or 10mg/l the total SO₂.

4.2. Precautionary allergen labelling (PAL) Commonly known as “may contain” labelling

PAL — or precautionary allergen information (PAI) for foods that are not prepacked and so do not have labels — is used to warn consumers that food allergens may be present due to cross-contact. Good Manufacturing Practices (GMP) should eliminate or greatly reduce the risk of cross-contact in most cases. However, despite the best efforts of food businesses, sometimes an unavoidable risk of food allergen cross-contact remains that cannot be sufficiently controlled.

Whether there is a specific legal requirement for food business operators to provide PAL depends on the jurisdiction, so it is important to check the legislation of the country in which you intend to sell the product. For markets

where there is no specific legislation in place around PAL, usually an overarching requirement to provide safe food still exists. In these areas, the food business operator must decide whether to provide this information voluntarily, where permitted, to ensure that consumers can make safe food choices.

PAL should not be used merely as a protective statement or as a substitute for good hygiene and safety practices — it should only be applied where there is a genuine risk of food allergen cross-contact. Guidance in the UK, for example, is that PAL is justifiable only where a meaningful risk assessment has been applied to a responsibly managed operation.



PAL should not be used merely as a protective statement or as a substitute for good hygiene and safety practices.”

In some jurisdictions, legislation dictates the permitted wording of PAL statements. Many regions do not have standardised wording, though. In such areas, regulatory bodies are making efforts to harmonise its application to make its usage more helpful for consumers.

Overall, the use of PAL is a complex issue. To standardise the application of PAL, work is being conducted and discussions are taking place about the use of allergen threshold levels to inform allergen risk management for foods. You can follow the latest developments in PAL by reading Campden BRI’s [blog](#) on the topic.¹⁵

4.3. “Free-from” claims

Consumers typically understand “free-from” labelling to mean that a specific substance causing food hypersensitivity reactions is entirely absent from the food. However, for food allergens, the best that can be scientifically demonstrated at present is that samples of the food were shown to be below the analytical limit of detection of a testing method on one or more occasions.

The people who are most likely to consume specifically labelled “free-from” products are those who have a sensitivity to the absent ingredient. Therefore, inaccurately labelled “free-from” foods pose a particularly high risk to consumers with food allergies.



Inaccurately labelled “free-from” foods pose a particularly high risk to consumers with food allergies.”

Importantly, in the EU and UK, no specific legislation details the requirements for making a “free-from” claim, apart from in the case of gluten (Regulation (EU) No. 828/2014). Your business must therefore decide whether to use “free-from” labelling based on several factors:

- A **robust risk assessment**
- **Good food allergen management** practices
- A **rigorous sampling and testing programme** using validated, relevant testing methodologies
- **Traceability** of information throughout the supply chain
- Whether you can make a specific claim based on **how consumers will interpret the message**



KEY TAKEAWAYS:

- Although over 200 foods are known to cause allergic reactions across the world, there is no universal legislation — with requirements varying from region to region
- To help consumers make informed purchasing and consumption decisions, labelling must truly reflect the allergen content of the product to which it relates
- PAL can be used to alert allergic consumers to the potential presence of allergens due to cross-contact
- “Free-from” claims should be carefully considered — validated, verified processes and procedures must be in place to ensure the food meets the claim being made



5

THE ROLE OF FOOD ALLERGEN TESTING

Food business operators have a legal responsibility to validate and verify their procedures and control measures to ensure food safety. This includes the validation, where feasible, and verification of all elements of a business's food allergen management system.

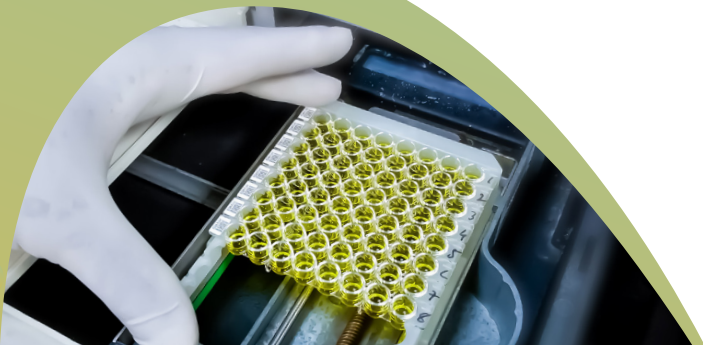
Validation provides evidence that the procedures in place are capable of controlling food allergens, and is a requirement for each allergen management control measure,


where feasible. For example, when cleaning is used between runs of products with and without food allergens present, the cleaning regime should be validated to show it is capable of removing food allergens or reducing them to an acceptable level.

