AcmeLabs™

CARE COMMITMENT PERFORMANCE

Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East, Vancouver, BC
Canada V6A 4A3

Tel: (604) 253-3158 Fax: (604) 253-1716
Toll Free in North America: 1-800-990-2263
E-mail: acmeinfo@acmelab.com
Website: www.acmelab.com

Please see back cover for addresses of Branch Labs.

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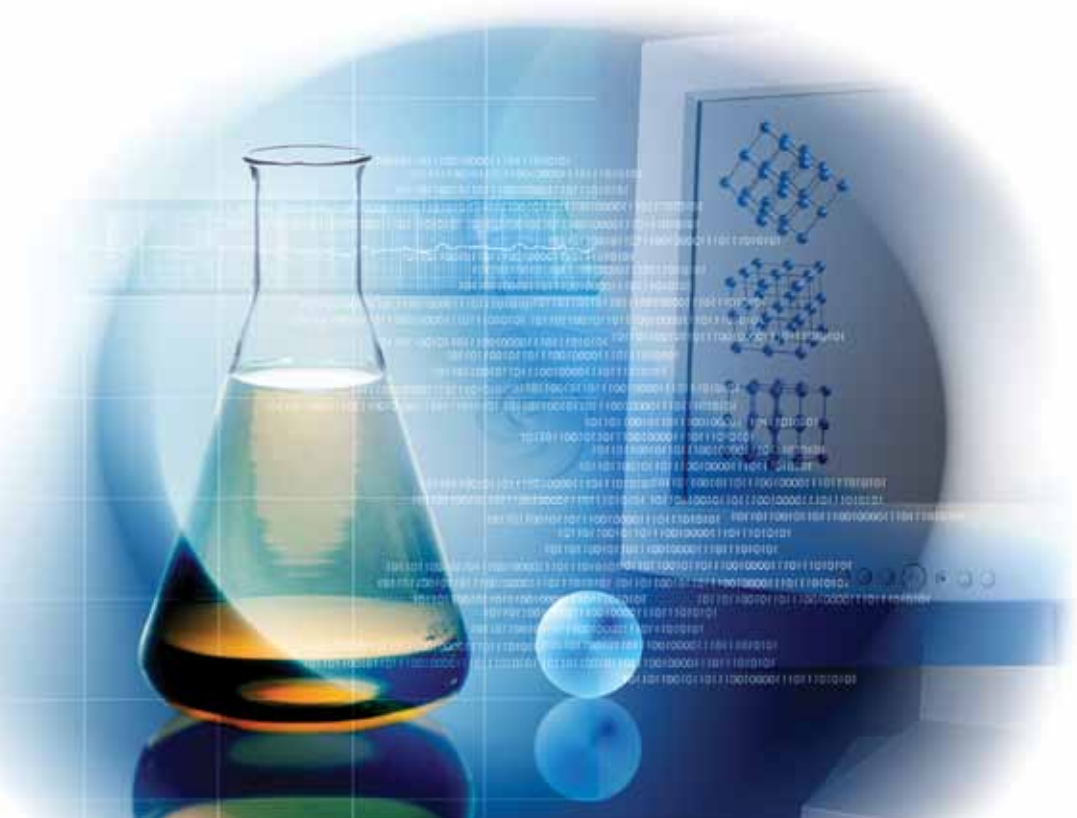


Since inception in 1971, AcmeLabs™ has been recognized as one of the leading geochemical and assaying laboratories to geologists and stock exchanges worldwide.

AcmeLabs™ is focused entirely upon the minerals testing business. Our services provide the specialized analytical methods needed by exploration and mining companies to find and validate the new ore deposits of the future. AcmeLabs™ has always been known for innovation and quickly embracing new technology. AcmeLabs™ strong commitment to research to provide analytical methods tailored to exploration geochemistry assures AcmeLabs™ success.

AcmeLabs™ is an employee-owned business operating in 31 offices in 13 countries. Our employee ownership reflects a very high level of personal commitment from our staff to our customers and our product. It is this care and commitment that makes AcmeLabs™ unique and strong.

AcmeLabs™ completed some large projects over the course of 2011 while other projects continue into 2012. These include:

1 The purchase of Alfred H. Knight laboratories in Fairbanks, Alaska and Spartanburg, South Carolina;

2 New sample preparation office in Krakow, Poland;

3 New sample preparation office in Dawson City, Yukon;

4 New sample preparation office in Cuiabá, Brazil;

5 Addition of precious metals analysis in our lab in Ankara, Turkey;

6 The construction of our new laboratory in Vancouver;

7 The construction of our new laboratory in Santiago;

8 Expanded services in many of our existing laboratories.

These investments are made to ensure that AcmeLabs™ can provide the best possible service to our customers.

Care, Commitment, Performance. We will continue to exceed your expectations.

Sample Preparation, Storage & Disposal

Sample Preparation

Code	Description	Cdn
SS80	Dry at 60°C, sieve 100g to –80 mesh, up to ½ kg sample	**$2.35**
	Sieve large samples: 80 mesh per ½ kg	**+$1.05**
S230	Dry at 60°C, sieve 100g to –230 mesh, up to ½ kg sample	**$3.15**
	Sieve large samples: 230 mesh, per ½ kg	**+$1.60**
SSXX	Further sieving to other mesh sizes, per ½ kg	**$1.60**
SP100	Pulverize soils to –100 mesh ASTM in mild-steel pulverizer, per 100g	**$3.15**
SCP100	Pulverize soils to –100 mesh ASTM in ceramic pulverizer, per 100g	**$8.25**
RJSV	Saving all or part of reject fraction	**$2.10**
CLSP	Clay separation per 500g	**$10.50**

Special Handling

ADRY	Air Dry sample (< 40°C), per 2 kg	**$2.40**
HAND	Handling special projects, rejects and pulp retrieval, per hour	**$52.50**
MIN01	Heavy Mineral Separation, S.G. 2.96, per 200 g (setup charge $100)	**$52.50**
MIN02	Heavy Mineral Separation, S.G. 3.32, per 200 g (setup charge $100)	**$52.50**
RIFL	Split by riffle splitter material up to 5 kg	**$2.20**
WGHT	Weigh sample	**$0.65**
XWSH	Extra wash with glass between each sample in pulverizer	**$1.30**
SPLP	Sorting, labelling and boxing samples received as pulps	**$0.30**

Sample Storage & Disposal Fees

RTRN	Return of all reject portions and/or pulps (British Columbia only)	**at cost**
DISP2	Heat treatment of soils and sediments, per sample	**$0.50**
STOR-PLP	Monthly storage of pulps after 90 days, per sample	**$0.16**
STOR3	Monthly storage of soil rejects, per sample	**$0.35**

No soil, till or sediment pulps or rejects (excluding those from BC Mainland, Yukon and NWT) can be returned and must be incinerated upon disposal. A disposal fee (DISP2) is charged for these samples. Soils will be discarded following analysis unless specific instructions are indicated on sample submittal forms. Soil rejects are discarded immediately after preparation.

Note: Importation regulations may apply; contact lab prior to shipment.

Note: Batch charge for sample submissions of less than 20 samples: $50.00

Soil, Till & Sediment

Soil, till and sediment have long been the interest of geochemists and geologists as a means of tracing mineralization to their sources. This could be sediment overlying bedrock which must be analysed and interpreted as to the underlying deposit or the means of tracing glacially dispersed elements or drainage systems back to their sources of mineralization. This interest has created an industry demand for new technology in laboratories, ever lower detection levels and a very stringent quality system to provide confidence in the results produced.

The most important factors for assessing methods for geochem samples are precision and sensitivity. This is the ability of the method to detect subtle anomalies above baseline or background levels. At AcmeLabs, we are at the forefront of this technology and innovation and we take pride in being the first choice for this type of survey by industry, academia and governments from all over the world.

Index

Sample Preparation, Storage & Disposal

Preparation

Code	Description	Cdn
R200–250	Crush 1 kg to 80% passing 10 mesh, split 250g and pulverize to 85% passing 200 mesh	**$7.20**
R200–500	Crush 1 kg to 80% passing 10 mesh, split 500g and pulverize to 85% passing 200 mesh	**$8.25**
R200–1000	Crush 1 kg to 80% passing 10 mesh, split 1000g and pulverize to 85% passing 200 mesh	**$9.30**
	Extra crushing and saving rejects over 1 kg, per kg	**+$0.75**
CR80	Crush 1 kg to 80% passing 10 mesh	**$3.50**
P200	Dry (60°C) and pulverize only to 85% passing 200 mesh, per 250g	**$3.70**
	Extra pulverizing over 250g, per 250g	**+$1.95**
PSCB	Pulverizing by Ceramic Box, per 100g	**$9.70**
M150	Crush, pulverize, sieve 500g, save +150 and –150 mesh fractions for metallics analysis	**$10.25**
M200	Same as M150 but sieving to 200 mesh	**$14.60**
MXXX	Extra M150 or M200 pulverizing and screening, per 250g	**+$3.70**
HPUL	Hand pulverizing by mortar & pestle	**$8.40**

Special Handling

D105	Dry pulp samples at 105°C, per sample	**$0.60**
HAND	Handling special projects, rejects and pulp retrieval, per hour	**$52.50**
MIXP	Mixing of received pulps	**$0.65**
MPCP	Compositing pulp, per 250g	**$3.15**
MPMP	Mixing & pulverizing composite, per 250g	**$2.85**
SPLT	Split large samples (>5 kg), per kg	**$0.50**
RIFL	Split by riffle splitter material up to 5 kg	**$2.20**
WGHT	Weigh sample	**$0.65**
XWSH	Extra wash with glass between each sample in pulverizer	**$1.30**
RPLP	Sorting, labelling and boxing samples received as pulp	**$0.30**
RS01	Rotary split up to 5 kg	**$4.45**

Sample Storage & Disposal Fees

All rock rejects are stored for 3 months at no charge. Clients may purchase additional storage time.

Note: a minimum charge of $10/quarter ($40/yr) will apply to all clients with rejects in storage after 90 days.

Acmelabs recognizes and applies the Canadian limits for the concentration of hazardous metals in waste materials. For samples exceeding these limits, Acmelabs reserves the right to require clients to accept the return of their reject and pulp material or the expense of disposing of any sample material that is defined as hazardous.

Code	Description	Cdn
RTRN	Return of all reject portions and/or pulps	**at cost**
DIS-RJT	Warehouse disposition of rejects	**$0.25**
DIS-PLP	Warehouse disposition of pulps	**$0.10**
STOR-RJT	Monthly storage of rejects after 90 days, per sample	**$0.35**
STOR-PLP	Monthly storage of pulps after 90 days, per sample	**$0.16**

Note: Concentrates and high NORM samples must be returned.
Note: Batch charge for sample submissions of less than 20 samples: $50.00

Rock & Drill Core

Rock and core samples are the final truth in any exploration program. Care and attention begin prior to any sample collection. Rock and core samples are dried then prepared by particle size reduction to produce a homogeneous sub-sample which is representative of the original sample. For most analytical methods, this sub-sample will undergo some form of dissolution and decomposition. Each sample decomposition procedure has its own advantages and limitations. The final technique used for the determination of elements is dependant on the required detection levels of the elements of interest.

AcmeLabs welcomes and encourages discussion with the geoscientist to determine the most appropriate analytical scheme of preparation, digestion and analysis to match the needs of their program. To this end, AcmeLabs have developed mineral-deposit specific analytical packages for consideration.

Index

Geochemical
Aqua Regia Digestion

Groups 1D, 1DX
ICP-ES & ICP-MS

You can choose economically priced ICP-ES (Group 1D) or ICP-MS (Group 1DX) analysis to complement your exploration program.

Sample splits of 0.5g are leached in hot (95°C) Aqua Regia. Select a larger split size for more representative Au analysis. Refractory and graphitic samples can limit Au solubility.

