Alpine Analytical Laboratory

Price List

&

Reference Guide

1315 Cherry Ave.

Helena, Montana 59601

www.alpineanalytical.com

(406) 449-6282

General Information:

Alpine Analytical, Laboratory. is an independent analytical laboratory located in beautiful Helena, MT. Since 1994 we have been continually growing and updating our facilities, instrumentation and procedures to stay in tune with the latest regulations and technologies. Through this growth we have remained committed to providing documented high quality analytical data with rapid turnaround.

Hours of Operation

We are open to receive samples 8 am through 5 pm Monday through Friday, closing for lunch from 12:30 pm -1:30 pm and all State Holidays. If necessary other times can be arranged by appointment.

Quality Data

Alpine Analytical Laboratory has a comprehensive, written QA/QC program designed to insure consistent high quality analytical data that meets or exceeds criteria established by the USEPA and state agencies. Quality control samples consisting of blanks, duplicates, spikes, and known samples, as applicable, are analyzed as an integral part of every analysis batch. Results of these analyses are routinely reported at no additional cost as part of our comprehensive data package. Our goal is to provide data that is technically sound and legally defensable.

Rapid Turnaround

Excellent customer service consists not only of generating quality data suitable for the customers need but also providing the data to the customer as close as possible to when the customer would like the results, if not before.

Turnaround time can be very critical. Rapid turnaround of sample results can save you time and money. In some instances it can even help to minimize your liability. We routinely report results within 5 to 7 business days after receipt of samples by our laboratory. When you have a problem and need results right away, we understand. We can provide rush analyses for most parameters in a matter of hours at an additional cost.

Reporting

We have designed our reports to be complete and easily understood. Each report includes date of analysis and reference to method used. Batch specific quality control data is generated for every sample and can be included in reports at no additional charge. The report can be custom designed to meet your specific needs, both in hard copy and electronic format.

Results of analyses performed are confidential information and will be provided only to you and anyone else whom you have approved.

Sample Containers

Alpine Analytical Laboratory provides at no charge to its customers, properly prepared sample containers, preservatives and chain of custody forms. We will also provide sampling instructions upon request, or assist you in locating someone to collect your samples.

Chain of Custody

We require chain of custody forms for all samples submitted for analysis. It provides evidence of sample handling, which is important in cases involving litigation and also expedites the measurement process.

Methodology

Analytical data, to be valuable, must accurately describe the characteristics and/or concentrations of the constituents of the material being sampled and be appropriate for its intended purpose. If requested our qualified staff can assist you in selecting the proper sampling, preservation and analysis methods to meet this purpose. Use of the proper methods and appropriate holding times is vitally important to obtaining useful analytical data.

Alpine Analytical Laboratory uses methodology accepted and set forth by US EPA,
American Public Health Association (APHA), the American Society for Testing and Materials (ASTM), the
Association of Official Analytical Chemists (AOAC), the National Institute for Occupational Safety and Health (NIOSH),
the Soil Science Society of America (SSSA), and various other state and federal agencies.

Prices and Discounts

The prices listed on the following pages are for single parameter analysis in small quantities. Suite prices and volume discounts are available. The methods and detection limits listed are those routinely used by our laboratory. Many additional parameters, methods, and detection limits are available. We will, upon request, provide a price quotation based upon your analytical needs.

An Additional Charge will be added for any samples brought in on Friday requiring a Total Coliform or Ecoli.

Rush Charges

In the event that you need results right away, we can perform most analyses within a matter of minutes or hours. The cost for this service is usually double the normal cost, but depends upon the situation. Samples that are submitted such that we need to work weekends or holidays are also charged a rush charge.

Terms

Our normal terms are net 30 days. After 30 days, interest charges may be added.

