Food Forensics Sample Submission

AsureQuality forensics testing assists with identification of foreign matter and potential sources of contamination.

Samples should be isolated into a sealed container such as a petri dish or a small ziplock bag. When submitting sediment pads for analysis please ensure they are completely enclosed or placed in a secondary container such as an envelope or Ziplock bag. We request that you do not place samples directly on tape or glue-like substances as this may coat the sample/s and interfere with our ability to isolate the sample/s for testing.

Before sending your sample, please contact our Forensics Team on forensics@asurequality.com with details of your testing needs and we can provide you with additional information and get a quote sent out to you if required.

Our standard turnaround time (TAT) is 5 working days and does not include our more specialised testing. If you require specialised testing an additional 5-10 working days is added to the TAT depending on which analysis you require. This is communicated when options for additional testing are provided to you.

Urgent TAT is 2-3 working days upon receiving the sample at the Auckland Laboratory. Urgent testing also comes with a 100% surcharge.

Submission of Raw Material testing:

This type of testing does not give a Pass or Fail result but provides a result on a scale from not consistent to consistent. From lowest confidence to highest confidence of a reference comparison match is; 'Not Consistent', 'Some Similarities with', 'Strong Similarities with' and 'Consistent'.

These samples are compared with our reference database. If you are unsure if AsureQuality has a reference of the raw material you are testing, email forensics@asurequality.com to confirm **before** sending the sample.

If you require a formal quote to produce a PO, please let the Forensics team know by emailing forensics@asurequality.com.

- Fill in a Forensic submission form with your details, what you want the sample to be called (include batch/lot number if required), and in the 'sample details' or 'purpose of testing' section write 'Raw Material Identification'. If you want you can also include the type of raw material, i.e. lactose, L-carnitine, citric acid etc, but it is not required.

- Send the sample and submission form to:

  AsureQuality Ltd
  ATTN: Forensics
  131 Boundary Road
  Blockhouse Bay
  Auckland 0600

- You could also send the submission form electronically to forensics@asurequality.com and LynfieldSR@asurequality.com **.** Please note that only the recipient emails in the 'Reporting Details' section on the submission form will receive the Forensic Report.

Submission of Foreign matter/reference comparison testing:

Our Forensics team can help with identification of numerous sample types including oil/fat based materials, protein based materials, carbohydrate based materials, dairy based materials, burnt dairy, plastics, rubbers, fibres, paper, plant matter, pest fragments, glass, metals, hairs, bone fragments and a few other specialty types.

If you are unsure if AsureQuality can help with the foreign matter you are wanting tested, please email forensics@asurequality.com to confirm **before** sending the sample.

If you require a formal quote to produce a purchase order, please let the Forensics team know by emailing forensics@asurequality.com and you will be provided a generic Forensic quote. This will provide you with all of the generic test codes you may need. If you require further specialty test codes (for things such as glass, plant and pest fragments) we can quote those separately.

- Fill in a Forensic submission form with your details, what you want the sample to be called (include batch/lot number if required), and in the 'sample details' or 'purpose of testing' section write as much information as you can about what it is, where it has come from, what you think it is, and what you want us to be able to tell you. For example, "black foreign matter found in our mixer after running a skim milk powder batch. Please identify" or "Sample X is foreign matter, please identify. Compare with Reference Y to confirm if it is a source".

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Understanding Forensic Test codes

- **FR-IDEN01 (01-DEFAULT)**
  - This is required for every foreign matter job and covers various operations surrounding the identification process each sample undergoes. This includes visual microscopy, a brief visual description of the foreign matter, images of the foreign matter under the microscope, measured dimensions, any raw analytical data obtained during testing, the interpretation of those results, and a generic list of potential sources of the foreign matter.

- **FR-IDEN01 (02-ADD)**
  - This is required for every additional foreign matter sample within the job that is covered by the 01-DEFAULT test code.

- **FR-IDEN01 (03-MULTI_INCOMP)**
  - This is required for every cross-comparison within a single report.

- **FR-IDEN01 (04-MULTI_EXCOMP)**
  - This is required for every cross-comparison of samples between reports. This test code covers a comparison of up to 4 components from a previous report with the new report being produced.

- **FR-FTIR01 (01-DEFAULT)**
  - This is our most standard form of testing as it allows for identification of organic matter. This includes fat, carbohydrate, protein, dairy, fibres, rubbers and plastics.

- **FR-SEMX01 (01-DEFAULT and 02-GLASS)**
  - This is our analytical technique for identification of inorganic testing. This includes metals, minerals, and glass identification capabilities. This provides the elemental composition of the material, i.e. whether it is composed of iron, silicon, calcium, magnesium, etc.

- **SC-IDEN04 (01-DEFAULT) – AQ Forensic Pest Visual**
  - This is required for visual pest identification. It covers only the visual analysis of the pest fragment based on its found condition. Any detached legs, antennae, body parts are also sent for analysis along with the larger body portion if required.
  - There is a chance that there is not enough sample, or it is too damaged to be accurately identified based off visual analysis alone, and that you will also require Pest DNA analysis.

- **SC-IDEN04 (02-DNA) – AQ Forensic Pest DNA**
  - This is required for pest DNA identification when visual analysis was unable to conclusively identify the sample.
  - There is a chance that DNA analysis is inconclusive as the sample may be too badly damaged or has gone through a heat process where the DNA is no longer viable.

- **SC-IDEN05 (01-DEFAULT) – AQ Forensic Plant Visual**
  - This is required for visual plant identification. It covers only the visual analysis of the plant based on its found condition.
  - The analysis is usually only used where the sample has been heated and DNA is not viable.

- **SC-IDEN05 (02-DNA) – AQ Forensic Plant DNA**
  - This is required for plant DNA identification. It is usually the first choice for plant based samples where DNA is likely viable.
  - There is a chance that DNA analysis is inconclusive as the sample may be too badly damaged or has gone through a heat process where the DNA is no longer viable.

- **SC-ECOG01 (01-DEFAULT) – DNA Analysis**
  - This is required for specialty DNA testing for samples where AQ inhouse DNA testing does not cover the DNA type. This may be specific species such as armadillo etc.
  - There is a chance that DNA analysis is inconclusive as the sample may be too badly damaged or has gone through a heat process where the DNA is no longer viable.

- **SC-ECOG02 (01-DEFAULT) – Visual Hair Examination**
  - This is required for specialty hair visual analysis where AQ analysts cannot achieve a conclusive answer. This may be due to the hair pigmentation being too dark and requiring a polarised microscope.

Please feel free to contact the forensics team on Forensics@asurequality.com if you have any further questions.