

ANALYSIS REQUEST

R J Hill Laboratories Limited
 28 Duke Street, Hamilton 3204
 Private Bag 3205
 Hamilton, New Zealand

T 0508 HILL LAB (44 555 22)
T + 64 7 858 2000
E mail@hill-labs.co.nz
W www.hill-laboratories.com

Client

Name _____

Address _____

Postcode _____

Email _____

Phone _____ Fax _____

Client Reference _____

Additional Client Ref _____

Quote No _____ Order No _____

Date Sampled _____

Charge To Client Submitter (Company) Other

Primary Contact

Submitter (if different) _____

Company _____

Address _____

Email _____

Results To Reports will be emailed to Primary Contact by default. Additional Reports will be sent as specified below.

- Email Primary Contact Email Client Email Submitter
 Email Other _____
 Other _____

SOIL SAMPLE DETAILS

Recommended Profiles are outlined below, and on the reverse of this sheet.

Please indicate your requested tests with a

Sample Identification	Sample Depth (mm)	Dairy (D), Drystock (DS) OR Crop Type (Specify)	Soil Code*	Rec. Profile	Basic Soil	Sulphate Sulphur	Organic Sulphur	Anion Storage Capacity	Total Sulphur	Resin P	Organic Soil Profile	Organic Matter	Pot Avail Nitrogen	Boron	Trace Metals	Mehlich 3	Other	Lab#
					BS	SO4	OS	ASC	tS	RP	OrgSP	OM	AN	B	EDTA	M3		

*Soil Code: Ash (A), Pumice (Pu), Peat (Pt), Sedimentary (Sed) – applies for pasture only, Glasshouse (GH)

Recommended Soil Profiles: (see Crop Guides)

Pasture (Basic Soil + SO4-S), Arable Crops (Basic Soil + SO4-S + Potentially Available N), Vegetables (Basic Soil + SO4 S + Pot Available N), Avocado (Basic Soil + M3), Kiwifruit (Basic Soil + Pot Available N)

PLANT SAMPLE DETAILS

Recommended Profiles are outlined below, and on the reverse of this sheet.

Please indicate your requested tests with a

Sample Identification	Dairy (D), Drystock (DS) OR Crop Type/Variety (Specify)	Crop Plant Part / Growth Stage	Rec. Profile	Basic Plant	Molybdenum	Cobalt	Selenium	Iodine	Chloride	Nitrate	Mixed Plant Profile	Complete Pasture Profile	Combined Plant Profile	Combined Potab Profile	Other	Lab#
				BP	MO	CO	SE	I	CL	NO3	MPast	CPP	CGP	CPotP		

Recommended Plant Profiles: (see Crop Guides)

Clover Only (Basic Plant + Molybdenum), Kiwifruit (Basic Plant + Cl), Avocado (Basic Plant + Cl), Brassica (Basic Plant + Molybdenum), Lucerne (Basic Plant + Molybdenum), Mixed Pasture (Basic Plant + Mo, Co, Se + Cl + Crude Protein + ME), Complete Pasture (Mixed Pasture + Clover Only Profiles)

FEED SAMPLE DETAILS

Recommended Profiles are outlined below.

Please indicate your requested tests with a

Sample Identification	Crop Grown	Sample Source e.g. paddock, trucks, stack, bales	Weeks in stack/bales (silage/baleage only)	Dry Matter	Dry Matter, CP, ME	Feed	Extended Feed	Silage	Extended Silage	Compound Feed CpdFeed	Other e.g. VFA, NO3-N, Starch, Cl	Lab#
				DM	DMME	Feed	ExtFed	Silage	ExtSil	NIR	Wet Chem	Starch, Cl

Recommended Feed Profiles:

Feedstuff

DM (Dry matter only), DMME (Dry Matter, Crude Protein, Digestibility, Metabolisable Energy), Feed (Dry Matter, Crude Protein, Crude Fat, Ash, Soluble Sugars, Starch, ADF, NDF, Lignin, Metabolisable Energy, Digestibility), ExtFed (Feed profile plus major & trace elements incl Cl), CpdFeed (Dry Matter, Crude Protein, Crude Fat, Ash, Soluble Sugars, Starch, ADF, NDF, Metabolisable Energy, Digestibility) - select between NIR analysis OR Wet Chemistry only (Price Impact).

Silage/Baleage

Silage (pH, Dry Matter, Crude Protein, Crude Fat, Ash, Soluble Sugars, Starch, ADF, NDF, Lignin, Metabolisable Energy, Digestibility, Lactic Acid, Ammonium N/Total N), ExtSil (Silage profile plus major & trace elements incl Cl)

ADDITIONAL INSTRUCTIONS

NB. Please advise laboratory if hazardous substances possibly present in samples.

Total Number of Samples Sent **NOTE:** If more than one courier bag being sent for one farm, please indicate eg. 1 of 2, 2 of 2 etc on outside of courier bag so that all samples are reported in one job.

