

FOOD FORENSIC INVESTIGATIONS

The aim of a Food Forensic investigations is to determine the what, how and when of food safety and quality issues which may involve the identification of foreign matter, taints and odours to the authenticity or certification of foodstuffs.

Food Forensics investigations are undertaken for a number of different reasons including consumer safety, industry liability and reputation, regulatory requirements, public relations and product perception.

ESR has over 20 years' experience in working with the food industry to identify and trace foreign material found in food. Our reputation as a meticulous, professional and independent investigative organisation is second to none.

We are experts at determining where and when food contamination has occurred, identifying the type of contaminant and its source and identifying foreign taints and odours and their source.

By using food forensics, we can also verify exactly what ingredients are in food. For example we identified inferior fruit pulp substituted for real orange juice, protected the halal market from processed meat products that contained pork, and determined that label claims were legitimate, i.e low calorie beer.

E / S / R

THE SCIENCE
BEHIND THE
TRUTH

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FOOD FORENSIC SCIENCE

RAPID RESPONSE MEANS RAPID RESULTS AND A SUCCESSFUL OUTCOME

If you're asking . . . What exactly is that foreign object in our product and where did it come from?

Does the product we imported/produced actually contain the active ingredients claimed on the label?

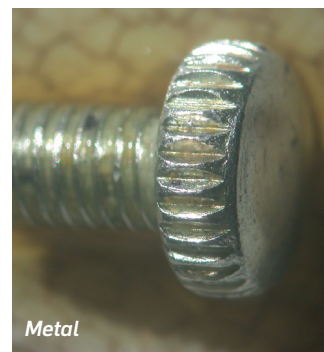
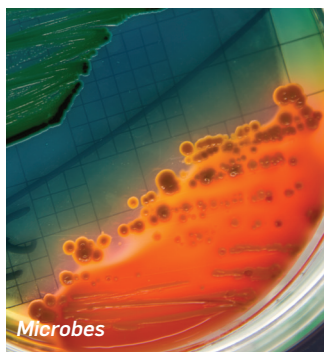
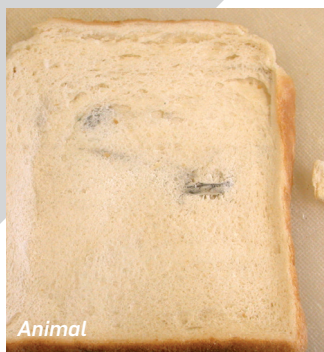
What could have caused the off taint or suspicious flavour of the food product?

Which microbes have caused this foodborne illness? . . . ESR can help.

Whether the problem is straightforward or complex, an ESR investigation will help minimise downtime, reduce the risk of product recall and get things back to normal as quickly as possible.

By the end of our investigation, you will have:

- ✔ A scientifically robust report that can be used to explain to the complainant (and any other interested parties) how the problem has been dealt with.
- ✔ Identified improvements in your processing to prevent recurrences.
- ✔ A clear demonstration for auditors and health authorities that you responded professionally and responsibly to the situation.



EXAMPLES OF FOREIGN OBJECTS AND CONTAMINANTS REGULARLY ENCOUNTERED BY OUR LABORATORY:

<i>Biological Sources</i>	<i>Non-biological Sources</i>
Microbes (mould, fungi, bacterial identification)	Glass (shape of original object, type of container, window, crystal, heat resistant)
Blood	Plastic
Plant material (species)	Metal (dental amalgam, piece of equipment)
Animals (whole or part identification, species identification)	Minerals
Insects (whole or part identification, pasteurised)	Synthetic Fibres
Hair (human—all body areas, rodent, other animals)	Medicines (supplements, prescription drugs)
Natural fibres	Colourings (legal and illegal food colours)
Faecal material (including rodent dropping)	Taints (solvents, cleaning agents, metallic, tastes, smoke/fire damage)

CAPABILITIES

Our capabilities in the food safety area include:

- ✔ Food Microbiology;
- ✔ Food Chemistry;
- ✔ Food Forensics;
- ✔ Food complaints investigation;
- ✔ Foodborne illness investigation;
- ✔ Risk assessment and modelling; and
- ✔ Food export certification.

Where other providers can produce data from a routine test, only ESR can complete an independent and detailed analysis of exactly what a result means and identify the best options for short and long term response and mitigation.

Our expertise can provide the certainty needed to assure customers about the safety, provenance and content of food products.

We have a long and prestigious and track record in food safety and easy access to a bank of knowledge gained from previous investigations – all of which can be applied to predict, address and prevent potential market access issues.

NEW ZEALAND BIOSECURITY

New Zealand imposes strict import restrictions on samples that pose biosecurity risk such as biota, waters, and soil. The Ministry for Primary Industries has approved our laboratories at the Christchurch Science Centre as a transitional facility for biological material, which allows us to import and store samples. This is of particular interest to those clients who export their products to overseas markets, but would like Food Safety investigations to take place back in New Zealand.

FOR MORE INFORMATION CONTACT:

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ESR (The Institute of Environmental Science and Research) is a Government-owned Crown Research Institute that delivers world class knowledge, research and laboratory services to help New Zealand get the most out of its investment in science and innovation.