Verification is an ongoing process that ensures the control measure is operating as intended. Verification determines if the measure has been carried out appropriately and effectively and is compliant with the food allergen management system.

Food allergen testing serves several purposes, including:

- Demonstrating that **controls and procedures in place to manage food allergens are working** (such as cleaning validation and verification)
- **Providing evidence** for compliance with claims
- **Assisting in investigations** such as those into potential cross-contact
- **Determining the food allergen status** of raw ingredients





While food allergen testing is an important part of any allergen management system, it is important to understand its limitations. Crucially, no end-product sampling scheme alone can provide full confidence in food safety, as food allergens can exist in altered forms that may not be detectable by the tests used. And, ultimately, not all individual product units can be tested.



No end-product sampling scheme alone can provide full confidence in food safety.”

To be confident in the food allergen status of your food, you must understand the potential risks and maintain control through a structured food safety management system. Therefore, you should consider end-product allergen testing to contribute to safety through validation of your control processes.

Food allergen testing can be used as a tool to provide evidence that control measures are effective. It is crucial,

however, to understand the inherent limitations and strengths of different allergen tests, as well as know vital information about the food product being analysed.

Factors to consider include the processing the food product has undergone, any ingredients that may cross-react with the tests, and the form and type of any potential food allergen contaminants.

5.1. What food allergen tests are available?

When selecting a food allergen test, you need to understand **what** you are testing for, **why** that specific test is being done, and on **what type** of sample. Routine food allergen testing is generally conducted using three types of test — plate Enzyme-Linked Immunosorbent Assay (ELISA), Lateral Flow Device (LFD, i.e. immunological tests in a lateral flow format) and Polymerase Chain Reaction (PCR) tests.

Plate ELISA tests

These commercially available tests are the most commonly used by analytical laboratories; they are relatively simple, give quick results, and are sensitive in that they can detect allergenic foodstuffs in the low mg/kg range. ELISA tests work by using antibodies that recognise and 'bind' the analyte of interest, in this case protein(s) from the allergenic foodstuff.

The resulting measurable signal — often a colour change — can be compared to a standard solution containing a known concentration of the allergenic foodstuff to provide either:

- **Qualitative results** — An indication of whether the allergen or allergenic ingredient is present above a certain level or not
- **Quantitative results** — A measure of the amount of allergen or allergenic material can be obtained by comparison with a standard curve (generated using standard solutions containing known amounts of the allergen or allergenic material)

Lateral Flow Devices

Using the same antibody technique as for the plate ELISA tests described, LFDs or dip-stick tests use a sample extract that flows along a membrane (or porous material), which has reagents affixed to it in a given positions. The 'analyte' (protein or proteins from the allergenic foodstuff) is captured by these reagents and generates a coloured line, thereby providing qualitative results.



PCR tests

PCR tests work by determining whether DNA from an allergenic substance is present in a sample. These tests are highly specific for the analyte of interest and can detect low amounts of the target substance. When using PCR for food allergen testing, it should be remembered that these tests indirectly indicate the presence of allergenic substances — a processed food product could contain little to no DNA yet still contain the allergenic protein, or even vice versa.



5.2. Selecting the right test

With so many different food allergen tests available, it can be daunting to select the most appropriate option. What's more, inherent limitations of the methodology can make it more challenging, for example:

- **Limited test availability:** In some cases, only one type of test may be available — for example, celery detection is limited to PCR tests
- **Complex food matrices:** Highly processed foods are complicated matrices — for accurate results, you must select the right analytical test and incorporate procedures to reduce matrix interference
- **Extraction difficulties:** Certain matrices, such as those containing fats or oils, can be challenging to extract from, potentially affecting quantitative test results

When multiple tests are available for detecting food allergen cross-contact, how can you determine which one should be used? The right choice depends on multiple factors. To ensure you choose the most appropriate test, you should: know your test options; understand what you are testing for; and account for sensitivity.

WORKED EXAMPLE: Selecting the right method for detecting milk cross-contact

Know your test options

Several tests are available for detecting constituents of milk — in the example table below, an ELISA for the detection of casein and an ELISA for the detection of beta-lactoglobulin (BLG) are compared with ion chromatography detection of lactose. While not an allergen itself, lactose could be used as a marker for the presence of milk.