Sample minimum 1g pulp.

Group 1D01	Cdn
34 elements	**$9.40**

Group 1D03	Cdn
Include Uranium	**+$0.50**

Code	Group 1DX	Cdn
1DX1	36 elements 0.5g	**$15.75**
1DX2	36 elements 15g	**$19.95**
1DX3	36 elements 30g	**$23.60**
Include U by request		

	Group 1D Detection	Group 1DX Detection	Upper Limit
Ag*	0.3 ppm	0.1 ppm	100 ppm
Al*	0.01 %	0.01 %	10 %
As	2 ppm	0.5 ppm	10000 ppm
Au*	2 ppm	0.5 ppb	100 ppm
B*†	20 ppm	20 ppm	2000 ppm
Ba*	1 ppm	1 ppm	10000 ppm
Bi	3 ppm	0.1 ppm	2000 ppm
Ca*	0.01 %	0.01 %	40 %
Cd	0.5 ppm	0.1 ppm	2000 ppm
Co	1 ppm	0.1 ppm	2000 ppm
Cr*	1 ppm	1 ppm	10000 ppm
Cu	1 ppm	0.1 ppm	10000 ppm
Fe*	0.01 %	0.01 %	40 %
Ga*	5 ppm	1 ppm	1000 ppm
Hg	1 ppm	0.01 ppm	50 ppm
K*	0.01 %	0.01 %	10 %
La*	1 ppm	1 ppm	10000 ppm
Mg*	0.01 %	0.01 %	30 %
Mn*	2 ppm	1 ppm	10000 ppm
Mo	1 ppm	0.1 ppm	2000 ppm
Na*	0.01 %	0.001 %	5 %
Ni	1 ppm	0.1 ppm	10000 ppm
P*	0.001 %	0.001 %	5 %
Pb	3 ppm	0.1 ppm	10000 ppm
S*	0.05 %	0.05 %	10 %
Sb*	3 ppm	0.1 ppm	2000 ppm
Sc	5 ppm	0.1 ppm	100 ppm
Se	–	0.5 ppm	100 ppm
Sr*	1 ppm	1 ppm	10000 ppm
Te	–	0.2 ppm	1000 ppm
Th*	2 ppm	0.1 ppm	2000 ppm
Ti*	0.001 %	0.001 %	5 %
Tl	5 ppm	0.1 ppm	1000 ppm
V*	1 ppm	2 ppm	10000 ppm
W*	2 ppm	0.1 ppm	100 ppm
Zn	1 ppm	1 ppm	10000 ppm

*Solubility of some elements will be limited by mineral species present.

†Detection limit = 1 ppm for 15g / 30g analysis.

Geochemical
Ultratrace Aqua Regia Digestion

Group 1F-MS
Ultratrace by ICP Mass Spec

ICP Mass Spec analysis of a 0.5, 15 or 30g sample after Aqua Regia digestion for low to ultra-low determinations on soils, sediments and lean rocks.

Larger splits (15 or 30g) give a more representative analysis of elements subject to nugget effect (e.g. Au). Au solubility can be limited in refractory and graphitic samples.

Sample minimum 1g pulp.

AcmeLabs now offers analysis of Pb isotopes (Pb_{204}, Pb_{206}, Pb_{207}, Pb_{208},) suitable for geochemical exploration of U and other commodities where gross differences in natural to radiogenic Pb ratios, is a benefit. Isotope values can be reported in both concentrations and intensities.

Code	Group 1F-MS	Cdn
1F01	Basic Suite (37 elements) 0.5g	**$19.40**
1F02	Basic Suite (37 elements) 15g	**$23.60**
1F03	Basic Suite (37 elements) 30g	**$27.30**
+1F08	Pd and Pt (add on)	**$2.10**
+1F09	REEs (add on)	**$6.30**
1F04	Full Suite (53 elements) 0.5g	**$22.85**
1F05	Full Suite (53 elements) 15g	**$27.05**
1F06	Full Suite (53 elements) 30g	**$30.70**
+1F07	Lead isotope (add on with any Basic or Full Suite)	**$12.60**

		Group 1F Detection	Upper Limit
Basic Suite	Au*	0.2 ppb	100 ppm
	Ag*	2 ppb	100 ppm
	Al*	0.01 %	10 %
	As	0.1 ppm	10000 ppm
	B*†	20 ppm	2000 ppm
	Ba*	0.5 ppm	10000 ppm
	Bi	0.02 ppm	2000 ppm
	Ca*	0.01 %	40 %
	Cd	0.01 ppm	2000 ppm
	Co	0.1 ppm	2000 ppm
	Cr*	0.5 ppm	10000 ppm
	Cu	0.01 ppm	10000 ppm
	Fe*	0.01 %	40 %
	Ga*	0.1 ppm	1000 ppm
	Hg	5 ppb	50 ppm
	K*	0.01 %	10 %
	La*	0.5 ppm	10000 ppm
	Mg*	0.01 %	30 %
	Mn*	1 ppm	10000 ppm
	Mo	0.01 ppm	2000 ppm
	Na*	0.001 %	5 %
	Ni*	0.1 ppm	10000 ppm
	P*	0.001 %	5 %
	Pb	0.01 ppm	10000 ppm
	S*	0.02 %	5 %
	Sb*	0.02 ppm	2000 ppm
	Sc*	0.1 ppm	100 ppm
	Se	0.1 ppm	100 ppm
	Sr*	0.5 ppm	10000 ppm
	Te	0.02 ppm	1000 ppm
	Th*	0.1 ppm	2000 ppm
	Ti*	0.001 %	5 %
	Tl	0.02 ppm	1000 ppm
	U*	0.05 ppm	2000 ppm
	V*	2 ppm	10000 ppm
	W*	0.05 ppm	100 ppm
	Zn	0.1 ppm	10000 ppm
Full Suite	Be*	0.1 ppm	1000 ppm
	Ce*	0.1 ppm	2000 ppm
	Cs*	0.02 ppm	2000 ppm
	Ge*	0.1 ppm	100 ppm
	Hf*	0.02 ppm	1000 ppm
	In	0.02 ppm	1000 ppm
	Li*	0.1 ppm	2000 ppm
	Nb*	0.02 ppm	2000 ppm
	Rb*	0.1 ppm	2000 ppm
	Re	1 ppb	10000 ppb
	Sn*	0.1 ppm	100 ppm
	Ta*	0.05 ppm	2000 ppm
	Y*	0.01 ppm	2000 ppm
	Zr*	0.1 ppm	2000 ppm
	Pt*	2 ppb	100 ppm
	Pd*	10 ppb	100 ppm

*Some elements will report partial concentrations due to refractory minerals.

†Detection limit = 1 ppm for 15g / 30g analysis.

Geochemical
4-Acid Digestion

Groups 1E & 1EX
ICP-ES & ICP-MS

Combines a strong multi-acid digestion that dissolves most minerals with a choice of either ICP-ES or ICP-MS analysis and you get highly cost-effective near-total determinations with low to very low detection limits.

A 0.25g split is heated in HNO_3-$HClO_4$-HF to fuming and taken to dryness. The residue is dissolved in HCl. Solutions are analysed by your choice of ICP-ES (Group 1E) or ICP-MS (Group 1EX).

Requires minimum 1g sample pulp.

Code	Group 1E	Cdn
	36 elements	**$13.25**
+G807	Hg (add on)	**+$11.00**

Code	Group 1EX	Cdn
	41 elements	**$18.75**
+G807	Hg (add on)	**+$11.55**

	Group 1E Detection	Group 1EX Detection	Upper Limit
Ag	0.5 ppm	0.1 ppm	200 ppm
Al*	0.01 %	0.01 %	20 %
As‡	5 ppm	1 ppm	10000 ppm
Au‡	4 ppm	0.1 ppm	200 ppm
Ba*	1 ppm	1 ppm	10000 ppm
Be*	1 ppm	1 ppm	1000 ppm
Bi	5 ppm	0.1 ppm	4000 ppm
Ca	0.01 %	0.01 %	40 %
Cd	0.4 ppm	0.1 ppm	4000 ppm
Ce	–	1 ppm	2000 ppm
Co	2 ppm	0.2 ppm	4000 ppm
Cr‡	2 ppm	1 ppm	10000 ppm
Cu	2 ppm	0.1 ppm	10000 ppm
Fe*	0.01 %	0.01 %	60 %
Hf*	–	0.1 ppm	1000 ppm
K	0.01 %	0.01 %	10 %
La	2 ppm	0.1 ppm	2000 ppm
Li	–	0.1 ppm	2000 ppm
Mg*	0.01 %	0.01 %	30 %
Mn*	5 ppm	1 ppm	10000 ppm
Mo	2 ppm	0.1 ppm	4000 ppm
Na	0.01 %	0.001 %	10 %
Nb	2 ppm	0.1 ppm	2000 ppm
Ni	2 ppm	0.1 ppm	10000 ppm
P	0.002 %	0.001 %	5 %
Pb	5 ppm	0.1 ppm	10000 ppm
Rb	–	0.1 ppm	2000 ppm
S*	0.1 %	0.1 %	10 %
Sb‡	5 ppm	0.1 ppm	4000 ppm
Sc	1 ppm	1 ppm	200 ppm
Sn*	2 ppm	0.1 ppm	2000 ppm
Sr	2 ppm	1 ppm	10000 ppm
Ta*	–	0.1 ppm	2000 ppm
Th	2 ppm	0.1 ppm	4000 ppm
Ti	0.01 %	0.001 %	10 %
U	20 ppm	0.1 ppm	4000 ppm
V	2 ppm	4 ppm	10000 ppm
W*	4 ppm	0.1 ppm	200 ppm
Y	2 ppm	0.1 ppm	2000 ppm
Zn	2 ppm	1 ppm	10000 ppm
Zr*	2 ppm	0.1 ppm	2000 ppm

*The digestion is only partial for some S, Cr and Ba minerals and some oxides of Al, Hf, Mn, Sn, Ta, Zr.

‡Volatilization during fuming may result in some loss of As, Sb and Au.

Geochemical
Ultratrace 4-Acid Digestion

Group 1T-MS
Ultratrace by ICP-MS

ICP Mass Spec analysis of a multi-acid digestion on a 0.25g split giving total to near total values for all elements.

Requires minimum 1g sample pulp.

Detection limits may change without notice due to the nature of some samples. Massive sulphide samples will cause elevated detection limits.

Code	Group 1T–MS	Cdn
	Full Suite (43 + REEs)	**$25.05**
+G807	Hg (add on)	**+$11.55**

	Detection Limit	Upper Limit
Au‡	0.1 ppm	200 ppm
Ag	20 ppb	200 ppm
Al*	0.02 %	20 %
As‡	0.2 ppm	10000 ppm
Ba*	1 ppm	10000 ppm
Bi	0.04 ppm	4000 ppm
Ca	0.02 %	40 %
Cd	0.02 ppm	4000 ppm
Co	0.2 ppm	4000 ppm
Cr	1 ppm	10000 ppm
Cu	0.02 ppm	10000 ppm
Fe*	0.02 %	60 %
Ga	0.02 ppm	100 ppm
K	0.02 %	10 %
Mg*	0.02 %	30 %
Mn*	2 ppm	10000 ppm
Mo	0.05 ppm	4000 ppm
Na	0.002 %	10 %
Ni	0.1 ppm	10000 ppm
P	0.001 %	5 %
Pb	0.02 ppm	10000 ppm
S‡	0.04 %	10 %
Sb‡	0.02 ppm	4000 ppm
Sc	0.1 ppm	200 ppm
Sr	1 ppm	10000 ppm
Th	0.1 ppm	2000 ppm
Ti	0.001 %	10 %
U	0.1 ppm	4000 ppm

	Detection Limit	Upper Limit
V	1 ppm	10000 ppm
W*	0.1 ppm	200 ppm
Zn	0.2 ppm	10000 ppm
Be*	1 ppm	1000 ppm
Cs	0.1 ppm	2000 ppm
Hf*	0.02 ppm	1000 ppm
Li	0.1 ppm	2000 ppm
Nb	0.04 ppm	2000 ppm
Rb	0.1 ppm	2000 ppm
Sn*	0.1 ppm	2000 ppm
Ta*	0.1 ppm	2000 ppm
Y	0.1 ppm	2000 ppm
Zr*	0.2 ppm	2000 ppm
La	0.1 ppm	2000 ppm
Ce	0.02 ppm	2000 ppm
Pr	0.1 ppm	2000 ppm
Nd	0.1 ppm	2000 ppm
Sm	0.1 ppm	2000 ppm
Eu	0.1 ppm	2000 ppm
Gd	0.1 ppm	2000 ppm
Tb	0.1 ppm	2000 ppm
Dy	0.1 ppm	2000 ppm
Ho	0.1 ppm	2000 ppm
Er	0.1 ppm	2000 ppm
Tm	0.1 ppm	2000 ppm
Yb	0.1 ppm	2000 ppm
Lu	0.1 ppm	2000 ppm

*The digestion is only partial for some Cr and Ba minerals and some oxides of Al, Fe, Hf, Mn, Sn, Ta, Zr.