Please supply more of:

(specify quantities required)

Qty: Request Forms KB 2009 Plant/Feed Bags (indiv)

Qty: Soil & Plant DIY sampling kits Soil Bags (indiv)

Qty: Courier Bags:
 NZ Courier Courier Post

Qty: Other _____

PLEASE SIGN (refer to terms of trade overleaf)

Signature _____

Date _____

SAMPLING INSTRUCTIONS

Interpretation of test data depends on the sample being taken (sampled) in the recommended manner. These notes will help to ensure that this is done. More detailed guides for specific crops are available on our website under **Crop Guides**. Please advise laboratory if hazardous substances possibly present in/on samples

Soil:

to determine the nutrient status of soils

- Take samples from sites representative of the greater part of the area. Avoid sampling unusual areas such as around hedges, fences, troughs, gates etc.
- Sample to the correct depth: Pasture 7.5cm, Arable land and orchards 15cm, Turf 7.5cm.
- Sample on a grid or zig-zag pattern, taking at least 20 cores.
Note: only 500cc (0.5 kg) is required for analysis
- Avoid contamination of samples, e.g. fertiliser. Use clean equipment and plastic sample bags.
- Clearly label sample bags with a permanent marker or ballpoint pen.
- Soils from horticultural, intensive cropping sites and turf areas should be analysed annually, at the same time of year. Arable and pasture paddocks also warrant sampling every year, especially if withholding or reducing fertiliser inputs when more regular data on nutrient depletion is essential.
- Carefully check you have filled in the request form.
- Send sample to laboratory as soon after collection as possible.

Plant:

for diagnosis of nutrient imbalance

- Collect the sample from plants that are representative of the crop. Avoid sampling from plants adjacent to shelter, headlands or other unusual areas.
- Take approximately **100grams (25-30 leaves for larger plants)**.
- Take care to avoid contamination of samples, particularly with soil, fertilisers and chemicals.
- Identify the sample bags with permanent marker pen or ballpoint pen.
- For diagnosis of nutritional disorders, sample plants showing signs of abnormality.
- Carefully check that you have filled in the request form, then promptly despatch to the laboratory, or keep chilled overnight if necessary.

Feed:

- Collect forage or silage sample representative of the feed source.
- Take approximately **500g-1kg** and place in sample bag, seal and identify clearly with permanent marker pen or ballpoint pen.
- Carefully check that you have filled in the request form, then promptly despatch to the laboratory. Send samples to laboratory as soon as possible after collection, or keep chilled overnight if necessary. Feed quality tests will be analysed using NIRS technology with automatic test notation if statistical prediction outliers exist. Reference method (wet chemistry) tests are available upon request.

RECOMMENDED TEST SELECTIONS

See Crop Guides on website
www.hill-laboratories.com

Hill Laboratories offers a wide range of tests for soil and plant testing. To assist you with selecting the tests to suit your particular needs, we have supplied the guide below. This shows which tests are strongly recommended, recommended, or applicable for special investigations only.

Soil tests marked with * will be analysed using NIRS with codeswap to wet chemistry if statistical prediction outliers exist.

Recommendation Legend:

- ☑ Strongly recommended
- * Recommended
- ⊕ For special investigations

Note: Soil and Plant testing will incur a sample preparation fee if the basic test is not requested.

Soils

Crop Grown

	Basic Soil	Sulphate Sulphur	Organic Sulphur	Anion Storage Capacity	Resin P	Organic Soil Profile	Organic Matter	Pot Avail. Nitrogen	Soluble Salts	Reserve Mg	Boron	Other
	BS	SO4	*OS	*ASC	RP	*ORGSP	*OM	*AN	SS	rMg	B	
Pasture	☑	☑	*	*	*	*				⊕		TBK,TS
Arable Crop	☑	☑	*	*	*	*		☑		⊕		
Forestry	☑	*		*			*			*	*	TBK
Sports Turf	☑			*			*		⊕			
Hort. Tree Crops	☑	*		*			*			*	*	
Hort. Field Crops	☑	*		*		*	*	☑	⊕		⊕	
Hort. Protected/Glasshouse	☑			*			*		☑		⊕	

Basic Soil Profile: volume weight, pH, Olsen phosphorus, potassium, calcium, magnesium, sodium, C.E.C., base saturation

***Organic Soil Profile:** Organic matter, Total N, Potentially Available N

Other soil tests available:

SS – soluble salts ASC – Anion Storage Capacity *OM – organic matter

*AN/AMN – potentially available nitrogen (anaerobic mineralisable N) pH – pH only

*CN – C:N ratio

SO4 – sulphate sulphur rMg – reserve magnesium TMO – Total Molybdenum

RP – resin phosphorus OS – organic sulphur B – boron

AL – aluminium TBK – reserve potassium *TN – total nitrogen

EDTA – EDTA manganese, zinc, copper, cobalt TSe – Total Selenium

TP – total phosphorus *TS – total sulphur TCD – total Cadmium

M3*(mehlich 3) – (P, Ca, Mg, K, Na, Mn, Zn, Cu, Co, Fe, Al, B)