Test method	ELISA	ELISA	Ion chromatography
Test specificity	Casein	Beta-lactoglobulin	Lactose
Test measuring range	2-25 mg/kg casein	2.5-40 mg/kg BLG	20-100 mg/kg lactose
Measuring range in terms of skimmed milk powder (SMP)	10-125 mg/kg SMP	111-1778 mg/kg SMP	40-200 mg/kg SMP

WORKED EXAMPLE: (continued)

Understand what you are testing for

The nature of the milk contaminant should be considered. For example, whey powder has a high BLG content, making the ELISA test for BLG the most suitable choice if whey powder is the contaminant to be analysed for. Skimmed milk powder (SMP), however, contains 20% casein, 2.25% BLG, and 50% lactose. Based on these proportions, it might seem like testing for lactose would be the most appropriate choice. However...

Account for test sensitivity

The sensitivity of the test needs factoring in, too. For example, while SMP contains more lactose than casein, taking the sensitivity of the testing methods into account reveals that casein is actually the most appropriate marker for SMP in this example. Therefore, an ELISA test for casein would be the best choice in this case if SMP is the contaminant to be analysed for.

By understanding the variety of food allergen tests and the inherent limitations of each, businesses can make informed decisions about which tests are most appropriate for their products and processes. But food allergen testing can be highly challenging and requires specialist expertise. To maximise confidence in your food allergen testing regime and interpretation of results, you should consider working with a partner, which we explore in more detail in the next chapter.

KEY TAKEAWAYS:

- Food business operators should have documented and detailed food allergen management policies and procedures specific to their operation
- Food allergen testing serves a variety of purposes in supporting food allergen management systems, including validation and verification of control measures such as cleaning
- Many tests are available for food allergen testing, and you must carefully consider your options to select the most appropriate test(s) for the situation, the product and the question being asked, and be able to interpret the results

6

BENEFIT FROM THE SUPPORT OF A PARTNER

6.1. How can a partner support you to produce safe food in the context of food hypersensitivity?

Delivering safe food to customers and consumers is of paramount importance. To ensure that food is safe for consumers with food hypersensitivities, effective food allergen management systems are key. But, given the complexities involved in managing food allergens, it may be that all the required expertise and capabilities are not available to you in-house. In such cases, partnering with a specialist organisation such as Campden BRI can provide valuable support and resources to help you navigate the challenges of food allergen management.



Partnering with a specialist organisation such as Campden BRI can provide valuable support and resources to help you navigate the challenges of food allergen management.”

6.2. Why choose Campden BRI?

At Campden BRI, we offer a wide range of services, including:

- Support
- Consultancy
- Legislative interpretation
- Research & development
- Testing
- Training

These services can help to bolster your food allergen management, ensuring that your products are safe for consumption by those with food hypersensitivities and compliant with relevant legislation.



6.2.1. Support

At Campden BRI, we offer comprehensive support throughout your food allergen management journey, assisting you in various aspects of the process. We can help you:

- **Gain a thorough understanding** of food allergens and hypersensitivities, stay informed of any potential new risks, and fully understand those already present
- **Examine** your processes to **identify potential contamination or cross-contact issues** at all stages of food production, ensuring that your operations maintain the highest level of safety and quality
- **By providing guidance on food allergen labelling**, including PAL and “free-from” claims, and the relevant legislation, allowing you to accurately and legally inform consumers of the allergen status of your products
- **With food allergen management**, such as risk assessment, practical food allergen control, and factory design and cleaning regimes, to ensure that your facilities and processes are optimised to minimise allergen risks

6.2.2. Consultancy

We have expert teams that can provide tailored consultancy services to enhance your food allergen management strategies by:

- **Sharing our knowledge** on the diverse range of tests available, ensuring that you select the most appropriate testing methods for your needs
- **Providing advice on various food safety management strategies** for your specific processes or products, so you can implement the most effective solutions
- **Guiding you on how to optimise your existing processes and procedures** and ensure they align to best practice, allowing you to holistically manage food allergens and confidently maintain the safety and quality of your products
- **Helping with incident management** so you can investigate, record and resolve any issues that arise during the production of your product(s)



6.2.3. Legislative interpretation


We have comprehensive knowledge and expertise in current global legislation, offering valuable insights to support your business. We can help you to understand, interpret and apply the specific legislation of the country or region in which your product is sold, ensuring you maintain a strong reputation and help to avoid any legal issues.