‡Volatilization during fuming may result in some loss of Au, As, S, and Sb

Geochemical
Single Elements

Group 2A
Special Extraction

Sample minimum 2g pulp

Code	Element	Method	Detection	Cdn
2A01	B	Na_2O_2 Fusion / ICP	3 ppm	**$11.00**
2A04	F	Fusion, analysis by specific ion electrode	10 ppm	**$11.00**
2A05	LOI	Loss on Ignition @ 1000°C (or 500°C)	0.1 %	**$9.20**
2A06	pH	pH Electrode	0.1 unit	**$9.20**
2A07	Conductivity	Conductivity Electrode	3 µS/cm	**$9.20**
2A67		pH and Conductivity		**$13.10**

Group 2A
Leco Analysis

Sample minimum 2g pulp

Code	Element	Method	Detection	Cdn
2A08	Total C	Leco (total as C)	0.02 %	**$13.40**
2A09	Graphite C	Ignite 600°C, HCl leach, residue by Leco	0.02 %	**$18.10**
2A10	Organic C	Total C (2A08) minus graphite C (2A09) and carbonate (2A11)	0.02 %	**$29.90**
2A11	Inorganic C	Direct CO_2 evolution and Leco analysis	0.02 %	**$13.40**
2A12	C & S	Both by Leco	0.02 %	**$14.70**
2A13	Total S	Total S by Leco	0.02 %	**$13.40**
		Surcharge on S > 20%, add		**$6.30**
2A14	Sulphate	Leco after ignition at 550°C	0.05 %	**$18.10**
2A15	Sulphide	Total S (2A13) minus Sulphate S (2A14)	0.05 %	**$19.70**
2A18	Sulphate	Gravimetric after $NaCO_3$ fusion	0.05 %	**$25.00**

Geochemical
Single Elements

Group 2X
XRF
Minor Element Analyses

Sample must be in fine grain, -200 mesh.

A minimum of 15 grams of sample is required.

Sample is mixed and pressed into a disc and analyzed by XRF (Siemen).

Note: XRF Fusion (Group 8X) is recommended for Pressed Pellet (2X) over-limits.

Group 2X	Cdn
First Element	**$8.90**
Second Element	**$2.10**

Element	Detection Limit	Upper Limit
Ba	10 ppm	4000 ppm
Ce	3 ppm	2000 ppm
Cs	3 ppm	1000 ppm
Hf	3 ppm	1000 ppm
La	2 ppm	2000 ppm
Nb	2 ppm	3000 ppm
Nd	2 ppm	1000 ppm
Rb	2 ppm	1000 ppm
Sc	2 ppm	1000 ppm
Se	2 ppm	1000 ppm
Sm	2 ppm	1000 ppm
Sn	2 ppm	1000 ppm
Sr	2 ppm	4000 ppm
Th	2 ppm	4000 ppm
U	2 ppm	2000 ppm
V	2 ppm	2000 ppm
W	3 ppm	2000 ppm
Y	2 ppm	2000 ppm
Zr	2 ppm	2000 ppm

Group 5A
Neutron Activation

Analysis by affiliate laboratory.

Total determination of Au plus 34 elements by gamma ray analysis after nuclear irradiation. Requires 5 – 30g pulp.

Group 5A	Cdn
Full Suite	**$22.05**

Element	Det. Limit
Au	2 ppb
Ag	5 ppm
As	0.5 ppm
Ba	50 ppm
Br	0.5 ppm
Ca	1 %
Ce	3 ppm
Co	1 ppm
Cr	5 ppm
Cs	1 ppm
Eu	0.2 ppm
Fe	0.01 %
Hf	1 ppm
Hg	1 ppm
Ir	5 ppb
La	0.5 ppm
Lu	0.05 ppm
Mo	1 ppm

Element	Det. Limit
Na	0.01 %
Nd	5 ppm
Ni	100 ppm
Rb	15 ppm
Sb	0.1 ppm
Sc	0.1 ppm
Se	3 ppm
Sm	0.1 ppm
Sn	0.01 %
Sr	0.05 %
Ta	0.5 ppm
Th	0.2 ppm
Tb	0.5 ppm
U	0.5 ppm
W	1 ppm
Yb	0.2 ppm
Zn	50 ppm

Geochemical
Precious Metals

Group 3A
Au by Wet Digestion

Recommended for soils, sediments, vegetation or reconnaissance rock samples. Samples are digested in Aqua Regia then analysed by ICP-Mass Spec.

Code	Element	Detection Limits	Upper Limits	Method	Cdn
3A01	Au	0.5 ppb	10 ppm	15g / Aqua Regia digestion / ICP–MS	**$10.50**
+3A02				30g sample (add on)	**+$3.95**
				Ignition for rocks*	**+$1.30**

*Refractory, massive sulphide and graphitic samples can limit Au solubility. Rock samples are ignited at 550˚C before Aqua Regia leaching.

Group 3B & 3B-MS
Au & PGMs by Fire Geochem

A lead-collection fire-assay fusion for total sample decomposition, digestion of the Ag dore bead and ICP-ES (Group 3B) or ICP-MS (Group 3B-MS) analysis. Group 6 precious metals assay recommended for Au or PGMs over 1000 ppb.

Code	Package	Element	Detection Limits	Upper Limits	Method	Cdn
3B01	Group 3B	Au	2 ppb	10 ppm	30g / Ag inquart fire assay fusion / ICP–ES	**$16.00**
3B02		Au Pt Pd	2 ppb 3 ppb 2 ppb	10 ppm 10 ppm 10 ppm	30g / Ag inquart fire assay fusion / ICP–ES	**$17.65**
3B03	Group 3B-MS	Au Pt Pd	1 ppb 0.1 ppb 0.5 ppb	1 ppm 1 ppm 1 ppm	30g / Ag inquart fire assay fusion / ICP–MS	**$21.00**
+3B04					50g sample (add on)	**+$3.15**

Note: Sulphide-rich samples require a 15g or smaller sample for proper fusion.

Assay
Precious Metals

Group 6
Fire Assay

Code	Element	Detection	Upper Limit	Method	Cdn
G601	Au	0.005 g/t	10 ppm	Fire Assay 30g – AA Finish (Automatic Grav Overlimits)	**$16.00**
G602		0.9 g/t		Metallics Fire Assay**	**$28.65**
G603	Au, Ag*	(Ag) 2 g/t	(Au) 10 ppm (Ag) 300 ppm	Au by Fire Assay 30g – AA Finish Ag by 7AR	**$21.00**
G604				Metallics Fire Assay**	**$34.10**
G605				Include all Group 7AR elements	**+$8.65**
G606	Au, Pt, Pd	0.01 g/t	10 ppm	Fire Assay on 30g sample	**$20.50**
G607				Metallics Fire Assay**	**$33.45**
G613	Ag			Fire Assay on 30g sample Gravimetric	**$19.60**
G614	Ag			Fire Assay on 50g sample Gravimetric	**$22.40**
G615	Au	0.005 g/t	10 ppm	Fire Assay 30g duplicate minus fraction for metallics F.A.	**$44.65**
Add On Options					
+G610				50g sample	**+$2.80**
+G612	Au and Ag only			Gravimetric Finish (add on)	**+$3.60**

*Ag by Group 7AR detection limit 2g/t to 300g/t

**All metallic fire assay requires preparation by M150 or M200

For metallic fire assay, the plus fraction is finished gravimetrically and the minus fraction is finished by AA.

Lithogeochemical
Whole Rock Major & Trace Element Analysis

Group 4A
Whole Rock by ICP

A cost-effective rock characterization package comprising four separate analytical tests.

Total abundances of the major oxides and several minor elements are reported on a 0.2g sample analysed by ICP-emission spectrometry following a Lithium metaborate/ tetraborate fusion and dilute nitric digestion. Loss on ignition (LOI) is by weight difference after ignition at 1000°C.

Unique to our lab is the addition of total carbon and sulphur analysis by Leco.

Code	Group 4A	Cdn
4A01	Any 1 element	**$16.05**
4A02	Basic Suite (21 parameters)	**$30.00**
4A03	Extended Package* (Basic Suite + Ce Co Cu Zn)	**$33.60**
4A04	Major Oxides & LOI (no C or S)	**$25.60**

Group 4X
Whole Rock by XRF

$LiBO_2$ fusion followed by XRF analysis for major oxides and LOI. X-ray fluorescence is a physical method that does not suffer from difficulties such as small sample size, incomplete dissolution, matrix effects and sample inhomogeneity found in "wet" methods.

Requires a 12g sample pulp.

Code	Group 4X	Cdn
4X01	Basic Suite	**$34.65**
4X02	No C or S	**$30.45**
4X03	Basic Suite + extended 22 elements + LOI	**$37.80**

Group 4B
Total Trace Elements by ICP-MS

This is the perfect addition to Group 4A. This package comprises two separate analyses. Rare earth and refractory elements are determined by ICP mass spectrometry following a Lithium metaborate / tetraborate fusion and nitric acid digestion of a 0.2g sample (same decomposition as Group 4A). In addition a separate 0.5g split is digested in Aqua Regia and analysed by ICP Mass Spectrometry to report the precious and base metals (in highlight). This is the same method as Group 1DX.

Prices are for routine geological samples. Acme may refuse to analyse or charge extra for non-geological materials.

Group 4A and 4B each require 5g for analysis, 10g for combined package (Group 4A-4B).

