



## Settling food safety disputes with scientific expertise

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A Leatherhead Food  
Research white paper

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# Settling food safety disputes with scientific expertise

The validity of experts has been called into question recently in the public sphere. In this white paper, Dr Peter Wareing discusses the independence and scientific rigour which expert witnesses need to deploy in unearthing the evidence to settle food safety disputes.

The food & beverage industry has a legal obligation to provide food that complies with the requirements of the relevant food law and ensure that it is safe and fit for human consumption. Sometimes things might go awry from a food safety, traceability or labelling perspective, leading to product withdrawals, recalls, food poisoning and potential legal action, all of which could call upon the requirements for an expert witness. The expert witness could be retained to review the evidence, prepare a joint statement outlining the points on which the various experts agree and disagree, or undertake laboratory studies to validate hypotheses. This white paper highlights three food-safety related case studies where scientific evidence and multidisciplinary expertise have played a key role during legal proceedings.

## **Responsibility of the expert witness**

A food safety expert witness assists the court in reaching its verdict by helping it to understand, through technical analysis and opinion, the reason(s) for the issue being presented. The evidence that the expert witness presents is often factually based, and any opinion should be stated as such.

In the course of their investigations, an expert witness could discover food safety evidence relevant to the issue under dispute associated with 'their side'. Even though this may not be helpful to the client's case, the responsibility of the expert witness is to the court and it is their duty, as a food safety professional, to report this. It is then down to the legal team to use the evidence as they see fit.

## **Technical analysis**

The expert witness should look at the way the evidence was gathered and critically appraise its veracity. Case studies 1 and 2 highlight the importance of the expert witness' scientific expertise in relation to the taking of samples to be used as evidence. If staff involved in the collection of evidence are not used to taking samples, they may not store and analyse them in a way that maintains their microbiological integrity. For example, in order for aseptic practices and sample traceability to be maintained, samples must be stored at the right temperature and analysed as quickly as possible using the correct methods. If these factors are not taken into account, there could be issues with cross contamination of samples, growth or death of microorganisms or a failure to isolate the causative organism,

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all of which could lead to charges being rejected.

The ability to integrate laboratory studies can be invaluable in validating hypotheses, providing scientific evidence to prove the theory. Case study 3 highlights how the 'challenge testing' of simulated fresh products can show how the growth of microorganisms can occur.

#### **Case study 1 – correct conclusions from the evidence**

In a case of suspected food poisoning at a hotel, the prosecution used evidence to serve ancillary charges of poor hygienic practices. On reviewing the evidence, it was found that the food sampled was from a meal frozen by the chef at the same time the suspect meal had been prepared; the meals that had purportedly caused the food poisoning were not available for sampling. The chef had not placed the food in sterile bags, nor used sterile utensils, both of which could lead to cross-contamination. In addition, the wrong indicator bacteria had been chosen to highlight purportedly poor kitchen hygiene practices. The ancillary charges were rejected after submission of the counterclaims.

However, the victim's food poisoning symptoms and timescale were such that the victims must have contracted food poisoning from the hotel restaurant. The evidence submitted from the defence side did not, and was not intended to rebut the causation from the prosecution, but it did serve to rebut several of the ancillary charges.

#### **Case study 2 – evaluating the evidence**

A restaurant purportedly caused food poisoning from a meal, resulting in the hospitalisation of several of the diners, with many others being nursed in their homes. Leatherhead Food Research was called upon by the defence team to review the evidence.

It was clear that the restaurant had caused the food poisoning, because the infection reports of the symptoms, timelines and meals consumed, fitted the timelines and symptoms for the pathogen. The defendants pleaded guilty to these charges.

The prosecution tried to increase the scale of the offences using evidence taken by swabs from kitchen surfaces and equipment after vegetable preparation activities had taken place, to show purportedly high levels of contamination. Upon examination of the evidence, Leatherhead found that the swabs were analysed 36 hours after being taken and were examined for common indicator bacteria, which would be expected from salad and vegetable preparation activities. The length of time between sampling and analysis could have allowed significant growth of the indicator bacteria, prior to analysis being carried out. The evidence was ruled inadmissible.

#### **Case study 3 – integrating laboratory studies to validate hypotheses**

Company A made an ingredient for company B which was used in a confectionery product. This ingredient purportedly caused fermentative yeast growth in the finished product. The resulting spoilage led to the loss of key contracts for company B. Company A was sued for these contract losses.

Working for the defence, Leatherhead Food Research was able to demonstrate that, although the ingredient was contaminated with fermentative yeasts, the contamination level was so low that spoilage could only have occurred if significant mishandling of the ingredient took place during the manufacturing process at company B's site. Audits of both sites, coupled with challenge testing of simulated finished products, showed how the growth could have occurred. The case was settled out of court, with the claimant's claim being much reduced as a consequence of Leatherhead's research and report.

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### **Balanced, fair objectives**

Independent assessment by a credible and respected industry organisation is crucial during food safety disputes. To be of assistance to a court, expert evidence must provide sufficient detail to be able to convince the judge that the expert's opinions are well founded. Any research, either paper based or via laboratory studies, must be designed, carried out, analysed and reported in a balanced and fair manner, with the objective of ascertaining the truth or otherwise of the allegations and instructions. Not following this advice could lead to evidence being ruled as inadmissible and have a significant impact on the outcome of the case.

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### **How Leatherhead can help**

Leatherhead Food Research provides expertise and support to the global food and beverage sector. Our significant experience in food science, safety practices, manufacturing processes and food law and regulation enables us to provide invaluable advice to clients involved in a dispute. We have helped mediation situations and have provided expert witnesses at legal hearings.

### **About the author**

Dr Peter Wareing, Food Safety & Manufacturing Consultant, has served as expert witness in a number of civil and criminal trials. Peter's specialist areas are food safety systems, including HACCP, microbiology and mycology. In his role as Food Safety & Manufacturing Consultant, Peter undertakes troubleshooting audits and investigations for clients, provides guidance on traceability systems and delivers food safety related training. Peter obtained his BSc in Agricultural Science from the University of Leeds and a PhD in Plant Pathology from the University of Hull.

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### About Leatherhead Food Research

Leatherhead Food Research provides expertise and support to the global food and drinks sector with practical solutions that cover all stages of a product's life cycle from consumer insight, ingredient innovation and sensory testing to food safety consultancy and global regulatory advice. Leatherhead operates a membership programme which represents a who's who of the global food and drinks industry. Supporting all members and clients, large or small, Leatherhead provides consultancy and advice, as well as training, market news, published reports and bespoke projects. Alongside member support and project work, our world-renowned experts deliver cutting-edge research in areas that drive long-term commercial benefit for the food and drinks industry. Leatherhead Food Research is a trading name of Leatherhead Research Ltd, a Science Group (AIM:SAG) company.

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