MICROBIOLOGICAL

Parameter	Reporting Limit	Units	Method	Description	Price
Total Coliform + E. Coli	1	colonies/100 mL	SM 9223 B	Quantitray	\$30.00
Total Coliform + E. Coli	P/A	presence/absence	SM 9223 B	Enzyme Substrate	\$30.00
Total Coliform	1	colonies/100 mL	SM 9223 B	Quantitray	\$30.00
Heterotrophic Plate Count	1	colonies/100 mL		Quantitray	\$40.00
Slime Producing Bacteria	P/A	presence/absence	BART SLYM	BART	\$45.00
Iron-Related Bacteria	P/A	presence/absence	BART IRB	BART	\$45.00
Sulfate-Reducing Bacteria	P/A	presence/absence	BART SRB	BART	\$45.00

Parameters			Price
C	ATION-ANION BA	LANCE	
рН	Magnesium	Alkalinity	
Specific Conductance	Hardness	Chloride	\$125.00
Total Dissolved Solids	Sodium	Nitrate+Nitrite	
Calcium	Potassium	Sulfate	

META	L SCAN - HIGH LEV	EL (>1.0 mg/L)	
	Analysis by ICP for the following	elements:	
Aluminum	Chromium	Molybdenum	
Antimony	Cobalt	Nickel	
Arsenic	Copper	Selenium	\$80.00
Barium	Iron	Silver	+
Beryllium	Lead	Thallium	\$20.00
Boron	Magnesium	Vanadium	if digestion needed
Cadmium	Manganese	Zinc	
Calcium	Mercury		

	Parameters		Price
	METAL SCAN - LOW	LEVEL	
	Analysis by ICP or ICP-MS for the follo	owing elements:	
Aluminum	Chromium	Molybdenum	
Antimony	Cobalt	Nickel	
Arsenic	Copper	Selenium	\$150.00
Barium	Iron	Silver	+
Beryllium	Lead	Thallium	\$20.00
Boron	Magnesium	Uranium	if digestion needed
Cadmium	Manganese	Vanadium	
Calcium	Mercury	Zinc	

	Parameters		Price
	Drinking Water	101	
рН	Fluoride	Chromium	
Specific Conductance	Nitrate + Nitrite	Iron	\$125.00
Total Dissolved Solids	Sulfate	Manganese	
Calcium	Total Coliform	Lead	
Magnesium	Arsenic	Selenium	
Hardness	Cadmium	Uranium	

An Additional Charge will be added for any samples brought in on Friday requiring a Total Coliform or Ecoli.

	Parameters					
	Drinking Wate	r 151				
рН	Alkalinity	Chromium				
Specific Conductance	Chloride	Iron				
Total Dissolved Solids	Fluoride	Lead				
Calcium	Nitrate + Nitrite	Manganese	\$175.00			
Magnesium	Sulfate	Selenium				
Hardness	Total Coliform	Uranium				
Sodium	Arsenic	Arsenic III & V (Speciation)				
Potassium	Cadmium					

An Additional Charge will be added for any samples brought in on Friday requiring a Total Coliform or Ecoli.

-	Parameters					
	Drinking Water	201				
рН	Magnesium	Alkalinity				
Specific Conductance	Hardness	Chloride				
Total Dissolved Solids	Sodium	Nitrate+Nitrite				
Calcium	Potassium	Sulfate				
Total Coliform	Fluoride					
Aluminum	Cobalt	Selenium	\$225.00			
Antimony	Copper	Silver				
Arsenic	Iron	Thallium				
Barium	Lead	Uranium				
Beryllium	Magnesium	Vanadium				
Boron	Manganese	Zinc				
Cadmium	Mercury					
Calcium	Molybdenum					
Chromium	Nickel					