Code	Group 4B	Cdn
4B01	Any 1 element	**$18.75**
4B02	Full Suite (45 elements)	**$40.15**
4B03	Refractory and REEs only	**$29.40**
4A4B	(4A02 + 4B02)	**$58.80**
4X4B	(4X01 + 4B02)	**$60.15**

Basic Suite	Group 4A Detection Limit	Group 4X01 Detection Limit	Upper Limit
SiO_2	0.01 %	0.01 %	100 %
Al_2O_3	0.01 %	0.01 %	100 %
Fe_2O_3	0.04 %	0.01 %	100 %
CaO	0.01 %	0.01 %	100 %
MgO	0.01 %	0.01 %	100 %
Na_2O	0.01 %	0.01 %	100 %
K_2O	0.01 %	0.01 %	100 %
MnO	0.01 %	0.01 %	100 %
TiO_2	0.01 %	0.01 %	100 %
P_2O_5	0.01 %	0.01 %	100 %
Cr_2O_3	0.002 %	0.001 %	100 %
Ba	5 ppm	0.01 %	5 %
LOI	0.1 %	0.1 %	100 %
C*	0.02 %	0.02 %	100 %
S*	0.02 %	0.02 %	100 %
* Group 4X02 has no C or S			

Extended Package	Group 4X03 Detection Limit	Upper Limit
Cu	0.001 %	8 %
Ni	0.001 %	10 %
Pb	0.001 %	10 %
SO_3	0.002 %	60 %
Sr	0.002 %	40 %
V_2O_5	0.002 %	15 %
Zn	0.001 %	8 %
Zr	0.002 %	50 %

	Group 4A Det. Limit	Group 4B Det. Limit	Upper Limit
Au	–	0.5 ppb	100 ppm
Ag	–	0.1 ppm	100 ppm
As	–	1 ppm	10000 ppm
Ba	5 ppm	1 ppm	50000 ppm
Be	–	1 ppm	10000 ppm
Bi	–	0.1 ppm	2000 ppm
Cd	–	0.1 ppm	2000 ppm
Co	20 ppm*	0.2 ppm	10000 ppm
Cs	–	0.1 ppm	10000 ppm
Cu	5 ppm*	0.1 ppm	10000 ppm
Ga	–	0.5 ppm	10000 ppm
Hf	–	0.1 ppm	10000 ppm
Hg	–	0.1 ppm	50 ppm
Mo	–	0.1 ppm	2000 ppm
Nb	5 ppm	0.1 ppm	50000 ppm
Ni	20 ppm	0.1 ppm	10000 ppm
Pb	–	0.1 ppm	10000 ppm
Rb	–	0.1 ppm	10000 ppm
Sb	–	0.1 ppm	2000 ppm
Sc	1 ppm	–	10000 ppm
Se	–	0.5 ppm	100 ppm
Sn	–	1 ppm	10000 ppm
Sr	2 ppm	0.5 ppm	50000 ppm
Ta	–	0.1 ppm	50000 ppm
Th	–	0.2 ppm	10000 ppm
Tl	–	0.1 ppm	1000 ppm
U	–	0.1 ppm	10000 ppm
V	–	8 ppm	10000 ppm
W	–	0.5 ppm	10000 ppm
Y	3 ppm	0.1 ppm	50000 ppm
Zn	5 ppm*	1 ppm	10000 ppm
Zr	5 ppm	0.1 ppm	50000 ppm
La	–	0.1 ppm	50000 ppm
Ce	30 ppm*	0.1 ppm	50000 ppm
Pr	–	0.02 ppm	10000 ppm
Nd	–	0.3 ppm	10000 ppm
Sm	–	0.05 ppm	10000 ppm
Eu	–	0.02 ppm	10000 ppm
Gd	–	0.05 ppm	10000 ppm
Tb	–	0.01 ppm	10000 ppm
Dy	–	0.05 ppm	10000 ppm
Ho	–	0.02 ppm	10000 ppm
Er	–	0.03 ppm	10000 ppm
Tm	–	0.01 ppm	10000 ppm
Yb	–	0.05 ppm	10000 ppm
Lu	–	0.01 ppm	10000 ppm

Note: Highlighted elements by Aqua Regia/ ICP-MS analysis in 4B package.

Lithogeochemical
Whole Rock Major & Trace Element Analysis

Group 4 NILAT
For Nickel-Laterite

Exploration and evaluation of nickel laterite requires total determination and mass balance accounting of the major rock-forming elements and the commodity elements Ni, Cu and Co. Acme delivers these requirements with Group 4A-7TD that combines a cost effective whole-rock determination and a total-digestion, multi-element assay.

The package contains four separate analytical tests that report 23 parameters (11 major oxides, 10 minor and trace elements, loss on ignition and SUM). SUM is the sum total of these constituents that gives a mass balance close to 100% when all the major constituents are accurately determined and accounted for. The redundancy of two separate Ni determinations (Group 4A and Group 7TD) provides an additional check on accuracy.

Samples must be dried (prep method D105) prior to analysis.

Group 4 NILAT	Cdn
Full Suite 23 elements	**$37.80**
C+S option	**+$5.25**

Requires 10g for analysis.

Full Suite Elements	Detection Limit
SiO_2	0.01 %
Al_2O_3	0.01 %
Fe_2O_3	0.04 %
CaO	0.01 %
MgO	0.01 %
Na_2O	0.01 %
K_2O	0.01 %
MnO	0.01 %
TiO_2	0.01 %
P_2O_5	0.01 %
Cr_2O_3	0.002 %
LOI	0.01 %
SUM	0.01 %
Ba	5 ppm
Co	0.001 %
Cu	0.001 %
Nb	5 ppm
Ni	20 ppm
Ni	0.001 %
Sc	1 ppm
Sr	2 ppm
Y	3 ppm
Zr	5 ppm

Optional Elements	Detection Limit
C	0.02 %
S	0.02 %

Group 4
Laterite Package

A predetermined amount of sample is dried at 105˚C to remove the moisture, then roasted at 1000˚C to determine the loss on ignition (LOI).

The roasted sample is then fused in a platinum-gold crucible with a commercial lithium tetraborate/metaborate flux and cast into a disc. Fused discs are analyzed by XRF (PANalytical Axios).

Group 4X20	Cdn
Full Suite	**$42.50**

Group 4X21	Cdn
Plus C and S	**$47.80**

Requires 25g for analysis.

Full Suite	Detection Limit	Upper Limit
SiO_2	0.01 %	100 %
Al_2O_3	0.01 %	60 %
Fe_2O_3	0.01 %	100 %
CaO	0.01 %	50 %
MgO	0.01 %	50 %
Na_2O	0.01 %	30 %
K_2O	0.01 %	15 %
MnO	0.01 %	75 %
TiO_2	0.01 %	40 %
P_2O_5	0.01 %	40 %
Cr_2O_3	0.01 %	20 %
Ba	0.01 %	15 %
Ni	0.001 %	20 %
Co	0.001 %	5 %
Cu	0.001 %	8 %
Pb	0.001 %	5 %
SO_3	0.002 %	60 %
Sn	0.01 %	5 %
Sr	0.002 %	40 %
Zn	0.001 %	10 %
Zr	0.002 %	20 %
V_2O_5	0.002 %	15 %
LOI (roast at 1000˚C)	0.1 %	

Extended Package	Detection Limit	Upper Limit
C	0.02 %	100 %
S	0.02 %	100 %

Lithogeochemical
Whole Rock Major & Trace Element Analysis

Group 4
Bauxite Package

A predetermined amount of sample is dried at 105˚C to remove the moisture, then roasted at 1050˚C to determine the loss on ignition (LOI).

The roasted sample is then fused in a platinum-gold crucible with a commercial lithium tetraborate/metaborate flux and cast into a disc. Fused discs are analyzed by XRF (PANalytical Axios).

Group 4X10	Cdn
Full Suite	**$37.80**

Requires 25g for analysis.

Full Suite	Detection Limit	Upper Limit
SiO_2	0.01 %	100 %
Al_2O_3	0.01 %	100 %
Fe_2O_3	0.01 %	100 %
CaO	0.01 %	100 %
MgO	0.01 %	100 %
Na_2O	0.01 %	100 %
K_2O	0.01 %	100 %
MnO	0.01 %	100 %
TiO_2	0.01 %	100 %
P_2O_5	0.01 %	100 %
Cr_2O_3	0.001 %	10 %
Ba	0.01 %	50 %
LOI (roast at 1050˚C)	0.1 %	100 %
Zn	0.001 %	8 %
Zr	0.002 %	50 %
Sr	0.002 %	40 %
V_2O_5	0.002 %	15 %
SO_3	0.002 %	60 %

Group 4
Iron Ore Package

Following the ISO-9516 guideline, use lithium tetraborate, lithium metaborate and sodium nitrate to fuse dried iron ore samples. Moisture and LOI will be done separately at 105˚C and 1000˚C.

The fused sample is cast into a disc and analyzed by XRF (PANalytical Axios).

Group 4X30	Cdn
Full Suite	**$48.80**

Requires 25g for analysis.

Full Suite	Detection Limit	Upper Limit
SiO_2	0.01 %	80 %
Al_2O_3	0.01 %	40 %
Fe_2O_3	0.01 %	100 %
CaO	0.01 %	30 %
MgO	0.01 %	50 %
K_2O	0.01 %	40 %
MnO	0.01 %	80 %
TiO_2	0.01 %	20 %
P_2O_5	0.01 %	40 %
Cr_2O_3	0.004 %	10 %
As	0.003 %	5 %
Ba	0.004 %	10 %
Co	0.001 %	5 %
Cu	0.001 %	10 %
Ni	0.001 %	5 %
Pb	0.001 %	10 %
S	0.001 %	10 %
Sn	0.003 %	5 %
Sr	0.002 %	5 %
Zn	0.001 %	10 %
Zr	0.002 %	10 %
V_2O_5	0.002 %	10 %
LOI (roast at 1000˚C)	0.1 %	

Note: Sodium (Na_2O) is not reportable with this package as sodium nitrate is part of the fusion flux.

Lithogeochemical
Whole Rock Major & Trace Element Analysis

Group 4
Iron Ore Package (without Arsenic and Sulphur)

A predetermined amount of sample is dried at 105˚C to remove the moisture, then roasted at 1000˚C to determine the loss on ignition (LOI).

The roasted sample is then fused in a platinum-gold crucible with a commercial lithium tetraborate/metaborate flux and cast into a disc. Fused discs are analyzed by XRF (PANalytical Axios).

Group 4X31 (no As + S)	Cdn
Full Suite	**$45.65**

Requires 25g for analysis.

Full Suite	Detection Limit	Upper Limit
SiO_2	0.01 %	80 %
Al_2O_3	0.01 %	40 %
Fe_2O_3	0.01 %	100 %
CaO	0.01 %	30 %
MgO	0.01 %	50 %
K_2O	0.01 %	40 %
MnO	0.01 %	80 %
Na_2O	0.01 %	30 %
TiO_2	0.01 %	20 %
P_2O_5	0.01 %	40 %
Cr_2O_3	0.004 %	10 %
Ba	0.004 %	10 %
Co	0.001 %	5 %
Cu	0.001 %	10 %
Ni	0.001 %	5 %
Pb	0.001 %	10 %
Sn	0.003 %	5 %
Sr	0.002 %	5 %
Zn	0.001 %	10 %
Zr	0.002 %	10 %
V_2O_5	0.002 %	10 %
LOI (roast at 1000˚C)	0.1 %	

Lithogeochemical
Optical & Mineralogical Studies

Sample Preparation for Optical Studies

	Cdn
Thin sections: standard 27 x 46mm with/without coverslip Other sizes upon request	**$30.00**
Impregnation (where required), sample dependent	**$5.80**
Casting (mill concentrates, drill chips, etc.)	**cost is sample dependent**
Polished sections	**$46.20**
Polished thin sections	**$63.00**
K-feldspar staining (thin sections or off-cuts)	**$6.00**
Slabbing, lapping, display polishing	**hourly charge**

Specialized Mineralogical Studies

Results are provided in report form, illustrated with photographs where appropriate.

Estimates available upon request.

	Cdn
Mineral identification by XRD – diffraction pattern/interpretation	**$105.00**
Reflected and transmitted light microscopy	**hourly charge**
Photomicrography	
Alteration mineral studies	
Examination of alluvial concentrates	
Studies of metallurgical test products	

Geochemical
Sequential Leaches

Group 1SL Sequential Leaches

Selective or sequential extractions can target elements held by a specific soil phase or range of phases thus allowing better interpretation of geochemical processes.

Used sequentially, the leaches can determine elements occurring in surface soils as salts or adsorbed ions on clays, organic compounds and amorphous Mn and Fe hydroxides. Used singularly, the stronger leaches are less selective. Contact our geochemist for further information.

Sample minimum 2.5g pulp per leach.

Group 1SLW A demineralized water leach for extracting the water-soluble component.

