

FACT SHEET

RSSL allergen services

Protein allergen testing by ELISA

For the analysis of raw materials, finished products, environmental swabs and rinse waters.

RSSL have ELISA tests for Almond, beta-Lactoglobulin (BLG), Buckwheat, Casein, Egg, Gluten, Hazelnut, Peanut, Sesame and Soya. The standard turnaround times available are 2, 5 and 10 working days.

N.B If samples are received before 9.30am this is considered to be the first working day for 2 and 5 day turnarounds.

Please note the following:

- All methods used are fully validated for a wide range of sample matrices, including cooked and raw food products, ingredients and environmental swabs for process monitoring.
- If a sample type has not been tested before, additional spike recovery analysis may be required and this would incur an additional charge. Each sample that is spiked is charged at the subsequent sample price. It would be preferable to provide a sample that does not contain the analyte to use as the control to spike.
- The tests are designed for the detection of trace amounts of allergens within standard ranges. These ranges can be extended by extending the standard range of the analysis, however this will increase the uncertainty of the analysis. Each standard range extension is charged at the subsequent sample price. The number of extensions you will require will depend on the quantifiable range that you require to cover. Please contact the team if you require advice.

DNA allergen testing by PCR

For the analysis of raw materials, finished products, environmental swabs and rinse waters.

RSSL have PCR tests for Almond*, Brazil, Cashew, Hazelnut, Macadamia, Peanut, Pecan, Pistachio, Walnut (these first 9 can be grouped together for a nine-nut screen or run individually), Celery, Mustard, Lupin, Kiwi, Pine nut, Chestnut, Fish*, Crustacean* and Mollusc.

The standard turnaround time for DNA methods is ten working days. If results are required in <10 days the cost will be increased. If a shorter turnaround time is required, the lab must be contacted in advance to discuss achievable turnarounds.

If known cross reactivity, additional tests conducted at subsequent sample price.

- *The fish test cross-reacts with some molluscs and some crustaceans
- *The crustacean test cross-reacts with some molluscs and some insects
- *The almond test cross-reacts with some other prunus species
- *The walnut test cross-reacts with pecan

Allergen testing for sulphites (SO₂)

For the analysis of raw materials, finished products and environmental rinse waters.

The standard turnaround for SO₂ analysis is ten working days. This analysis is carried out using distillation (Monier Williams) and titration techniques. If you require results in <10 days the cost will be increased. If a shorter turnaround time is required, the lab must be contacted in advance to discuss achievable turnarounds.

Testing for Lactose

For the analysis of raw materials, finished products, swabs and environmental rinse waters.

The standard turnaround for lactose analysis is ten working days. This analysis is performed using Ion-Chromatography. If the laboratory has not analysed the matrix before, they will require ingredient list to be shared prior to submitting samples in order for them to identify any potential interferences and to assess if additional feasibility will be required. If you require results in <10 days the cost will be increased. If a shorter turnaround time is required, the lab must be contacted in advance to discuss achievable turnarounds.

Emergency analysis

Members of our Emergency Response Service (ERS) are able to access allergen analysis on a priority basis to assist with their product crisis situations. Quotes for analysis under our Emergency Response Service will be provided on request.

Consultancy and training services

Effective allergen management requires robust manufacturing controls within all aspects of the production process, including the supply chain. These controls should be implemented based on the outcome of a thorough risk assessment, and they must then be validated to demonstrate their effectiveness.

Our experts can support you in a number of ways to ensure you are managing allergens effectively. This includes:

- Developing allergen management policies
- Allergen risk analysis (including risk assessment and risk management)
- Cleaning validation studies
- Site assessments/gap analysis

Projects are designed to meet your needs including the relevant aspects you require. They are priced on a case-by-case basis.

We also offer allergen management workshops as well as tailored allergen training courses, which can be run at your facility or online.

Our allergen management workshops are designed to be practical, with elements of interactive learning, guidance on how to perform allergen risk analysis and time dedicated to practicing how to carry out an effective allergen risk assessment. Delegates will acquire the necessary skills, tools and confidence to manage allergens effectively. When run at your facility, these sessions are tailored for your site, your processes and your products.

If you require additional information or advice on our vegan and vegetarian services, please contact customer services on +44 (0)118 918 4000 or email enquiries@rssl.com.

Analysis reporting limits				
ELISA testing (quantitative)				
Analyte	ELISA kit	Standard range* for raw materials, finished products & rinse waters (mg/kg)	Standard range* for swabs (ug/swab)	Reporting units
Almond	Neogen Veratox	2.5 – 25	0.10 – 1.0	Whole almond
	ELISA Systems**	0.50 – 2.5	0.050 – 0.25	Soluble almond protein
β-Lactoglobulin	Morinaga II	0.063 – 2.0	0.0032 – 0.10	β-Lactoglobulin
	R-Biopharm**	5.0 – 405	0.010 – 0.81	β-Lactoglobulin
Buckwheat	ELISA Systems***	2.5 – 25	Not available	Buckwheat protein
Casein	Morinaga I	2.5 – 20	0.063 – 0.50	Milk protein
	Neogen Veratox**	2.5 – 15	0.10 – 0.60	Non-fat dried milk
Egg	Morinaga I	0.63 – 20	0.031 – 1.0	Egg protein
	Neogen Biokits**	1.0 – 10	0.010 – 0.10	Egg white protein
Gluten	R-Biopharm	5.0 – 80	0.010 – 0.16	Gluten
Hazelnut Protein	ELISA Systems	1.0 – 5.0	0.10 – 0.50	Hazelnut protein
Peanut Protein	ELISA Systems	0.25 – 2.5	0.025 – 0.25	Soluble peanut protein
Sesame	R-Biopharm	2.5 – 20	0.13 – 1.0	Sesame seed
Soya Protein	ELISA Systems	2.5 - 25	0.25 – 2.5	Soya protein
DNA testing (qualitative)				
Analyte (Latin name of target gene)		Reporting limit (mg/kg)		
Almond (<i>Prunus dulcis</i>)		10		
Brazil (<i>Bertholletia excelsa</i>)		1		
Cashew (<i>Anacardium occidentale</i>)		100		
Celery/celeriac (<i>Apium graveolens</i>)		1000		
Chestnut (<i>Castanea sativa</i>)		100		
Crustaceans		50		
Fish		10		
Hazelnut (<i>Corylus avellana</i>)		1		
Kiwi (<i>Actinidia chinensis</i>)		10		
Lupin (<i>Lupinus luteus</i>)		100		
Macadamia (<i>Macadamia integrifolia</i>)		10		
Molluscs		50		
Mustard (<i>Brassica nigra</i>)		10		
Peanut (<i>Arachis hypogea</i>)		1		
Pecan (<i>Carya illinoensis</i>)		10		
Pine nut (<i>Pinus pinea</i>)		100		
Pistachio (<i>Pistacia vera</i>)		100		
Walnut (<i>Juglans regia</i>)		10		

Ion-Chromatography	
Analyte	Reporting limit (mg/kg)
Lactose	<70
Distillation	
Analyte	Reporting limit (Dependent on sample matrix) (mg/kg)
Sulphite (SO ₂)	<5

* Results falling outside of the standard range will be reported on a 'less-than' (< concentration of bottom standard) or 'greater-than' (> concentration of top standard) basis.

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