

Evidence Proforma  
Food Authenticity Centres of Expertise

**Premier Foods trading as Premier Analytical Services (PAS)**

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

1. Meat authenticity verification - By DNA analysis
  - a) Speciation of meats used for adulteration
  - b) Adulteration of meat based ingredients and meat products with undeclared or cheaper meats
  - c) Detection of meat as a vegetarian food contaminant
2. Meat authenticity verification - By immunological methods
  - Adulteration of meat with non meat proteins
3. Genetically Modified Organisms detection and quantification by DNA analysis
4. Pasta authenticity verification by DNA analysis
  - Presence and quantification of non durum wheat
5. Cereals authenticity by DNA analysis
6. Spices authenticity by microscopy
7. Detection of illegal colour dyes
8. Melamine testing

**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)**

Premier Analytical Services (PAS) has many years experience in both classical analytical chemistry and in modern molecular methods including quantitative PCR design and analysis. In the past 20 years we have been the lead laboratory on a large number of FSA and Defra projects and have participated in a many consortia involving PCR, authenticity and quantitative measurement of GMOs. PAS was the first UK laboratory to attain UKAS accreditation for quantitative GMO analysis by Real-Time PCR. PAS is the analytical arm of the Premier Foods Group (formally RHM) and as such has a wealth of experience in dealing with the issues associated with cereals and in particular pasta where we have a specialist knowledge of pasta and the authenticity issues involved. Dr Gordon Wiseman is a Churchill Fellow, having been awarded his Fellowship in 1997 following his study of the effects of geographical origin and grain morphology on durum wheat authenticity. As a

laboratory we have over 400 methods accredited to ISO 17025 by UKAS. We endeavour to utilise the most modern and effective approach to the investigation of authenticity issues including the use of digital PCR and other modern molecular techniques.

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

All methods used by Premier Analytical Services are fully validated and over 100 are UKAS accredited to ISO 17025 standard.  
Method validation includes: Specificity/Selectivity of the Method; Precision; Repeatability; Measurement Uncertainty; Accuracy; Linearity and Range; Sensitivity; Stability; Ruggedness and Suitability.  
In addition we take part in External Quality Assurance (Proficient Testing) for as many analytes as possible.  
We sit on the FAPAS and GeMMA Steering Groups.  
Premier Analytical Services can provide a full explanation and interpretation of all analytical results.

**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)**

Premier Analytical Services was the first UK laboratory to offer a UKAS accredited (to ISO 17025) quantitative GMO testing service in the UK utilising analysis based on real-time PCR. More than 20 years of experience in molecular diagnostic techniques has meant that our scientists have been at the forefront of the detection and quantification of GMOs, providing expert advice to UK and European governments. Premier Analytical Services now offer a range of diagnostic PCR tests to detect the adulteration of various food ingredients with undeclared or cheaper materials. We can offer a 'universal' meat detection assay for vegetarian foods, meat is readily detected above a level of 0.05% even in the presence of milk and cheese. We can also assist clients in designing and implementing DNA testing programmes and in providing interpretation of results to enable solutions.

**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)**

Premier Analytical Services is willing to provide advice on our areas of expertise and assist others through partnership working and sharing of information.

- We are involved in authenticity projects throughout Europe and can advise

on emerging and existing authenticity issues

- We are active participants of trade association authenticity working parties
- We are members of the Defra Authenticity Methods Working Group and its Technical sub committee.

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

Premier Analytical Services has many authenticity methods including:

- Meat authenticity using DNA
- Detection of meat as a vegetarian food contaminant
- Meat authenticity -ELISA
- GMO detection and quantification
- Pasta authenticity –DNA analysis
- Spices authenticity
- Detection of illegal colour dyes
- Melamine testing