

Analytical Service

Romer Labs UK

Testing services for:

Food allergens
Genetically modified organisms (GMO)
Meat speciation



At the forefront of diagnostic technology for the food and feed industries, Romer Labs operates an accredited, full-service laboratory in Runcorn, Cheshire. We guarantee quality services by complying with ISO standards.

Romer Labs UK provides a wide portfolio for analyses in the field of **food allergens, genetically modified organisms (GMO) and meat species authenticity.**



4634



Food Allergens

Food allergies, immune responses to proteins present in food that the body mistakenly believes are harmful, are a significant health issue. Allergens are the largest single cause of global product recalls, with the major risk for food manufacturers being the potential for cross-contamination with food allergens during production processes.



ELISA Allergen	LOQ		UKAS Accredited
	Samples	Swabs (ng/ml)	
Almond	0.4 – 10 ppm	20 – 500	Yes
β-Lactoglobulin (BLG)	10 – 400 ppb	0.5 – 20	Yes
Casein	0.2 – 6 ppm	10 – 300	Yes
Cashew	2 – 60 ppm	100 – 3000	No
Crustacean	20 – 400 ppb	1 – 20	Yes
Egg White Protein	0.4 – 10 ppm	20 – 500	Yes
Fish	4 – 100 ppm	200 – 5000	Yes
Gluten (AgraQuant method)	4 – 120 ppm	8 – 240	No
Gluten (G12 method)	4 – 200 ppm	10 – 500	No
Gluten (R5 method)	5 – 80 ppm	10 – 160	Yes
Hazelnut	1 – 40 ppm	50 – 2000	Yes
Lupin	2 – 30 ppm	100 – 1500	No
Macadamia nut	1 – 25 ppm	50 – 1250	No
Milk	0.4 – 10 ppm	20 – 500	Yes
Mollusk	10 – 400 ppb	0.5 – 20	Yes
Mustard	2 – 60 ppm	100 – 3000	Yes
Peanut	1 – 40 ppm	50 – 2000	Yes
Pistachio	1 – 40 ppm	50 – 2000	No
Sesame	2 – 30 ppm	100 – 1500	Yes
Soy	40 – 1000 ppb	2 – 50	Yes
Walnut	2 – 60 ppm	100 – 3000	Yes

Qualitative PCR	LOD	UKAS Accredited
Celery	10 ppm	Yes
Pecan	10 ppm	No





Genetically Modified Organisms (GMO)

Plants of vital importance to agriculture are often genetically modified by the insertion of foreign DNA material into their DNA sequence, resulting in the expression of novel traits, typically herbicide tolerance or insect resistance.



Analysis: GMO (PCR) - Qualitative

GMO Varieties ¹	UKAS Accredited
Roundup Ready Soya	Yes
Bt-176 Maize	Yes
Bt-11 Maize	No
MON810 Maize	Yes
35S Promoter	Yes
NOS-Terminator	Yes
BAR	Yes

¹ LOD of all GM varieties 0.1%

GMO Screen	UKAS Accredited
GMO Screen ² (35S, NOS)	Yes
GMO Maize Screen ² (35S, NOS, BAR)	Yes

² Limit of Detection 0.1% for GM elements

Meat Speciation

The meat species authenticity gains more and more attention in an increasingly globalized and industrialized food production sector.



Animal Species	UKAS Accredited
Cow	Yes
Sheep	Yes
Pig	Yes
Chicken	Yes
Turkey	No

Animal Species	UKAS Accredited
Horse	Yes
Rabbit	No
Goat	No
Fish species (please enquire)	No

Samples and Turnaround Time

Analysis	Recommended Sampling Amount *	Turnaround
Allergens	50 – 100 g	For ELISA: 10, 3, 2 days and same day PCR: 10, 3 and 2 days
GMO	50 – 100 g 1 kg (whole grains)	Samples should be sent to arrive before 10:30 am to be booked in that day (late arrivals are booked in the following working day)

* The sampling procedure is crucial to obtaining representative results.

Analytical Methods

Enzyme Linked Immuno Sorbent Assay (ELISA)

ELISA is an immunological detection method by which specific antibodies bind to proteins and small molecules; this technique allows for the simultaneous measurement of multiple samples.

Polymerase Chain Reaction (PCR)

PCR analysis is a highly specific DNA-based test method, which allows for the detection of specific sequences of genes. A very small amount of DNA is copied multiple times by the polymerase and can thus be detected. Gel Electrophoresis is used to detect targeted DNA molecule.

Romer Labs UK partners with other ISO 17025 accredited laboratories, and can subcontract samples for additional testing such as Lactose and Sulphites. (Please enquire)