Parameter	Reporting Limit	Units	Method	Description	Price
Alkalinity, Total as CaCO ₃	1	mg/L	SM 2320 B	Titrimetric	\$20.00
Ammonia as N	0.08	mg/L	SM 4500 NH ₃ B	Ion Specific Electrode	\$20.00
Biochemical Oxygen Demand (BOD)	1	mg/L	SM 5210 B	5 Day, Ion Specific Electrode	\$50.00
Bicarbonate as HCO ₃	1	mg/L	SM 2320 B	Titrimetric	\$20.00
Carbonaceous BOD (CBOD)	1	mg/L	SM5210 B	5 Day, Ion Specific Electrode	\$50.00
Carbonate as CO ₃	1	mg/L	SM 2320 B	Titrimetric	\$20.00
Carbon Dioxide as CO ₂	1	mg/L	SM 2320 B	Titrimetric	\$20.00
Chemical Oxygen Demand (COD)	1	mg/L	EPA 410.4	Spectrophotometric	\$35.00
Chloride	0.1	mg/L	EPA 300.0	Ion Chromatographic	\$20.00
Chlorine Residual	0.1	mg/L	SM 4500 CI G	Spectrophotometric	\$15.00
Color	0	color units	SM 2120 B	Comparison	\$20.00
Conductance, Specific	1	μmho/cm	EPA 120.1	Electrode	\$13.00
Cyanide, WAD	0.05	mg/L	SM 4500CN I	Micro-Dist	\$60.00
Cyanide, Free	0.05	mg/L	SM 4500CN F	Ion Specific Electrode	\$50.00
Cyanide, Total	0.05	mg/L	SM 4500CN C	Micro-Dist	\$60.00
Fluoride	0.1	mg/L	SM 4500 F	Ion Specific Electrode	\$20.00
Hardness, Total as CaCO3	1	mg/L	SM 2340 B	ICP	\$30.00
Kjeldahl Nitrogen as N, Total	0.2	mg/L	SM 4500 N _{org}	Ion Specific Electrode	\$35.00
Nitrate as N	0.01	mg/L	EPA 300.0	Ion Chromatographic	\$20.00
Nitrite as N	0.01	mg/L	EPA 300.0	Ion Chromatographic	\$20.00

Parameter	Reporting Limit	Units	Method	Description	Price
Nitrate + Nitrite as N	0.01	mg/L	EPA 300.0	Ion Chromatographic	\$20.00
Nitrogen, Total	0.2	mg/L	Calculated	Calculated from TKN and Nitrate	N/C
Oil & Grease, Gravimetric (Hexane)	1	mg/L	EPA 1664	Gravimetric	\$70.00
Oxygen, Dissolved	1	mg/L	SM 4500 O	Electrode	\$15.00
рН	0.1	s.u.	SM 4500 H ⁺	Electrode	\$13.00
Phenols, Total	0.01	mg/L	EPA 420.1	Spectrophotometric	\$40.00
Phosphorus, Ortho	0.01	mg/L	EPA 300.0	Ion Chromatographic	\$20.00
Phosphorus, Ortho	0.01	mg/L	EPA 365.2	Spectrophotometric	\$20.00
Phosphorus, Ortho, low level	0.005	mg/L	EPA 365.2	Spectrophotometric	\$30.00
Phosphorous, Hydrolyzable	0.01	mg/L	EPA 365.2	Spectrophotometric	\$20.00
Phosphorus, Total	0.01	mg/L	EPA 200.7	ICP	\$25.00
Phosphorous, Total	0.01	mg/L	SM 4500 P E	Spectrophotometric	\$30.00
Phosphorus, Total, low level	0.005	mg/L	SM 4500 P E	Spectrophotometric	\$35.00
Residue, Filterable (TDS)	5	mg/L	SM 2540 C	Gravimetric	\$17.00
Residue, Non-filterable (TSS)	1	mg/L	SM 2540 D	Gravimetric	\$17.00
Residue, Total	10	mg/L	SM 2540 B	Gravimetric	\$10.00
Residue, Volatile (VSS)	10	mg/L	SM 2540 E	Gravimetric - Combustion	\$30.00
Settleable Matter	0.5	ml/L	SM 2540 F	Imhoff Cone	\$15.00
Specific Gravity			SM 2710 F	Hydrometer	\$15.00
Sulfate	0.5	mg/L	EPA 300.0	Ion Chromatographic	\$20.00

WATER - NONMETALS						
Parameter	Reporting Limit	Units	Method	Description	Price	
Sulfide	1	mg/L	SM 4500 S ² F	lodometric titration	\$50.00	
Thiosulfate	1	mg/L	EPA 300.0	Ion Chromatographic	\$30.00	
Turbidity	0.01	NTU	EPA 180.1	Nephelometric	\$15.00	