Group 1SLE 1 M ammonium acetate leach for exchangeable cations adsorbed by clay and elements co-precipitated with carbonates.

Group 1SLO 0.1 M sodium pyrophosphate leach for elements adsorbed by organic matter (humic and fulvic compounds).

Group 1SLM 0.1 M hydroxylamine leach for elements adsorbed by amorphous Mn hydroxide, often the most reactive soil phase for scavenging mobile elements.

Group 1SLF 0.25 M hydroxylamine leach for elements adsorbed by amorphous Fe hydroxide and more crystalline Mn hydroxide.

Group 1SL	Cdn
Separate, per leach	**$27.05**
Sequential, per leach	**$34.40**
Set up charge, first leach	**$367.50**
Set up charge, additional	**$241.50**

	Group 1SLW	Group 1SLE	Group 1SLO	Group 1SLM	Group 1SLF
Al	1000	1000	1000	1000	1000
Ca	5000	5000	5000	5000	5000
Fe	100	5000	5000	5000	5000
K	2000	5000	5000	5000	5000
Mn	50	50	50	50	50
Mg	100	1000	1000	1000	1000
Na	3000	–	–	–	–
P	100	5000	–	5000	5000
Ti	50	1000	1000	1000	1000
Au	1	1	1	1	1
Ag	0.5	3	3	3	3
As	5	100	100	100	100
Ba	10	50	50	50	50
Be	1	20	20	20	20
Bi	0.5	5	5	5	5
Br	10	–	–	–	–
Cd	0.5	20	20	20	20
Ce	1	5	5	5	5
Cl	2000	–	–	–	–
Co	1	20	20	20	20
Cs	0.5	5	5	5	5
Cu	5	20	20	20	20
Dy	0.1	5	5	5	5
Er	0.1	5	5	5	5
Eu	0.1	5	5	5	5
Ga	0.5	20	50	20	20
Gd	0.1	5	5	5	5
Ge	0.1	50	50	50	50
Hf	0.1	20	20	20	20
Hg	1	5	5	5	5
Ho	0.05	20	20	20	20
In	0.05	10	10	10	10

	Group 1SLW	Group 1SLE	Group 1SLO	Group 1SLM	Group 1SLF
La	2	5	5	5	5
Li	0.1	20	20	20	20
Lu	0.05	5	5	5	5
Mo	1	10	10	10	10
Nb	0.5	10	10	10	10
Nd	1	5	5	5	5
Ni	5	50	50	50	50
Pb	3	20	20	20	20
Pr	0.5	5	5	5	5
Rb	2	5	5	5	5
Re	0.05	2	2	2	2
S	10000	–	–	–	–
Sb	1	5	5	5	5
Sc	20	100	100	100	100
Se	5	200	200	200	200
Sm	0.5	5	5	5	5
Sn	1	20	20	20	20
Sr	10	20	20	20	20
Ta	0.5	20	20	20	20
Tb	0.05	5	5	5	5
Te	1	20	20	20	20
Th	2	20	20	20	20
Tl	0.2	5	5	5	5
Tm	0.05	5	5	5	5
U	0.1	5	5	5	5
V	50	50	50	50	50
W	2	10	10	10	10
Y	1	5	5	5	5
Yb	0.5	5	5	5	5
Zn	10	100	100	100	100
Zr	1	20	20	20	20

Note: All detection limits in ppb

Assay
Single Element

Group 8X
XRF

Trace elements by fused disc.

A predetermined amount of sample is roasted at 1050˚C to determine the loss.

Sample preparation: on ignition (LOI). The roasted sample is then fused in a platinum-gold crucible with a commercial lithium tetraborate flux. Fused discs are analysed by XRF.

Group 8X	Cdn
First Element	**$16.55**
Second Element	**$5.00**

Requires 20g sample for analysis.

Element	Detection Limit
Ba	0.01 %
Ce	0.01 %
Cs	0.01 %
CrO_2	0.01 %
Hf	0.01 %
La	0.01 %
Nb	0.01 %
Nd	0.01 %
Rb	0.01 %
Sm	0.01 %
Sn	0.01 %
Sr	0.01 %
Ta	0.01 %
Th	0.01 %
U	0.01 %
W	0.01 %
Y	0.01 %
Zr	0.01 %

Note: Surcharges may apply for high Sulphur

Group 8
Single Element Assays

The following methods require a minimum of 1g of sample pulp except for precious-metal assays that require a minimum of 30g.

Code	Element	Cdn
G816	Zn by titration	**$29.95**
G817	Pb by titration	**$29.95**
G818	Fe by titration	**$29.95**
G819	SiO_2 (gravimetric)	**$26.25**
G820	Cu – volumetric titration	**$36.75**
G822	Fe – high grade assay	**$20.00**
G823	Pb or Zn oxide (non sulphide)	**$25.00**
G824	Acid insoluble	**$20.00**

Code	Element		Cdn
G801	Copper – Non-Sulphide	CuO	**$17.30**
G802	Molyoxide Leach	MoO	**$17.30**
G803	Fluorine	F	**$18.10**
G804	Gallium	Ga	**$18.10**
G805	Germanium	Ge	**$17.20**
G806	Iron – Ferrous	FeO	**$22.80**
G807	Mercury (to 50 ppm)	Hg	**$11.55**
G808	Moisture (110°C)	H_2O^-	**$6.80**
G809	Lattice Water (1000°C)*	H_2O^+	**$27.30**
G810	Nickel sulphide	Ni	**$27.30**
G812	Specific Gravity Pulp	SG	**$13.25**
G813	Specific Gravity Core	SG	**$13.25**
G814	Ba by Na_2CO_3 / K_2CO_3 fusion		**$27.55**

*includes correction for FeO

Assay
Multi-Element

Group 7
ICP & ICP-MS

The following multi-element assays provide optimum precision and accuracy for high-grade rock and drill core samples with a selection of digestion methods to best suit the ore type.

Groups 7AR, 7TD and 7PF report %-level concentrations as determined by ICP emission spectrometry.

Two new packages (Groups 7AX and 7TX) combine both ICP emission spectrometry and ICP mass spectrometry analysis to extend the lower detection limits and provide a broader spectrum of elements.

Group 7KP will provide total values for select elements.

Sample minimum 1g pulp.

Group 7AR
Hot Aqua Regia digestion for base-metal sulphide and precious-metal ores. ICP-ES analysis.

Group 7AX
Same digestion as 7AR above but includes ICP-ES and ICP-MS analysis.

Group 7TD
Hot 4-Acid digestion for sulphide and silicate ores. ICP-ES analysis.

Group 7TX
Same digestion as 7TD above but includes ICP-ES and ICP-MS analysis.

Group 7PF
Sodium peroxide fusion for refractory-mineral ores.

Group 7KP
Phosphoric acid digestion for select elements.

Code	Group 7AR	Cdn
7AR1	Any element	**$11.15**
7AR2	Full Suite	**$15.45**
7AX1	**Group 7AX**	**$21.00**

Code	Group 7TD	Cdn
7TD1	Any element	**$13.25**
7TD2	Full Suite	**$17.65**
7TX1	**Group 7TX**	**$25.45**

Code	Group 7PF	Cdn
7PF1	Any element	**$14.95**
7PF2	Full Suite	**$19.30**

Code	Group 7KP	Cdn
7KP1	Any element	**$13.90**
7KP2	Full suite	**$17.65**

	G7AR	G7AX		G7TD	G7TX		G7PF		G7KP
	Det. Lim.	Det. Lim.	Upper Limit	Det. Lim.	Det. Lim.	Upper Limit	Det. Lim.	Upper Limit	Det. Lim.
Ag	2 g/t	0.5 ppm	300 g/t	2 g/t	0.5 ppm	300 g/t	–		–
Al	0.01 %	0.01 %		0.01 %	0.01 %		0.01 %	50%	–
As	0.01 %	5 ppm		0.02 %	5 ppm		0.007 %	10%	–
Ba	–	5 ppm		–	5 ppm		–		–
Be	–	–		–	5 ppm		–		–
Bi	0.01 %	0.5 ppm		0.01 %	0.5 ppm		–		–
Ca	0.01 %	0.01 %		0.01 %	0.01 %		0.006 %	50%	–
Cd	0.001 %	0.5 ppm		0.001 %	0.5 ppm		–		–
Ce	–	–		–	5 ppm		–		–
Co	0.001 %	0.5 ppm		0.001 %	1 ppm		0.001 %		–
Cr	0.001 %	0.5 ppm		0.001 %	1 ppm		0.006 %		–
Cu	0.001 %	0.5 ppm	10%	0.001 %	0.5 ppm		0.008 %		–
Fe	0.01 %	0.01 %		0.01 %	0.01 %		0.02 %		–
Ga	–	5 ppm		–	–		–		–
Hf	–	–		–	0.5 ppm		–		–
Hg	0.001 %	0.05 ppm		–	–		–		–
K	0.01 %	0.01 %		0.01 %	0.01 %		0.02 %	30%	–
La	–	0.5 ppm		–	0.5 ppm		–		–
Li	–	–		–	0.5 ppm		0.001 %		–
Mg	0.01 %	0.01 %		0.01 %	0.01 %		0.01 %	30%	–
Mn	0.01 %	5 ppm		0.01 %	5 ppm		0.001 %		–
Mo	0.001 %	0.5 ppm	20%	0.001 %	0.5 ppm		–		0.001 %
Na	0.01 %	0.01 %		0.01 %	0.01 %		–		–
Nb	–	–		–	0.5 ppm		–		0.001 %
Ni	0.001 %	0.5 ppm		0.001 %	0.5 ppm		0.002 %		–
P	0.001 %	0.001 %		0.01 %	0.01 %		–		–
Pb	0.01 %	0.5 ppm	4%	0.02 %	0.5 ppm	10%	0.03 %	30%	–
Rb	–	–		–	0.5 ppm		–		–
S	0.05 %	0.05 %		0.05 %	0.05 %		0.01 %	60%	–
Sb	0.001 %	0.5 ppm		0.01 %	0.5 ppm		–		–
Sc	–	0.5 ppm		–	1 ppm		–		–
Se	–	2 ppm		–	–		–		–
Sn	–	–		–	0.5 ppm		0.005 %		–
Sr	0.001 %	5 ppm		0.01 %	5 ppm		–		–
Ta	–	–		–	0.5 ppm		–		0.001 %
Th	–	0.5 ppm		–	0.5 ppm		–		–
Ti	–	0.001 %		–	0.001 %		0.002 %	30%	–
Tl	–	0.5 ppm		–	–		–		–
U	–	0.5 ppm		–	0.5 ppm		–		0.001 %
V	–	10 ppm		–	10 ppm		–		–
W	0.001 %	0.5 ppm		0.01 %	0.5 ppm		–		0.005 %
Y	–	–		–	0.5 ppm		–		–
Zn	0.01 %	5 ppm	20%	0.01 %	5 ppm	40%	0.002 %		–
Zr	–	–		–	0.5 ppm		–		–

Note: Highlights in table indicate partial digestion if refractory minerals are present.

