

Helping the Lab to Help you

Set Your Samples Up for Success

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Overview

- Sample Submission and Chain-of-Custodies
- Logistics and Turnaround Time (TAT)
- Data Quality Objectives
- Representative samples
- NES quality requirements vs Project Size
- Summary - helping the Lab to help you



Consultant Sample Submission Rating

- 7 out of 10
- Room for improvement!
- A couple of consultants were given 10 out of 10, so that means...

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**"There's always room for improvement.
It's a small room with no windows and no
distractions. We already moved your things."**

Sample Submission & COC's: Most Common Issues

- No COC
- Loading soil chilly bins too full (20kg courier weight limit)
- Sample packing issues
- Sample labelling issues (e.g. duplicate ID's, unlabeled jars)
- Samples not matching COC (extra samples, missing samples, different depths, etc.)
- Confusing testing requests, e.g. asking for an SPLP but not specifying what tests are required on the SPLP extract



Request Form and Chain-of-Custody

Hill Laboratories
TRIED, TESTED AND TRUSTED

ANALYSIS REQUEST

Quote No: _____
 Primary Contact: _____
 Submitted By: _____
 Client Name: _____
 Address: _____
 Postcode: _____
 Phone: _____
 Mobile: _____
 Email: _____
 Charge To: _____
 Client Reference: _____
 Order No: _____
 Results To: _____
☐ Email Primary Contact ☐ Email Submitter ☐ Email Other
☐ Email Other ☐ Other

CHAIN OF CUSTODY RECORD

Sent to Hill Laboratories Date & Time: _____
 Name: _____
 Signature: _____
☐ Tick if you require COC to be emailed back

Received at Hill Laboratories Date & Time: _____
 Name: _____
 Signature: _____

Condition ☐ Room Temp ☐ Chilled ☐ Frozen Temp: _____

ADDITIONAL INFORMATION / KNOWN HAZARDS

Priority ☐ Low ☒ Normal ☐ High
☐ Urgent (ASAP, extra charge applies, please contact lab first)
 Requested Reporting Date: _____

No.	Sample Name	Sample Date	Sample Time	Sample Type	Tests Required (if not as per Quote)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					

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CHAIN OF CUSTODY RECORD

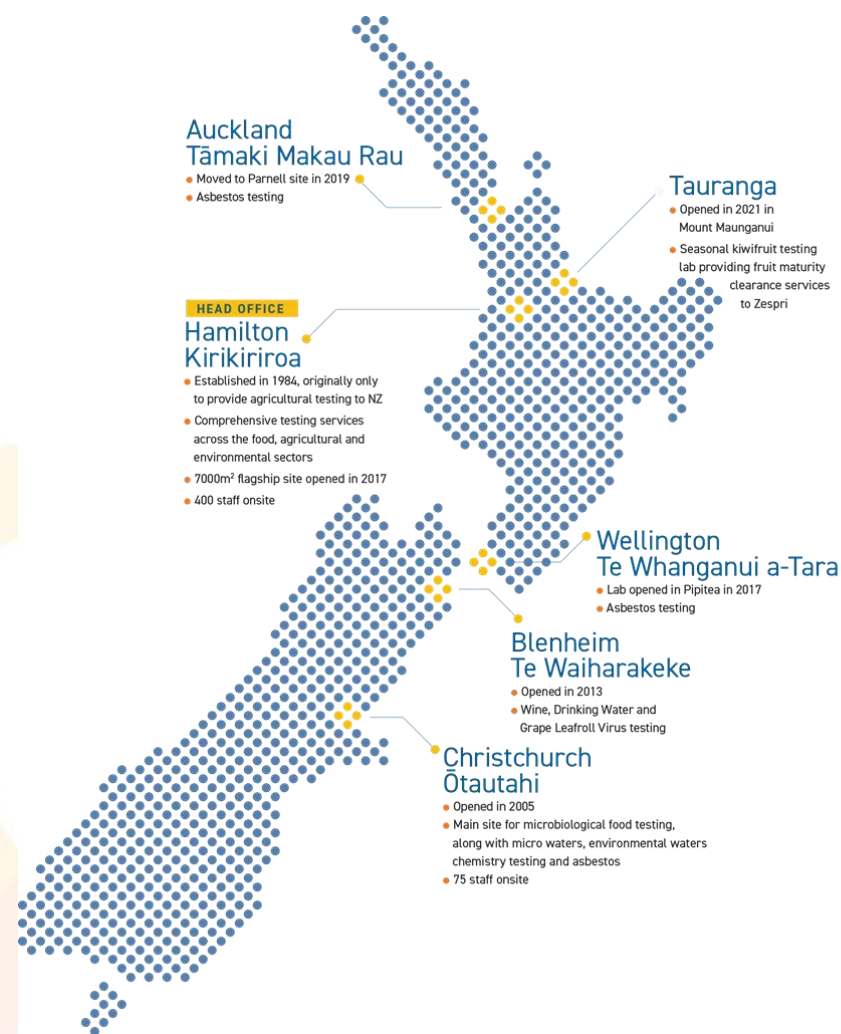
Sent to Hill Laboratories Date & Time: _____
 Name: _____
 Signature: _____
☐ Tick if you require COC to be emailed back

Received at Hill Laboratories Date & Time: _____
 (Refer to Lab created Job No above)
 Name: _____
 Signature: _____

Condition ☐ Room Temp ☐ Chilled ☐ Frozen Temp: _____

Logistics and TAT

- Satellite Labs vs Main Lab
- TAT implications if you drop off samples to a satellite lab late in the day
- Might be better to drop it off to a courier depot
- Cooling/chilly pads dependent on analysis (metals vs volatiles)
- Best practice is put samples on ice then use chilly pads for transport
- No ice for transport please!



Data Quality Objectives

- Screen vs Trace detection limits
- Detection limit requirements for project – check!
- IANZ accreditation for method?
- Can the Lab deliver the required TAT?
- Appreciation of Uncertainty of Measurement (UoM)
- “Analytical results are not concentrations but error-prone estimates of concentrations” [Analytical Methods Committee, Royal Society of Chemistry, AMC Technical Brief, No 5, April 2001]
- If something doesn't look right, ask the lab to check it
- Watch for headspace on volatile/SVOC samples – try to minimise

Representative Samples

- What the Lab takes for analysis vs what volume the sample represents
- Keep in mind sample preparation requirements (contaminants are concentrated in fine fractions)
- Implications for rocks and pebbly/gravel samples
- Sample volume sufficient?
- Crushing oversize samples or macro-extraction
- Talk to the lab about unusual samples!



NES quality requirements vs Project Size

- CLMG #5 (2021) lists QA/QC requirements
 - “The extent of QC will depend on the sampling objectives and should be documented in the sampling and analysis plan.”
- Duplicate samples (includes both field and lab variability)
- Inter-laboratory comparison samples
- Certified Reference Materials (CRM)
- Rinsate blanks
- Small projects vs large projects

Summary - helping the Lab to help you

- Make sure there is a COC and that it matches samples
- Samples well packaged
- Make sure analysis requirements are clear and unambiguous
- If you have samples that may cause issues in the lab, please discuss with us before sending the samples
- Give the lab a heads up on sample specific issues
 - Saline vs groundwater (saline intrusion)
 - High PID or XRF readings
- Make sure logistics, DQO & NES QA/QC requirements are covered