Parameter	Reporting Limit	Units	Method	Description	Price
Aluminum	0.1	mg/L	EPA 200.7 / 6010	ICP	\$15.00
Aluminum, low level	0.001	mg/L	EPA 200.8 / 6020	ICP-MS	\$25.00
Antimony	0.1	mg/L	EPA 200.7 / 6010	ICP	\$15.00
Antimony, low level	0.0005	mg/L	EPA 200.8 / 6020	ICP-MS	\$25.00
Arsenic	1	mg/L	EPA 200.7 / 6010	ICP	\$15.00
Arsenic, low level	0.001	mg/L	EPA 200.8 / 6020	ICP-MS	\$25.00
Arsenic Speciation (+3, +5)	0.005	mg/L	EPA 206.3	ICP-MS	\$40.00
Barium	0.1	mg/L	EPA 200.7 / 6010	ICP	\$15.00
Barium, low level	0.001	mg/L	EPA 200.8 / 6020	ICP-MS	\$25.00
Beryllium	1.0	mg/L	EPA 200.7 / 6010	ICP	\$15.00
Beryllium, low level	0.0008	mg/L	EPA 200.8 / 6020	ICP-MS	\$25.00
Bismuth	2.0	mg/L	EPA 200.7 / 6010	ICP	\$15.00
Bismuth	0.002	mg/L	EPA 200.8 / 6020	ICP-MS	\$60.00
Boron	0.1	mg/L	EPA 200.7 / 6010	ICP	\$15.00
Cadmium	0.0005		EPA 200.8 / 6020	ICP-MS	\$25.00
Cadmium, low level	0.00003	mg/L	EPA 200.8 / 6020	ICP-MS	\$50.00
Calcium	1	mg/L	EPA 200.7	ICP	\$15.00

Parameter	Reporting Limit	Units	Method	Description	Price
Chromium	0.1	mg/L	EPA 200.7 / 6010	ICP	\$15.00
Chromium, low level	0.001	mg/L	EPA 200.8 / 6020	ICP-MS	\$25.00
Chromium, Hexavalent	0.01	mg/L	SM 3500 Cr B	Spectrophotometric	\$40.00
Cobalt	0.1	mg/L	EPA 200.7 / 6010	ICP	\$15.00
Cobalt, low level	0.001	mg/L	EPA 200.8 / 6020	ICP-MS	\$25.00
Copper	0.1	mg/L	EPA 200.7 / 6010	ICP	\$15.00
Copper, low level	0.001	mg/L	EPA 200.8 / 6020	ICP-MS	\$25.00
Gold	0.1	mg/L	EPA 200.7 / 6010	ICP	\$15.00
Gold, low level	0.001	mg/L	EPA 200.8 / 6020	ICP-MS	\$25.00
Iron	0.02	mg/L	EPA 200.7 / 6010	ICP	\$15.00
Lead	0.5	mg/L	EPA 200.7 / 6010	ICP	\$15.00
Lead, low level	0.001	mg/L	EPA 200.8 / 6020	ICP-MS	\$25.00
Lead, ultra low level	0.0003	mg/L	EPA 200.8 / 6020	ICP-MS	\$25.00
Lithium	0.1	mg/L	EPA 200.7 / 6010	ICP	\$15.00
Magnesium	1	mg/L	EPA 200.7 / 6010	ICP	\$15.00
Manganese	0.05	mg/L	EPA 200.7 / 6010	ICP	\$15.00
Manganese, low level	0.001	mg/L	EPA 200.8 / 6020	ICP-MS	\$25.00
Mercury, low level	0.0006	mg/L	EPA 200.8 / 6020	ICP-MS	\$35.00
Mercury,low low level	0.00001	mg/L	EPA 200.8 / 6020	ICP-MS	\$55.00