Assay
Single Element

	Method	Element	Detection	
Group 8AR	Aqua regia digestion ore grade / AAS	Ag	1-1000 ppm	Prices available upon request
		Cu	0.001-10 %	
		Mo	0.001-10 %	
		Fe	0.001-10 %	
		Zn	0.01-30 %	
		Pb	0.01-10 %	
		As	0.01-10 %	
Group 8TD	4 Acid digestion ore grade / AAS	Ag	1-1000 ppm	Prices available upon request
		Cu	0.001-10 %	
		Mo	0.001-10 %	
		Fe	0.001-10 %	
		Zn	0.01-30 %	
		Pb	0.01-30 %	

Analysis at AcmeLabs Santiago, Chile

Group 9

Code	Method	Element	Detection	Cdn$ First Element	Cdn$ Additional Element
G901	CuS Citric Acid 1M / AAS	CuS	0.001-10 %	**$12.85**	-
G902	CuS Sulfuric Acid 5% / AAS	CuSH	0.001-10 %	**$12.85**	-
G903	CuS NaCN / AAS	CuCN	0.01-10 %	**$12.85**	-
G904	Sequential Copper (CuSH, CuCN, CuR)	CuSeq		**$34.90**	-
G905	BLEG, Cyanide leach for 12 hours Organic extraction / AAS	Au	0.1 ppb	**$25.70**	**$2.60**
		Ag	0.1 ppb		
		Cu	0.01 ppm		
		Zn	0.01 ppm		
G906	Bottle Roll Test, Cyanide leach on 500g pulp / AAS	Au	0.01 ppm	**$45.40**	-
G907	Bottle Roll Test, Cyanide leach on 20g pulp / AAS	Au	0.01 ppm	**$19.40**	**$6.55**
		Cu	0.01 ppm		

Special Exploration Packages

Code	Description	Cdn
Geo1	Group 1D + Group 3A (with ignition for rock samples)	**$19.00**
Geo2	Group 1DX (Aqua Regia/ICP-MS 0.5g) + Group 3B (fire geochem Au)	**$27.30**
Geo3	Group 4A (Whole Rock Majors) + Group 4B (Trace Elements)	**$58.80**
Geo4	Group 1D (32 element AR/ICP) + Group 3B02 (fire geochem Au, Pt, Pd)	**$25.35**
Geo5	Group 1T + 7 (Au, As, Hg, Sb, Se, Te and Tl by 0.5g Aqua Regia/ICP-MS)	**$37.40**
Geo6	Group 1EX (41 element 4-acid/ICP) + Group 3A (Au wet geochem)	**$26.25**
Assay2	Group 7AR (multi-element assay by ICP) + Group 6 (Au Fire Assay)	**$29.40**
Assay3	Group 1DX (Aqua Regia /ICP-MS 0.5g) + Group 6 (Au Fire Assay on 30g)	**$28.75**

Water

The mobility of water makes it an excellent exploration tool. As water contacts an ore deposit, major changes occur in its chemical composition. This can occur as rain causing weathering on rocks or flowing underground water. These water soluble weathering products and suspended matter can then be compared to background levels of chemical elements in the water to aid in determining the dispersion pattern.

The sensitivity of the ICP-Mass Spectrometers at AcmeLabs provides the ultra low detection limits required to determine background and anomalous levels.

Note: Batch charge for sample submissions of less than 20 samples: CDN$50.00.

Index

Sample Preparation & Preservation

Samples received by AcmeLabs are run as received. In order to ensure the most accurate readings of samples submitted it is recommended that the following handling procedures be considered when planning your sampling and choosing a method of delivery for samples.

SAMPLING

In order to ensure a representative sample, samples should be collected in pre-cleaned, HDPE plastic bottles that have been rinsed with sample three times prior to use. Keep in mind that if dissolved metals are required the sample should be filtered through a 0.45 filter prior to acidification

PRESERVATION

If anions, pH alkalinity or conductivity are required samples should be kept refrigerated.

For metals analysis due to the problems of absorption or precipitation the sample should be acidified to pH <2 as soon as possible after collection with environmental grade (ultra pure) nitric acid. Pre-acidifying sample bottles before a sampling program is not recommended as this can result in leaching of metals from the bottle. Unacidified filtered samples can be acidified at the laboratory but must sit for seven days to dissolve any absorbed or precipitated metals.

Important: Acidified water samples can not be analysed for anions and a second unacidified sample should be sent if required.

The following table summarizes the BC Ministry of Water, Land and Air Protection's recommendations for sample preservation and holding times which should be considered when planning your sampling and choosing a method of delivery for samples.

Analyte	Recommended Preservation	Stability
F	None required	28 days
pH	Store cool 4C	72 hours
Conductivity	Store cool 4C	28 days
Alkalinity	Store cool 4C	72 hours
Anions	Store cool 4C	48 hours – 28 days
Metals	Nitric acid to pH<2	6 months – metal dependent

Geochemical
Water Analysis

Group 2B
Water Analysis

Sample minimum 50mL

Code	Parameter	Method	Detection	Cdn
2B01	**F**	Specific Ion Electrode	20 ppb	**$11.00**
2B02	**pH**	pH Electrode	0.1 unit	**$7.35**
2B03	**Conductivity**	Conductivity Electrode	3 µS/cm	**$7.35**
2B05	**TDS**	Total Dissolved Solids – by meter	2 ppm	**$7.35**
2B06	**Alkalinity**	Alkalinity by titration	1 ppm	**$10.75**
2B07	**Hg**	Analysis by ICP-MS	0.1 ppb	**$12.85**

Group 2B
Anion Analysis

Analysis by ion chromatography

Prices available on request.

	Detection
Cl	0.2 ppm
SO_4	0.1 ppm
Br	0.05 ppm
NO_2	0.05 ppm
NO_3	0.05 ppm
PO_4	0.05 ppm

Geochemical
Water Analysis

Group 2C
ICP-MS Analysis of Water

Sample minimum 50mL. Solutions are analysed as received.

For this analysis all water samples must have less than 0.1% total dissolved solids.

Group 2C
Natural Waters

Surface and groundwater surveys are an effective means of exploration for remote and blind ore deposits. ICP Mass Spec provides the low detection limits needed to define background and anomalous levels.

Group 2C
Enhanced ICP-ES/ICP-MS

	Cdn
Full Suite (70 elements)	**$30.45**

	Detection Limit	
Ag	0.05	ppb
Al	1	ppb
As	0.5	ppb
Au	0.05	ppb
B	5	ppb
Ba	0.05	ppb
Be	0.05	ppb
Bi	0.05	ppb
Br	5	ppb
Ca	0.05	ppm
Cd	0.05	ppb
Ce	0.01	ppb
Cl	1	ppm
Co	0.02	ppb
Cr	0.5	ppb
Cs	0.01	ppb
Cu	0.1	ppb
Dy	0.01	ppb
Er	0.01	ppb
Eu	0.01	ppb
Fe	10	ppb
Ga	0.05	ppb
Gd	0.01	ppb
Ge	0.05	ppb
Hf	0.02	ppb
Hg	0.1	ppb
Ho	0.01	ppb
In	0.01	ppb
K	0.05	ppm
La	0.01	ppb
Li	0.1	ppb
Lu	0.01	ppb
Mg	0.05	ppm
Mn	0.05	ppb
Mo	0.1	ppb

	Detection Limit	
Na	0.05	ppm
Nb	0.01	ppb
Nd	0.01	ppb
Ni	0.2	ppb
P	20	ppb
Pb	0.1	ppb
Pd	0.2	ppb
Pr	0.01	ppb
Pt	0.01	ppb
Rb	0.01	ppb
Re	0.01	ppb
Rh	0.01	ppb
Ru	0.05	ppb
S	1	ppm
Sb	0.05	ppb
Sc	1	ppb
Se	0.5	ppb
Si	40	ppb
Sm	0.02	ppb
Sn	0.05	ppb
Sr	0.01	ppb
Ta	0.02	ppb
Tb	0.01	ppb
Te	0.05	ppb
Th	0.05	ppb
Ti	10	ppb
Tl	0.01	ppb
Tm	0.01	ppb
U	0.02	ppb
V	0.2	ppb
W	0.02	ppb
Y	0.01	ppb
Yb	0.01	ppb
Zn	0.5	ppb
Zr	0.02	ppb

Vegetation

Plant sampling (biogeochemistry) is an effective method of exploration – called the Biogeochemical Method. Root systems of the plants collect the water which contain mineral rich nutrients. Depending on the size of the plant and particularly the size of its root system, this can provide the geologist with a significant geochemical signature. Factors to be considered include collecting a single species and sampling the same part of this species in order to compare "apples with apples"; also the same age of plant and same time of year.

Vegetation sampling in some instances can replace soil sampling in areas where obtaining a proper soil sample is not possible.

Index

Sample Preparation & Disposal

Sample Preparation

Code	Description	Cdn
PM1	Dry and macerate vegetation to –100 mesh (mild steel), per 100g	**$8.80**
VA475	Ashing up to 0.1 kg dry vegetation at 475°C	**$8.80**
WWSH	Wash plant samples with Type-1 water, dry at 60°C, per 100g	**$2.95**
RJSV	Saving all or part of reject fraction	**$2.10**

Special Handling

Code	Description	Cdn
WGHT	Weigh sample	**$0.70**

Sample Disposal Fees

Code	Description	Cdn
DISP2	Incineration of vegetation samples, per sample	**$0.45**

Note:
Acme can only accept dry plant material free of any soil.
Importation regulations may apply; contact lab prior to shipment.
Batch charge for sample submissions of less than 20 samples: CDN$50.00.

Geochemical
Ultratrace Aqua Regia Digestion

Group 1VE-MS
Ultratrace by ICP Mass Spec

ICP Mass Spec analysis of vegetation samples using a 1g split digested in HNO_3 then Aqua Regia and analysed by ICP-MS for ultralow detection limits.

Washing with de-mineralized water is recommended if samples are coated with inorganic material. (See WWSH under Sample Preparation.)

AcmeLabs now offers analysis of Pb isotopes (Pb_{204}, Pb_{206}, Pb_{207}, Pb_{208}) suitable for geochemical exploration of U and other commodities where gross differences in natural to radiogenic Pb ratios, is a benefit. Isotope values can be reported in both concentrations and intensities.

Code		Cdn
1VE1	Basic Suite (37 elements)	**$24.70**
1VE2	Full Suite (53 elements)	**$28.65**
+1VE3	Lead Isotope (add on)	**$13.25**
+1VE5	Pt and Pd (add on to Basic Suite)	**$2.20**
+1VE6	5g sample option	**$3.30**

Group 1AV
Add on

This group analyses the vegetation ash of a 15g dry plant sample that has undergone controlled ignition to minimize volatilization (see VA475 under Sample Preparation).

Results are normalized to the dry plant weight giving lower detection limits and greater precision. Must be requested as an add on to Group 1VE above.

Code		Cdn
+1VE4	18 elements (add on)	**+$15.00**

		Group 1VE Detection	Group 1AV Detection	Upper Limits
Basic Suite	**Au**	0.2 ppb	0.05 ppb	100 ppm
	Ag	2 ppb	–	100 ppm
	Al*	0.01 %	–	10 %
	As	0.1 ppm	0.02 ppm	10000 ppm
	B*	1 ppm	–	2000 ppm
	Ba*	0.1 ppm	–	10000 ppm
	Bi	0.02 ppm	0.005 ppm	2000 ppm
	Ca*	0.01 %	–	40 %
	Cd	0.01 ppm	–	2000 ppm
	Co	0.01 ppm	–	2000 ppm
	Cr*	0.1 ppm	–	10000 ppm
	Cu	0.01 ppm	–	10000 ppm
	Fe*	0.001 %	–	40 %
	Ga*	0.1 ppm	0.02 ppm	1000 ppm
	Hg	1 ppb	–	100 ppm
	K*	0.01 %	–	10 %
	La*	0.01 ppm	–	10000 ppm
	Mg*	0.001 %	–	30 %
	Mn*	1 ppm	–	10000 ppm
	Mo	0.01 ppm	–	2000 ppm
	Na*	0.001 %	–	10 %
	Ni*	0.1 ppm	–	10000 ppm
	P*	0.001 %	–	5 %
	Pb	0.01 ppm	–	10000 ppm
	S*	0.01 %	–	10 %
	Sb	0.02 ppm	0.005 ppm	2000 ppm
	Sc*	0.1 ppm	–	100 ppm
	Se	0.1 ppm	0.02 ppm	100 ppm
	Sr*	0.5 ppm	–	10000 ppm
	Te	0.02 ppm	0.005 ppm	1000 ppm
	Th*	0.01 ppm	0.002 ppm	2000 ppm
	Ti*	1 ppm	–	10 %
	Tl	0.02 ppm	0.005 ppm	1000 ppm
	U*	0.01 ppm	0.002 ppm	2000 ppm
	V*	2 ppm	0.5 ppm	10000 ppm
	W*	0.1 ppm	0.02 ppm	100 ppm
	Zn	0.1 ppm	–	10000 ppm
Full Suite	**Be***	0.1 ppm	0.02 ppm	1000 ppm
	Ce*	0.01 ppm	–	2000 ppm
	Cs*	0.005 ppm	–	2000 ppm
	Ge*	0.01 ppm	0.002 ppm	100 ppm
	Hf*	0.001 ppm	–	1000 ppm
	In	0.02 ppm	0.005 ppm	1000 ppm
	Li*	0.01 ppm	–	2000 ppm
	Nb*	0.01 ppm	–	2000 ppm
	Rb*	0.1 ppm	–	2000 ppm
	Re	1 ppb	0.2 ppb	1000 ppb
	Sn*	0.02 ppm	–	100 ppm
	Ta*	0.001 ppm	–	2000 ppm
	Y*	0.001 ppm	–	2000 ppm
	Zr*	0.01 ppm	–	2000 ppm
	Pt*	1 ppb	0.2 ppb	100 ppm
	Pd*	2 ppb	0.5 ppb	100 ppm

Requesting Analysis, Packaging & Shipping

SHIPMENTS WITHIN CANADA

Small packages can be sent by courier, larger packages by Greyhound or Pacific Coach Lines. For large drill programs use a freight service.

