

Evidence Proforma
Food Authenticity Centres of Expertise

Reading Scientific Services Limited (RSSL)

What is your organisations particular area(s) of expertise in food authenticity testing?

Our current areas of expertise include species identification of meats, dairy and fish; expertise in oils and fats authenticity; expertise in botanical identification by microscopy; and have the capability to carry out spectroscopic true-to-type analysis. Other areas include coffee, GMO, free-from authenticity and marker compound identification for other food materials.

Please highlight your organisations key skills and capabilities in this area and provide a justification as to why you feel it should be regarded as a Centre of Expertise? In particular you should focus on highlighting your key analytical skills and capabilities and any accreditation and how you ensure fitness for purpose testing. (250 words max)

RSSL has been providing services for product authenticity for over 25 years. We have expertise in genomics, chromatography, mass spectrometry, spectroscopy and other physical methods, microscopy, immunoassay, proteomics, chemical analysis and trace element analysis. We have an ongoing method development program and investment in state of the art equipment, ensuring we anticipate and respond to industry issues.

Species Identification – RSSL have provided a service in meat (>20 species) and fish speciation (>50 species) for >10 years to a wide range of customers on a variety of matrices. Through the horsemeat contamination in the food chain, RSSL provided both extensive support on sampling, analysis and the translating of the complex issues of result interpretation to both their customers, industry bodies and regulatory authorities. RSSL are currently applying for a UKAS flexible scope of accreditation for their nuclear quantitative meat speciation service.

Oils and Fats – RSSL experts have been offering authenticity services in this field for more than 20 years. Our FOSFA (Federation of oils, seeds and fats association) Full Member Analyst laboratory uses a range of techniques covering both classical wet chemistry and chromatography to verify oil type and highlight both substitution and dilution with inferior / cheaper oils.

Other specialities – RSSL has a broad range of state of the art techniques which are combined with experienced analysts who work on a range of authenticity projects. This could range from for example the identification of herbs to confirming a food ingredient such as an emulsifier conforms to its specification.

Briefly highlight your experience in method validation, data interpretation and evaluation and the reporting of analytical results? (150 words max)

RSSL operates to ISO 17025 standard throughout its business; our accredited methods are validated, staff trained and equipment maintained to meet that standard. Non-accredited methods undergo rigorous validation or verification depending on the application. Before a method is offered commercially, or transferred to a client, fitness for purpose has to be demonstrated and documented. Our quality team undertake a comprehensive system of laboratory audits and we are audited by our customers. If proficiency testing is available for a method we participate to demonstrate the procedure is in control and analysts are competent. Where appropriate, methods will have control charts and certified reference materials are analysed.

We are recognised for interpreting results in the wider context of an issue, for our guidance as to the implications of the results and our team provide consultancy support to the industry. In order to achieve this, we invest time in training the team to understand the consequences of the analysis for our customers.

Please provide brief details where possible, of your experience in dealing with complex technical authenticity challenges and evidence of your ability to provide solutions. (150 words max)

Our business is based on the ability to help our customers with complex technical challenges.

Horsemeat contamination involved experience in sampling strategies, preparation and translating of quantitative DNA results into % meat content. We provided expertise in this area by utilizing both our experience in analysis and food production.

Adulteration of spices with nuts required extensive on-going validation and critical appraisal of results to ascertain accuracy.

The area of oil authenticity is complex and is governed by (EEC) 2568/91 for some oils.

These can have very similar fatty acid profiles and therefore more complex techniques looking at minor components, such as phytosterols are required. In some cases a result from one test might indicate that an oil has been adulterated, but actually this may not be the case as the oil may have aged, and it is only by taking into account all the suite of analyses and using expertise to give the correct interpretation.

Are you willing to provide advice on your areas of expertise and assist others through partnership working and sharing of information? Outline briefly your experience in collaborative working and how you could contribute to enhancing the UKs standing in the field of authenticity testing. (150 words max)

Yes we are. We have a track record in participating industry body working groups both in the UK, Europe and internationally. We collaborate in a number of working groups including BSI, ISO, CEN and SCI in oils and fats. We are members of the DEFRA Authenticity

Steering Group, FDF Scientific working groups and ILSI Allergen Taskforce. In these groups we are leading the establishment of reference methods. Where invited and available, we have contributed to a range of collaborative trials. We have provided sampling and analysis guides for industry, working with the FDF, without charge, in areas of complex authenticity issues. We are lead organisers for conferences eg. 'Compositional Analysis of Lipids', Ghent, Belgium in 2013 and our experts are invited to present at numerous global conferences. We provide a number of roadshows, webinars and workshops to share best practice with the industry.

Please prove a brief statement of your capabilities to be included on the virtual food authenticity network portal (50 words max)

RSSL provide unrivalled expertise in analysis, product development and training to the global food industry to assist in developing safe world-leading products. Our authenticity services include: meat & fish speciation, oil & fat authenticity as well as botanical and marker compound identification for other food materials.