Parameter	Reporting Limit	Units	Method	Description	Price
Molybdenum	0.1	mg/L	EPA 200.7 / 6010	ICP	\$15.00
Molybdenum, low level	0.001	mg/L	EPA 200.8 / 6020	ICP-MS	\$25.00
Nickel	0.1	mg/L	EPA 200.7 / 6010	ICP	\$15.00
Nickel, low level	0.001	mg/L	EPA 200.8 / 6020	ICP-MS	\$25.00
Potassium	10	mg/L	EPA 200.7 / 6010	ICP	\$15.00
Selenium	1	mg/L	EPA 200.7 / 6010	ICP	\$15.00
Selenium, low level	0.001	mg/L	EPA 200.8 / 6020	ICP-MS	\$22.00
Silicon	0.1	mg/L	EPA 200.7 / 6010	ICP	\$15.00
Silver	0.001	mg/L	EPA 200.8 / 6020	ICP-MS	\$25.00
Silver, low level	0.0002	mg/L	EPA 200.8 / 6020	ICP-MS	\$32.00
Sodium	1	mg/L	EPA 200.7 / 6010	ICP	\$15.00
Strontium	0.5	mg/L	EPA 200.7 / 6010	ICP	\$15.00
Thallium	0.1	mg/L	EPA 200.7 / 6010	ICP	\$15.00
Thallium, low level	0.0002	mg/L	EPA 200.8 / 6020	ICP-MS	\$22.00
Tin	0.1	mg/L	EPA 200.7 / 6010	ICP	\$55.00
Uranium	0.001	mg/L	EPA 200.8 / 6020	ICP-MS	\$25.00
Uranium, low level	0.0002	mg/L	EPA 200.8 / 6020	ICP-MS	\$32.00

Parameter	Reporting Limit	Units	Method	Description	Price
Vanadium	0.5	mg/L	EPA 200.7 / 6010	ICP	\$15.00
Vanadium, low level	0.001	mg/L	EPA 200.8 / 6020	ICP-MS	\$25.00
Zinc	0.05	mg/L	EPA 200.7 / 6010	ICP	\$15.00
Zinc, low level	0.001	mg/L	EPA 200.8 / 6020	ICP-MS	\$22.00
Filtering sample for metals					\$10.00
Digestion for total metals					\$20.00

Waste - TCLP (Toxicity Characteristic Leaching Procedure)

Parameter	Method	Description	Reporting Limit mg/L	Regulatory Limit mg/L	Price	
Extraction						
TCLP Extraction (metals, base-neutrals, acid extractables, pesticides, & herbicides)	EPA 1311	20 hour			\$60.00	

Metals (requires TCLP extraction)							
Arsenic (As)	EPA 6020	ICP/MS	0.5	5.0	\$25.00		
Barium (Ba)	EPA 6010	ICP	10	100	\$15.00		
Cadmium (Cd)	EPA 6010	ICP	0.1	1.0	\$15.00		
Chromium (Cr)	EPA 6010	ICP	0.5	5.0	\$15.00		
Lead (Pb)	EPA 6010	ICP	0.5	5.0	\$15.00		
Mercury (Hg)	EPA 6020	ICP/MS	0.02	0.2	\$35.00		
Selenium (Se)	EPA 6020	ICP/MS	0.1	1.0	\$25.00		
Silver (Ag)	EPA 6010	ICP	0.5	5.0	\$15.00		

Waste

Parameter	Method	Description	Reporting Limit	Price			
Metals Digestion							
Digestion for total metals	EPA 3050	acid digestion		\$20.00			
To	tal Metals (requires digestion))					
Arsenic (As)	EPA 6020	ICP-MS	5.0 mg/Kg	\$25.00			
Barium (Ba)	EPA 6010	ICP	100 mg/Kg	\$15.00			
Cadmium (Cd)	EPA 6010	ICP	1.0 mg/Kg	\$15.00			
Chromium (Cr)	EPA 6010	ICP	5.0 mg/Kg	\$15.00			
Copper (Cu)	EPA 6010	ICP	5.0 mg/Kg	\$15.00			
Lead (Pb)	EPA 6010	ICP	5.0 mg/Kg	\$15.00			
Mercury (Hg)	EPA 6020	ICP-MS	1.0 mg/Kg	\$35.00			
Nickel (Ni)	EPA 6010	ICP	5.0 mg/Kg	\$15.00			
Molybdenum (Mo)	EPA 6010	ICP	5.0 mg/Kg	\$15.00			
Selenium (Se)	EPA 6020	ICP-MS	5.0 mg/Kg	\$25.00			
Silver (Ag)	EPA 6010	ICP	5.0 mg/Kg	\$15.00			
Zinc (Zn)	EPA 6010	ICP	5.0 mg/Kg	\$25.00			
	Miscellaneous						
Flashpoint	EPA 1010	Pensky-Martins		\$25.00			
Loss on ignition	Ignition at 600°C	Ignition at 600°C		\$15.00			
Moisture	Dry at 105°C	Dry at 105°C		\$20.00			
Paint Filter Test	EPA 9095	filter		\$20.00			

