



FOOD ALLERGEN

WHAT IS FOOD ALLERGY?

A food allergy is a condition that causes your immune system to treat a normally harmless type of food as if it was a dangerous virus, bacteria, or other infectious agent. The immune system response to a food allergy ranges from mild rashes to abdominal pain to a life-threatening complication called anaphylactic shock.

Up to 5% of the population is affected by food allergies. For people at risk, ingestion of the allergenic food, even at very low concentrations, can lead to severe allergic reactions.

Besides, there are many people with food intolerances against lactose and gluten (coeliac disease). People suffering from food allergies or intolerances have to avoid the corresponding allergen and therefore they need correct labelling of food containing potential allergenic threats.

For some people, even the tiniest amount of the allergy-causing food can trigger life-threatening symptoms. Especially foods like peanuts, tree nuts, shellfish, and fish usually cause the most serious allergic reactions.

LABELLING LEGISLATION

To meet the allergen labelling requirements of your destination market(s), you must be aware of the allergenic ingredients as well as the cross-contamination with allergens that may have occurred. Our comprehensive and independent testing and labelling service covers all of these aspects, at every stage of the food supply chain. We use the proven, Polymerase Chain Reaction (PCR) and Enzyme-Linked Immunosorbant Assay (ELISA) testing methodologies to determine the presence of allergens at low levels.

Virtually all of the known food allergens are proteins that can subsist in large quantities and often survive food processing. Although almost any food protein can be allergenic, the European Union's allergen labelling legislation states that the most likely causes of an allergic reaction are:

- Celery
- Gluten in cereals (e.g barley, oats, rye, wheat)
- Eggs
- Fish
- Lupin
- Milk and dairy products
- Molluscs (e.g clams, mussels, oysters, scallops)
- Mustard
- Nuts (e.g almonds, brazil nuts, cashews, hazelnuts, macadamia nuts, peanuts, pecans, pistachios, walnuts)
- Seafood crustaceans (e.g crabs, lobsters, prawns)
- Sesame seeds
- Soy
- Sulphur dioxide and sulphites (at levels above 10mg/ kg or 10mg/ L)



Obligatory thresholds for gluten-free products are in place. Foods containing a maximum of 20 ppm gluten can be declared as gluten-free. 100 ppm is the maximum for very low gluten declaration. The contamination of products by accidental cross-contamination is not covered by the labelling regulation. However, cross contaminations play a major role for the product liability.

Direct detection of the allergen proteins using immunological testing is appropriate in most cases where the protein can be detected by the antibody. However, ultra-traces of allergen may not always be detected by the ELISA. Multi-Allergen screening by real-time PCR is appropriate in cases where multiple allergens might enter into the supply chain adventitiously.



Both Multi-Allergen and Single-Allergen PCR tests are generally advisable where no immunological test is available that exhibits the required sensitivity (as with soya), or with highly processed or heat-treated food.



COMPETENCE IN ALLERGEN DETECTION

- Wide scope of detection methods for all relevant food allergens (ELISA, PCR, LC-MS/MS)
- State of the art methods are used to supply precise and accurate analytical data at high quality
- Close cooperation with certification bodies, method suppliers and international project partners
- Highly experienced and motivated staff provides excellent customer services and assists in quality management



As always, **Eureka** is here to support you not only with our **sampling, testing and inspection services**, but also with **expert advice on related topics**.

Please email us for all your upcoming requirements on testing as per above values.