We can help you to understand, interpret and apply the specific legislation of the country or region in which your product is sold.”

6.2.4. Research and development

We have extensive facilities and capabilities and can therefore undertake tasks that may be challenging or time-consuming to do in-house. Such a collaboration may include the evaluation of new equipment for its suitability to process allergen-containing materials and products with differing allergen profiles, as well as independent assessments of the allergenic profile of your ingredients and products. Working with us can therefore help ensure your business



stays ahead in the industry and maintains high standards of safety and quality.

6.2.5. Testing

Collaborating with a partner that provides testing services can greatly support and enhance your food allergen management systems. We can perform food allergen testing for a variety of purposes, including:

- Cleaning validation
- Legislation and claims
- Investigation of consumer complaints
- Confirming the allergen status of raw ingredients

By partnering with us, you can benefit from a bespoke and flexible service, providing both rapid analysis and expert interpretation of results.

6.2.6. Training

The right partner can offer training to help businesses enhance their understanding of food hypersensitivity, including food allergy. We offer courses in a broad range of areas, covering topics such as:

- Food safety management systems
- HACCP
- Cleaning and hygiene
- Food defence and food fraud (TACCP/VACCP)
- Root cause analysis
- Raw material risk assessment
- Primary production
- Validation and verification
- Food law (including labelling)

We provide tutor-led, specific training courses on key aspects of food allergen management, including:

- Food allergen control (including key principles and strategies of assessing and controlling food allergen risks and how they relate to the development of food safety management systems)

- Food allergen cleaning validation and analysis (including interpretation of results and handling unexpected results)
- Food allergen communication and labelling (including an introduction to quantitative risk assessment for deciding whether to apply precautionary allergen labelling)

All courses can be tailored to the needs of your business and can be held either online or at a suitable venue. We can also provide briefings and updates to technical meetings.



Not all partners offer the same services, and their strengths may lie in different areas, making it important to carefully evaluate a partner's services before you decide who to work with. For those seeking a partner who has established knowledge across the whole spectrum of food allergen management, we can offer you the perfect fit.

Additionally, we:

- Are up-to-date on the latest developments in the area, being highly active in committees related to best practices and standards
- Have produced industry best practice guidance — such as [Guideline 71](#) and [Guideline 59](#) — and published peer-reviewed research in the field
- Are selected to conduct research for government departments – such as the Food Standards Agency commissioned [‘International Review of the Literature and Guidance on Food Allergen Cleaning’](#)
- Have helped write Global Food Safety Initiative (GFSI) commercial standards and associated industry best practice guidance

KEY TAKEAWAYS:

- A good partner can support you in all aspects of your food allergen management systems
- Partners offer a wide range of services, including support, testing and training — but not all partners offer all of these
- Different partners have strengths in different areas, so carefully evaluate potential partners to find the best fit



SUMMARY

Secure food safety with effective food allergen management

The majority of people can safely consume foods that cause adverse reactions in others. But for those with food hypersensitivities, and in particular food allergy, the risks can be life-threatening.

Food business operators must accurately label food products, or provide information, to allow consumers to make informed choices about the food they consume, and to comply with legislation where applicable. But, **accurate labelling can be challenging**, as every step of the food supply chain may unintentionally introduce food allergens.

To ensure you produce safe food you should:

- Carefully consider whether additional labelling, such as PAL (where cross-contact cannot be controlled) and justified “free-from” claims, could help consumers make informed choices
- Investigate all aspects of your operation, including for example, raw materials, equipment and cleaning, to identify any risk of cross-contact
- Validate and verify your cleaning protocols with food allergen testing, where feasible
- Ensure the right labels are applied to the correct products

Food allergen testing also plays a crucial role in aiding compliance with labelling legislation and claims, investigating consumer complaints, and confirming the allergen status of raw ingredients. Businesses must ensure that they use the most appropriate tests for their needs, but this can be challenging to determine.



CHOOSE CAMPDEN BRI

We can help

Managing food allergens can be challenging, but collaborating with an experienced partner can help.

At Campden BRI, we have over 100 years of expertise and are well-equipped to support food and drink businesses in all areas of food allergen management.

Our experience extends beyond food hypersensitivity and encompasses a holistic understanding of global food safety, quality and regulatory requirements.

By working with us, you can make the most of our extensive offerings — whether that be support to your business, consultancy, legislative interpretation, research and development, or testing and training — to boost your level of control and confidence in producing safe food.



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