EPA 9040/9045

Dry at 105°C

EPA 351.4

electrode

Dry at 105°C

digestion/electrode

\$20.00

\$15.00

\$45.00

0.5 mg/Kg

Total Kjeldahl Nitrogen (*TKN*)
Inquire for pricing on all other parameters

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Solids

RCRA Metals

Parameter	Method	Reporting Limit	Price
Total RCR	A Metals		
Digestion	EPA 3050		
Arsenic (As)	EPA 6020	5.0 mg/Kg	
Barium (Ba)	EPA 6010	100 mg/Kg	
Cadmium (Cd)	EPA 6010	1.0 mg/Kg	
Chromium (Cr)	EPA 6010	5.0 mg/Kg	\$180.00
Lead (Pb)	EPA 6010	5.0 mg/Kg	with
Mercury (Hg)	EPA 6020	1.0 mg/Kg	Digestion
Selenium (Se)	EPA 6020	5.0 mg/Kg	
Silver (Ag)	EPA 6010	5.0 mg/Kg	

SOIL

Parameter	Reporting Limit	Units	Price
Sample preparation			Inquire
Acid-Base Potential	1	T CaCO₃/1000T	\$35.00
Acid Potential	1	T CaCO3/1000T	\$20.00
Alkalinity, saturated paste	0.01	meq/L	\$25.00
Ammonia as N	1	μg/g	\$20.00
Cation Exchange Capacity (CEC)	1	meq/100g	\$30.00
Chloride	1	μg/g	\$20.00
Conductivity, saturated paste	0.01	mmho/cm	\$20.00
Moisture	0.1	%	\$15.00
Neutralization Potential	1	TCaCO ₃ /1000T	\$20.00
Nitrate as N	1	μg/g	\$20.00
Organic Matter	0.1	%	\$30.00
pH, marble		s.u.	\$30.00
pH, saturated paste		s.u.	\$20.00
Phosphorus, NaHCO ₃	1	μ g /g	\$20.00
Particle Size, sieve analysis	0.1	%	\$10.00/sieve
Particle Size, sand, silt clay	1	%	\$25.00
Potassium	1	μg/g	\$15.00
Saturation Percentage	0.1	%	\$15.00
Sodium Adsorption Ratio (includes Na, Ca, Mg)	0.01		\$45.00
Sodium, available	0.01	meq/100g	\$25.00
Sodium, exchangable	0.01	meq/100g	\$25.00
Sulfate	0.1	μg/g	\$20.00
Total Nitrogen as N	1	μg/g	\$60.00
Total Kjeldahl Nitrogen as N	1	μg/g	\$45.00

Sample preparation charge applies to all analyses except: Conductivity, moisture, Organic matter, pH, particle size, and saturation percentage.

SOIL

Parameter	Reporting Limit	Units	Price
Digestion for metals			\$20.00
AquaRegia Digestion for metals			\$30.00
HydreoFluoric Acid Digestion for metals			\$30.00
Bomb Digestion for metals			\$45.00
Arsenic	0.02	μg/g	\$25.00
Barium	0.1	μ g /g	\$15.00
Boron	0.1	μ g /g	\$15.00
Cadmium	0.1	μg/g	\$15.00
Calcium	1	μg/g	\$15.00
Chromium	0.1	μ g /g	\$15.00
Copper	0.1	μ g /g	\$15.00
Lead	1	μ g /g	\$15.00
Magnesium	1	μg/g	\$15.00
Manganese	0.1	μg/g	\$15.00
Mercury	0.1	μg/g	\$35.00
Molybdenum	0.1	μg/g	\$15.00
Nickel	0.1	μ g /g	\$15.00
Selenium	0.01	μ g /g	\$25.00
Zinc	0.1	μg/g	\$15.00

Digestion method: *EPA 3050, SW846.* Analysis method: *USEPA 6010/6020, SW846.*