Samples should be addressed to:

Acme Analytical
Laboratories (Vancouver) Ltd.
1020 Cordova St. East
Vancouver, BC
Canada, V6A 4A3

All shipments should be labeled:

GEOLOGICAL ROCK/SOIL SAMPLES
FOR ANALYSIS ONLY
NO COMMERCIAL VALUE

U.S. SHIPMENTS

Ship via courier, air or ground to our US Sample Depot at:

AcmeLabs
c/o Security Freight
880 Grant Ave.
Blaine, WA 98230

REQUESTING ANALYSIS

Each sample shipment must include an analytical request that specifies:

- Individual or company to be invoiced
- Contact person and phone number
- Method of analysis (analytical package) wanted
- Purchase order number or project name if required for invoicing
- Type, number of samples and sample sequence (optional)
- Any special instructions
- Mode of data transmittal (e-mail, website, diskette); a hard copy is always mailed
- Disposition of rejects and pulps (discard, returned or stored) after analysis

A copy of the Acme Requisition for Analytical Work form can be photocopied from this brochure or downloaded from the Acme website at www.acmelab.com and should be included with each shipment. Please state clearly the desired method of data delivery including a fax and/or e-mail address.

PACKAGING

Pack the samples securely, ensuring that each sample is clearly labeled with a sample number. Please identify any high grade samples – this helps us to reduce the risk of cross contamination.

SHIPPING SAMPLES

For expedient and assured delivery, do not mail your samples. Free pick-up service for samples delivered to the Vancouver airport, bus depot or our US sample depot in Blaine, WA. Shipping labels are available at no charge. Please prepay all courier and freight charges, otherwise a surcharge will be added to any collect shipping charges.

Soil samples must be shipped according to Canadian Food Inspection Agency regulations in a "sturdy leak-proof container." Environmentally hazardous material may require special handling; additional charges may apply.

In South America AcmeLabs has existing agreements with local courier firms. Please contact the local manager in the relevant country for more information on expediting your samples to our laboratories.

INTERNATIONAL SHIPMENTS

- Please contact AcmeLabs prior to sending the first shipment.
Acme will provide a CFIA Permit needed to clear soil samples expeditiously through Canada Customs. Permits are specific for the country of sample shipment origin and valid for one year. A copy of the permit must accompany each shipment. Shipments cleared through Canada Customs for no charge.
- Use a major international airline or a courier service such as DHL, UPS or Federal Express.
- Mark the air waybill: Notify ACME at (604) 253-3158 upon arrival.
- Acme's customs broker is Cole International Inc.
- Label the shipment as: "Geological rock/soil samples for analysis only. No Commercial Value"

Account Payment & Data Transfer

PAYMENTS

Payments can be made by check, credit card (charges will be in Canadian dollars), bank draft or wire transfer to our bank. Please contact us for information.

CREDIT ACCOUNT

To establish a credit account with Acme, please call us or send your request by e-mail for a credit application form.

PAYMENT BY NEW CLIENTS

New clients must include payment with their samples, otherwise payment will be required before releasing results. Example of calculating costs for Canadian clients:

# of samples*	Assay	Unit Price	Cdn
20	Group 1DX (15g split)	**$19.15**	**$383.25**
20	Rock sample preparation	**$7.20**	**$143.85**
	GST Taxable (in Canada only)		**$527.10**
	5% GST		**$26.35**
	Total		**$553.45**

*Note batch charge for submissions of less than 20 samples.

If you have any questions about calculating the charges for analysis or the status of your account, please call us toll free (within North America) at 1-800 990 2263 or 1-604 253 3158.

DATA TRANSFER

By Internet
Clients with Internet access can receive their data in digital format via e-mail. Call or send us an e-mail request to use this service. Our address is: acmeinfo@acmelab.com. Acme also welcomes your comments on how we can improve our service.

By Website Download
Acme provides a secure extranet site on the AcmeLabs website (www.acmelab.com) from which a client can download their data 24 hours a day, 7 days a week. To set up your account, username and password, contact us by phone or email.

By Portable Storage Media
Upon request, data can be provided in digital format on CD ROM. Data formats supported include comma delimited ASCII (CSV) and Excel. Storage media and courier services at cost.

ADDITIONAL SERVICES

Information Bulletins
Information Bulletins are available should you desire additional information on analytical procedures, quality control methods or precision and accuracy estimates on specific analytical packages.

Conversions & Supplies

Oxides Conversion Factors

Element	Conversion Factor	Oxide
Al	1.889	Al_2O_3
Ba	1.669	$BaSO_4$
	1.116	BaO
Be	2.775	BeO
C	3.666	CO_2
Ca	1.399	CaO
	2.497	$CaCO_3$
Cr	1.461	Cr_2O_3
F	2.055	CaF_2
Fe	1.286	FeO
	1.430	Fe_2O_3
K	1.205	K_2O
Mg	1.658	MgO
	3.468	$MgCO_3$
Mn	1.291	MnO
Na	1.348	Na_2O
Nb	1.431	Nb_2O_5
Ni	1.273	NiO
P	2.291	P_2O_5
Rb	1.094	Rb_2O
Si	2.139	SiO_2
Sn	1.270	SnO_2
Sr	1.185	SrO
Ta	1.221	Ta_2O_5
Th	1.138	ThO_2
Ti	1.668	TiO_2
U	1.179	U_3O_8
V	1.785	V_2O_5
W	1.261	WO_3
Y	1.270	Y_2O_3
Zr	1.351	ZrO_2

Conversion for Weights

	Troy Oz.	Avoirdupois Oz.	Grams
1 Troy oz.	1	1.0971	31.104
1 Avoirdupois oz.	0.91146	1	28.35
1 Gram	0.03215	0.03527	1

1 Metric Tonne (MT) = 1000 kilograms = 2204.6 pounds
1 Short Ton (ST) = 907.2 kilograms = 2000 pounds
1 Long Ton (LT) = 1016 kilograms = 2240 pounds

Assay Valuations

		Troy Ounces Per		
Value	**Parts per Million (ppm)**	**Metric Tonne**	**Short Ton**	**Long Ton**
1 Gram / MT	1	0.03215	0.02917	0.03266
1 Troy oz / MT	31.104	1	0.9072	1.106
1 Troy oz / ST	34.286	1.1023	1	1.120
1 Troy oz / LT	30.612	0.9842	0.8929	1

Bags, Tags & Other Things

Description	Units	Cdn
3-Part Assay tags	50 / book	**FREE**
Shipping sacks (rice bags)	per bag	**$1.20**
Plastic Bags – 6 mil 8" x 13"	per 100	**$18.50**
Plastic Bags – 6 mil 12" X 18"	per 100	**$27.00**
Cable ties 7"	per 100	**$4.60**
Tin-tie Bags	per 1000	**$196.00**

Note: shipment costs may apply.

Terms & Conditions

PRICES

All prices contained herein are for the analysis of routine geological samples (water, plant, soil, sediment and rock both barren and mineralized) and are net local taxes. Discounts are available by contract, however a batch charge applies to each analytical package on batches of less than 20 samples. Prices for control assays (heads and tails), concentrates and metallurgical products are by contract. All prices listed in the fee schedule are subject to change, without notice. Please contact a local representative of AcmeLabs to obtain a current price list and or quote.

PAYMENT

Unless stated on the invoice or agreed in writing, payment for all accounts is due within 30 days from date invoice. Overdue accounts are subject to an interest charge of 1.5% per month. AcmeLabs reserves the right to discontinue work or hold results for any client failing to observe these terms.

SAMPLE QUALITY

The Client bears the sole responsibility for the quality of samples as received by AcmeLabs. AcmeLabs shall not be responsible for the loss, degradation, contamination and/or tampering of samples whether intentional or unintentional by the Client, shipping company or any other third party for samples delivered to and from its laboratories, agents or subcontractors. AcmeLabs is under no obligation to assess and report on the fitness of samples for the intended analysis. Because of different custom rules and regulations in various countries, please contact a representative of AcmeLabs to obtain correct procedures for shipping samples or supplies to one of AcmeLabs facility.

STORAGE AND DISPOSAL

Unless otherwise directed by the Client, AcmeLabs will discard all rejects from soil, sediment and vegetation samples immediately after sample preparation. Rock and core rejects are disposed of after 3 months. All pulps are retained for 3 months after which storage charges will apply unless the Client directs AcmeLabs to either return or dispose of the pulps. Return of pulps will be charged at cost. Disposal or storage of rejects and/or pulps will be charged as specified in this price brochure. International soil samples cannot be returned and will be charged a disposal charge for incineration according to CFIA protocol. Acmelabs recognizes and applies the Canadian limits for the concentration of hazardous metals in waste materials. For samples exceeding these limits, Acmelabs reserves the right to require clients to accept the return of their reject and pulp material or the expense of disposing of any sample material that is defined as hazardous.

STATEMENT OF LIABILITY

AcmeLabs will undertake to conduct and report all analyses in accordance with generally accepted analytical laboratory principles and practices unless deemed necessary in the reasonable judgment of AcmeLabs to vary from said principles and practices due to the nature or composition of the samples or to comply with regulatory requirements. AcmeLabs total aggregate liability arising from professional acts, errors or omissions shall not exceed the total fees for the services rendered. There will be no other liability, obligation or responsibility of any kind for losses, costs, expenses or other damages (including without limitation special indirect, incidental or consequential damages) relating to services or results provided by Acme. All results are strictly for the use of the Client; AcmeLabs nor its subcontractors is not responsible for any loss, damage or liability arising from any acts by the Client, its agents, staff or other consultants employed by the Client. All claims shall be deemed waived unless made in writing and received by AcmeLabs within 2 years following completion of services.

DISCLAIMER

All results are the confidential property of the Client. AcmeLabs assumes the following liabilities only: Actual cost of the analysis for errors attributable to AcmeLabs, and $20.00 per sample for loss of samples during processing or during storage up to one month after analysis. Clients must retrieve samples they consider to be of value.

Computer Services

ACME ACCESS

Acme Access is a secure web interface for our customers to obtain direct access to Acme's laboratory database. Acme access is a fully compliant .NET application designed for Microsoft Internet Explorer. Using this system, our customers may gain access to their data any time of the day or night. In addition customers are provided access to:

- All PDF documents pertaining to each sample submission such as the original sample submission form, certificates, invoices, and facturas (for Latin America);
- PDF documents that apply to the project such as the pricing quote and template submission forms;
- PDF documents that describe the analytical methods;
- Quality Control documents reviewing standard and replicate performance.

