

AllerGene[®], the comprehensive testing program for food allergens

The number of consumers concerned about food allergies is increasing. Eurofins is the only laboratory, which is able to analyse all relevant food allergens of the EU hit list

Recent studies estimate the prevalence of food allergies at 3.5 to 5% of the population in industrialised countries. For people at risk, ingestion of the allergenic food, even at very low concentrations, can lead to severe allergic reactions – sometimes with fatal consequences. In addition further food intolerances against lactose and gluten (celiac disease) have to be considered.

People suffering from food allergies or intolerances have to avoid the corresponding allergen and therefore need proper labelling of food containing potential allergenic threats.

Labelling legislation

The EU-directive 2003/89/EG on ingredient labelling requires that all substances on an allergen hit list in attachment IIIa have to be labelled as ingredients, if they are present as ingredients in the product.

The EU allergen hit list includes all products, which contain or are derived from cereals with gliadin/gluten, crustaceae, eggs, fish, peanuts, soy beans, milk and



dairy products (including lactose), tree nuts (e.g. hazelnut, almonds, Brazil nut, cashew nut, pistachio, walnut, pecan nut, macadamia and Queensland nut), sesame seeds, celery, mustard and the pseudo allergen sulphite.

Additionally attention has also to be drawn to the risks linked to accidental cross-contamination. Labelling of allergens as “may contain” is frequently used within the EU.

What is AllerGene[®]?

AllerGene[®] is a full combination testing program for all allergens/intolerances on the EU allergen hit list.

It consists of chemical, enzymatic, molecularbiological and immunological tests for proteins, DNA, lactose and sulphite.

We also provide advice to select the proper testing combination depending on your individual needs.

As additional services we provide swab tests, training, consulting, risk assessment and auditing to improve and evaluate quality management systems regarding GMO- and allergen-issues, e.g. under the International Food Standard (IFS).

The AllerGene[®] testing catalogue The right combination for each application

Allergen/incompatibility	Method	Specificity	Limit of Detection
Gluten	ELISA	Gluten (Gliadin)	<3 ppm
Grain with gluten: wheat,	PCR	Grain specific DNA	< 20 DNA copies*
Crustaceae	ELISA	Tropomyosin	< 0,05 ppm
Egg	ELISA	Ovalbumin, ovomucoid	<2 ppm egg white
Chicken meat	PCR	Chicken specific DNA	<20 DNA copies*
Fish	PCR	Fish specific DNA	<20 DNA copies*
Peanut	ELISA	Conarahin A	<1 ppm
	PCR	Peanut specific DNA	<20 DNA copies*
Soya	ELISA	Total soya protein	<0,5% soya protein
	ELISA	Trypsin inhibitor	<1 ppm soya protein
	ELISA	Soya protein in lecithin	<1 ppm soya protein
	PCR	Soya specific DNA	<20 DNA copies*
Milk and cheese	ELISA	Casein	<2 ppm
Whey	ELISA	β-Lactoglobulin	<2,5 ppm
Cattle meat	PCR	Bovine specific DNA	<20 DNA copies*
Lactose	enzymatic	Lactose	Dep. On matrix <10 ppm
Almond	ELISA	Almond proteins	<2,5 ppm
	PCR	Almond specific DNA	<20 DNA copies*
Hazelnut	ELISA	Corylin 18 kD	<2,5 ppm
	PCR	Hazelnut specific DNA	<20 DNA copies*
Walnut and pecanut	PCR	Nut specific DNA	<20 DNA copies*
Cashew nut	PCR	Nut specific DNA	<20 DNA copies*
Pistacia	PCR	Nut specific DNA	<20 DNA copies*
Macadamia	PCR	Nut specific DNA	<20 DNA copies*
Celery	PCR	Celery specific DNA	<20 DNA copies*
Mustard	PCR	Brassica specific DNA	<20 DNA copies*
Sesame	ELISA	Sesame proteins	<6 ppm
	PCR	Sesame specific DNA	<20 DNA copies*
Sulphite	By wet chemistry acc. Reith-Williams		<5 ppm
Sulphite in garlic products	By wet chemistry acc. Zonneveld		<5 ppm

* The detection limit of the PCR method depends on the matrix. In matrices rich in DNA (e.g. wheat flour) the detection limit can be as low as 10ppm.

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