HWEC – Hot Water Extractable Carbon

MinN – NO3N, NH4-N (soils to be chilled or frozen before sending)

Plants

Crop Grown

	Basic Plant	Molybdenum	Cobalt	Selenium	Iodine	Chloride	Sulphate Sulphur	Aluminium	Plant Nitrate	Other
	BP	MO	CO	SE	I	CL	SO4	AL	NO3	
Pasture	☑	☑	☑	☑	*		⊕	⊕	⊕	
Fruit Crop	☑						⊕			
Vegetable Crop	☑	*					⊕	⊕	⊕	
Kiwifruit	☑					☑				
Arable Crop	☑						⊕		⊕	
Flowers/Ornamental Crops	☑									

Basic Plant Profile: *nitrogen, phosphorus, potassium, sulphur, calcium, magnesium, sodium, iron, manganese, zinc, copper, boron

Complete Pasture Profile (CPP): The herbage samples is divided in half and the clover is separated out. These are then tested as two samples

Mixed Pasture Profile (MPast): Basic Plant, Mo, Co, Se + Cl + Crude Protein + ME

Combined Grape Profile (CGP): Tests are carried out on the Petiole (N, NO3-N, P, K, Mg) and the Blade (P, K, S, Mg, Ca, Na, Mn, Zn, Cu, Fe, B) of the same leaf sample.

Combined Potato Profile (CPotP): Tests are carried out on the Petiole (N, NO3-N, P, K, Mg) and the Blade (P, K, S, Mg, Ca, Na, Mn, Zn, Cu, Fe, B) of the same leaf sample.

Special plant tests:

MO – molybdenum CO – cobalt SE – selenium I – iodine CL – chloride

SO4 – sulphate-S AL – aluminium NO3 – nitrate-N NI – nutrient indices

TERMS OF TRADE

The following terms and conditions apply for work done by R J Hill Laboratories Limited (henceforth referred to as "Hills"), unless otherwise arranged by the management.

Invoices

- An invoice detailing the charges for work undertaken will be forwarded by Hills with the results
- A monthly statement issued detailing all transactions up to month end, showing any amount due for payment
- Hills reserve the right to charge the customer for any bank charges associated with processing their payment (e.g. foreign exchange charges, dishonoured cheques, etc)

Payments

- Payment to be made in NZ \$ for the amount invoiced
- Payment to Hills is due within 7 days of date of invoice for casual customers
- Full payment to Hills is due by the 20th of the month following date of invoice for customers with approved credit
- Hills may take immediate action to recover overdue debt in the event of the following occurring:
 - The customer is in default under any agreement with Hills
 - The customer commits an act of insolvency or bankruptcy

New Customers

- Hills reserves the right to require payment in advance for any work to be done and/or require the customer to fill in a credit application form prior to information being released

Requests to invoice another customer/entity

Hills will:

- Not release results until both customer and third party have signed an approval form for re-invoicing to occur
- Charge a \$25 plus GST re-invoicing fee to the customer

Overdue Accounts

If an account is overdue, Hills reserves the right to:

- Withhold results until payment is received
- Charge interest on overdue accounts at the rate of 1.5% per month from the due date until payment
- Recover from the customer any debt collection charges including commission from Debt Collection Agencies

Poor Account History

Hills reserves the right to:

- Require payment prior to release of results
- Refuse to undertake any further work without pre-payment
- Withdraw any special discounts or arrangements

Data Release Policy

- The party who has paid Hills for the analysis has the primary right to a copy of the results of that analysis. Hills will retain a copy of all analytical results on its database and reserves the right to use those results for the development and continuous improvement of its own business. For further detail on Hills policy on the release of data, refer to our Data Release Policy document KB 28309.

Delivery

- If Hills is unable to deliver the results or perform a service because of any cause beyond its control (including any force majeure event), it may suspend delivery or cancel the customer's order without incurring any liability for loss or damage suffered by the customer
- Delivery of results shall be deemed to be made to the customer when the results are first dispatched from Hills in Hamilton, or collected by the customer or the customer's agent. All carriers, including couriers, are deemed to be agents of the customer

Warranties and Conditions

- If Hills shall be under any liability whatsoever to the customer then, whether such liability be in contract, tort (including negligence and personal injury), or otherwise and notwithstanding any relief or remedy to which the customer may be entitled to under the Contractual Remedies Act 1979 or at law or in equity, such liability shall be limited to the price at which the goods or services are supplied to the customer
- Under no circumstances will Hills be liable for any financial or economic loss or consequential loss of any kind whatsoever

Privacy

- The customer agrees that Hills may obtain information about the customer from any person (including any Collection Agency), for any purpose being in the course of Hills business, including credit assessment and debt collecting and the customer consents to any person providing Hills with such information
- The customer agrees that Hills may use for lawful purposes any information it has about the customer relating to the customer's creditworthiness for lawful purposes

Jurisdiction

- In the event of a dispute arising between Hills and the customer, such dispute shall be governed by New Zealand Law and the place of any hearing shall be Hamilton, New Zealand