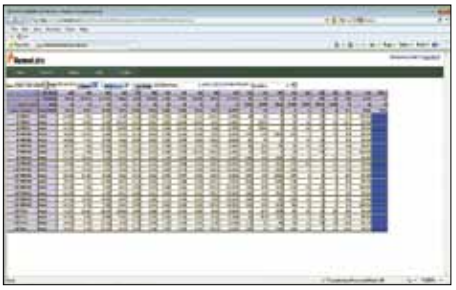
SAMPLE TRACKING SYSTEM

Acme uses a sophisticated LIMS (Laboratory Information Management System) to track the flow of every sample through each stage of sample handling and analysis. When received, each sample is bar coded and labeled. This unique barcode is used to build an audit trail that documents the complete history of work performed on each sample. This includes recording each and every person that has touched each sample and the work that they performed. This provides Acme with a very high level of control but also provides our clients with an unprecedented level of traceability and sample tracking.

BOX TRACKING SYSTEM

Each bar coded sample is allocated into a bar coded sample box, typically 36 samples per box, but this could be up to several hundred per box. This allows Acme to track each box as it moves from one laboratory to another and allows our clients to monitor the progress of their samples from a remote sample preparation facility to the main laboratory. More importantly, this system speeds the flow of the samples through the laboratory by utilizing bar coding to eliminate time consuming manual steps.



Requisition for Laboratory Services (North America)

Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East, Vancouver, BC
Canada, V6A 4A3

acmeinfo@acmelab.com
www.acmelab.com
Phone: +1 604 253 3158 / +1 800 990 2263
Fax: +1 604 253 1716

LABORATORY USE ONLY	Carrier & Waybill:	Acme Job Number:
Number of Parcels:	Date Received:	

CLIENT INFORMATION

Project:	Shipment ID:	PO #:

Primary Client Contact: (certificate will bear this name)	**Invoice to:** ❍ Same as primary contact
Company	Company
Address	Address
Attn:	Attn:
Email:	Email:
Phone: Fax:	Phone: Fax:

Additional Copies to:

Name	Company	Email	Data format (check)		
			❍ CSV	❍ XLS	❍ PDF
			❍ CSV	❍ XLS	❍ PDF
			❍ CSV	❍ XLS	❍ PDF

ANALYSES

Sample Type	Quantity	Sample Sequence From – To	Prep Code	Analytical Package or Elements Wanted	Rush (x2 quote)
		–			❍
		–			❍
		–			❍
		–			❍
		–			❍
		–			❍
		–			❍
		–			❍
		–			❍
		–			❍
		–			❍

SPECIAL INSTRUCTIONS

STORAGE & DISPOSAL: This section must be filled in before any prep or analysis will begin

Rejects (Rock and Core)

- ❍ Return immediately after analysis
- ❍ Return after 90 days at cost
- ❍ Paid disposal after 90 days
- ❍ Paid storage after 90 days
- ❍ Pickup
- ❍ RJSV (Soil, till, sediment, vegetation)

Pulps (all samples)

- ❍ Return immediately after analysis
- ❍ Return after 90 days at cost
- ❍ Paid disposal after 90 days
- ❍ Paid storage after 90 days
- ❍ Pickup

Return Address

❍ Same as primary contact

Company

Address

Attn: Tel:

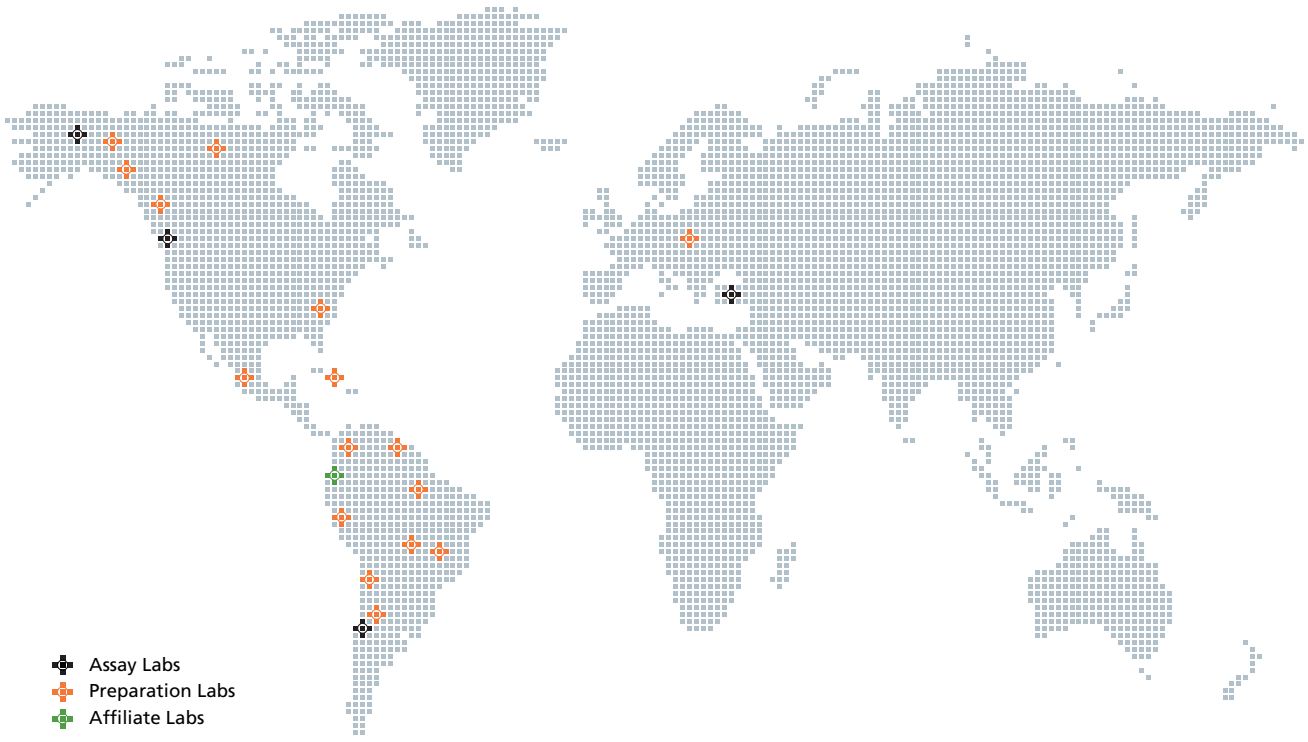
Failure to indicate instructions for rejects and pulps, or failure to pay storage charges upon notice, will result in disposal of all samples at the Client's cost. Soil, till, sediment and vegetation rejects will be immediately disposed of after sample preparation unless prep code RJSV is indicated above. All soils originating outside of British Columbia, Canada cannot be returned when shipped to Vancouver, Canada and DISP2 fees will apply. Exceptions apply, see Terms and Conditions in our current price brochure.

AUTHORIZATION

This requisition for Laboratory Services, when signed by the Client's representative and accepted by Acme, becomes a binding contract on the terms herein and the Terms and Conditions in our current price brochure found at www.acmelab.com. Client hereby requests Acme to perform the above services.

Signature of Client's Representative which binds the Client

Date:



HUB ANALYTICAL LABORATORIES

Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East
Vancouver BC V6A 4A3
Canada
and
852 East Hastings Street
Vancouver BC V6A 1R6
Canada
Tel: +1 604 253 3158
Fax: +1 604 253 1716
Toll Free in North America: +1 800 990 2263
Email: acmeinfo@acmelab.com

Acme Analytical Laboratories S.A.
Av. Claudio Arrau 7152
Pudahuel, Santiago
Chile
Tel: +56 2 616 4600
E-mail: info.sa@acmelab.com

BRANCH PREPARATION FACILITIES

North America

Acme Analytical Laboratories (Vancouver) Ltd.
Yellowknife Branch
300-349 Old Airport Rd.
Yellowknife NT X1A 3X6
Canada
Tel: +1 867 873 9484
Fax: +1 867 873 9490

Smithers Branch
3470B Highway 16
Smithers BC V0J 2N0
Canada
Tel: +1 250 847 4548

Dawson City Branch
Lot 24, Callison Subdivision
Dawson City YT Y0B 1G0
Canada
Tel: +1 867 393 4725

Whitehorse Branch
77 Collins Lane, Lot #53
Whitehorse YT Y1A 0A8
Canada
Tel: +1 867 393 4725
Fax: +1 867 393 4775

Spartanburg Branch
145 Tradd Street
Spartanburg, South Carolina 29304
USA
Tel: +1 864 576 2281
Fax: +1 864 576 2271

Fairbanks Branch
1921 Sanduri Avenue
Fairbanks, Alaska 99701
USA
Tel: +1 907 479 3110
Fax: +1 907 479 3112

Acme Analytical Laboratories Mexico S.A. de C.V.
Miguel López de Legazpi N° 711
Col. Echeverría
44970 Guadalajara, Jalisco
Mexico
Tel/Fax: +52 33 3367 0920

South America

Acme Analytical Laboratories (Argentina) S.A.
Maza Norte 3880
5511 Luzuriaga Maipú, Mendoza
Argentina
Tel: +54 261 524 0456

Acme Analytical Laboratories S.A.
Carretera Diego de Almagro s/n
Costado de Maestranza Resk., Copiapó
Chile
Tel: +56 97 989 7176

Acme Analítica Laboratórios Ltda.
Av. Nossa Senhora de Lourdes
Quadra 46 lote 01 a 06
Vila Santa
74912-595 Aparecida de Goiânia-Goiás
Brasil
Tel: +55 62 3264 1176

Acme Analítica Laboratórios Ltda.
Rodovia transamazônica Km 2 Bairro Comercio
Itaituba-Pará, Brasil
Tel: +55 93 3518 1774

Acme Cuiabá
Avenida Doutor Sergio Navarro
Jardim Maria Isabel
Várzea Grande, Cuiabá
Mato Grosso, Brasil
Tel: +55 65 3694 3326

Acme Analytical Laboratories R.D., S.A.
Carretera Maimón Cotuí N°42 Buenos Aires
Maimón Monseñol Nouel
Bonao, Dominican Republic
Tel: +1 809 551 2011

Acme Analytical Laboratories Colombia S.A.S.
Cra. 49 No. 78D Sur-68
Zona Industrial
Sabaneta, Antioquia
Colombia
Tel: +57 4 301 9941

Acme Analytical (Laboratories) Guyana Inc.
Lot. 13 Plantation Non Pariel
East Coast Demerara
Guyana
Tel: +592 270 4349
Tel: +592 270 4393

Acme Analytical Laboratories Perú S.A.
Jr. Pacto Andino N° 260 – 266, Urb. La Villa
Distrito de Chorrillos, Lima
Perú
Tel: +51 1 467 2045
Fax: +51 1 467 5132

Eurasia

Acme Analitik Laboratuar Hizmetleri Limited Sirketi
Bahçelievler Mahallesi (Samsun Karayolu)
Üçyol Sokak No: 27, Hasanoglan,
Elmadag, Ankara
Turkey
Tel: +90 312 866 3466
Tel: +90 312 866 3539
Fax: +90 312 866 1008
E-mail: acmeturkey@acmelab.com

AcmeLabs Polska Sp. Z.o.o.
3 Magazynowa Street
Krakow, 30-001
Poland
Cel: +48 601 306 201

AFFILIATED LABORATORIES

LAC y Asociados Cía. Ltda.
Panamericana Sur Km 1½ Narancay Alto
Sector El Chorro (Subida a Ucholoma)
Cuenca, Ecuador
Tel: +593 7 4042853
Cel: +593 097253459

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