

AQUATIC CONSULTING & TESTING, INC.
Biological and Analytical Chemistry Services

Laboratory Location:

We are located just west of the University and Priest intersection in Tempe, Arizona. Our physical address:

1525 West University Drive
Suite 106
Tempe, Arizona 85281
(480) 921-8044 - Telephone
(480) 921-0049 - Fax
lab@aquaticconsulting.com

Laboratory Turnaround Time

We operate on a 15-day turnaround time. We do offer RUSH turnaround, weekend, and holiday analyses for those needing fast results (contact the lab for availability). The following surcharges will apply:

<u>NEED</u>	<u>CHARGE</u>
24 Hour	3 times standard rate
48-72 Hour	2 times standard rate
5 Day	1.5 times standard rate
6-10 Day	Standard rate, may be available based on laboratory workload.
Weekend/Holiday*	3 times standard rate

* Samples requiring immediate attention (short holding times or special lab preparation) and received after 15:00 on a Friday may be subject to Weekend/Holiday surcharge. Contact the lab if you must sample on a Friday afternoon.

Supplies and Volume Discounts

We provide our clients with clean, pre-preserved sample bottles, coolers, blue ice and chain of custody. Plan ahead. Contact us with your annual sampling schedule, and we can set up bottle delivery and monthly billing and you may even be qualified for a volume discount.

Invoices & Payment

Payment is due upon presentation of our invoice and is past due thirty (30) days from invoice date. A finance charge of 1% per month shall be added to any balance unpaid after the 30 days.

MICROBIOLOGY

<u>ANALYSIS</u>	<u>METHOD</u>	<u>COST / SAMPLE</u>	
		<u>WATER</u>	<u>SOIL</u>
<u>TOTAL COLIFORM</u>			
MPN (10 tube)	SM9221B	\$25.00	\$30.00
MPN (15 tube/3 dilution series)	SM9221B	\$25.00	\$50.00
P/A	SM9221E	\$25.00	--
Colilert (24hr)	SM9223B	\$25.00	--
Colilert (24hr Escrow)	SM9223B	\$50.00	--
Membrane Filter	SM9222B	\$25.00	--
<u>FECAL COLIFORM</u>			
MPN (15 tube/3 dilution series)	SM9221C	\$25.00	\$50.00
each additional dilution add		\$20.00	\$20.00
Membrane Filter	SM9222D	\$25.00	--
Biosolids	SM9221C	--	\$75.00
<u>E. COLI</u>			
Colilert (P/A)	SM9223B	\$25.00	--
MPN	SM9221F	\$25.00	\$50.00
Membrane Filter		25.00	--
<u>FECAL STREPTOCOCCUS</u>			
MPN (15 tube/3 dilution series)	SM9230B	\$45.00	\$75.00
each additional dilution add		\$20.00	\$20.00
Membrane filter	SM9220C	\$45.00	--
<u>HETROTROPHIC PLATE COUNT</u>	SM9215B	\$50.00	\$75.00
<u>IRON BACTERIA</u> (P/A Reactivity)	SM9240B	\$60.00	\$100.00
<u>SULFUR BACTERIA</u> (P/A Reactivity)	SM9240C	\$60.00	\$100.00
<u>BOTULISM TOXIN SCREENING</u>		\$75.00	
<u>DENITRIFYING BACTERIA</u>		\$60.00	
<u>NITRIFYING BACTERIA</u>		\$60.00	
<u>SLIME FORMING BACTERIA</u>		\$60.00	
<u>PSEUDOMONAS SCREEN</u>		\$50.00	
<u>E. COLI TYPE H0157:H7</u>		\$60.00	
<u>BACTERIA SPECIES IDENTIFICATON (Biolog)</u>		\$75.00 Culture + \$90.00 per colony type	
<u>YEAST AND MOLD COUNT</u>		\$75.00	
<u>FUNGUS</u> (Genus Identification)		\$75.00	
<u>COLIPHAGE</u>		\$150.00	
<u>MUTAGENICITY</u> (AMES Test)		Quote	

BIOLOGY CONSULTING

CONSULTATION AND SPECIAL ANALYSES

COST / HOUR

Research and Development - Special Projects	\$125.00*
Senior Microbiologist	\$125.00*
Senior Biologist	\$75.00*
Microbiology Technician	\$35.00*
Clerical	\$30.00*

*minimum.

BIOMONITORING/BIOTOXICITY

COST / SAMPLE

<u>ACUTE TOXICITY TEST (EPA/600/4-90/027F)</u>	2 Replicates	4 Replicates	5 Replicates
100% vs Control (Daphnia, Ceriodaphnia, or Fathead minnow)			
24-hr static test	\$150.00	\$200.00	\$250.00
48-hr static or renewal test	\$175.00	\$225.00	\$300.00
96-hr static or renewal test	\$300.00	\$400.00	\$450.00
Five Dilution Series (Daphnia, Ceriodaphnia, or Fathead minnow)			
24-hr static test	\$400.00	\$400.00	\$450.00
48-hr static or renewal test	\$450.00	\$550.00	\$650.00
96-hr static or renewal test	\$550.00	\$750.00	\$850.00

CHRONIC TOXICITY TEST - (EPA-600-4-91/002; EPA-R-821-02-013)

COST / SAMPLE

Cladoceran (C. dubia) survival and reproduction (10 rep.) (USEPA 1002.0)	
100% vs. Control	\$800.00
Five Dilution Series	\$1,100.00

CHRONIC TOXICITY TEST - (EPA-600-4-91/002; EPA-R-821-02-013)

COST /SAMPLE

Fathead minnow (*P. promelas*) survival and growth (USEPA 1000.0)

100% vs. Control (4 rep.) \$800.00

Five Dilution Series (4 rep.) \$1,100.00

Algal Growth Test (*S. capricornutum*) (USEPA 1003.0)

96-hr, 100% vs Control \$350.00

96-hr, Five Dilution Series \$700.00

BIOSTIMULATION TEST (SM8111)

\$900.00

SEDIMENT TOXICITY TEST

COST / SAMPLE

ASTM E 1383

5 replicates, 20 organisms per replicate, static

Hyalella azteca, *Chironomus* spp.

10-day survival test \$700.00

10-day survival and growth test \$800.00

30-day survival, growth, and reproduction test \$2,200.00

EPA 600/R-94/024

8 replicates, 10 organisms per replicate, renewal

Hyalella azteca Method 100.1 \$1,300.00

Chironomus tentans Method 100.2 \$1,300.00

PRODUCT TESTING

Screening \$150.00 *

* *plus Acute or Chronic fees listed on page 8 & 9*

PRYMNESIN (Golden Algae) toxin screen \$200.00

All Toxicity testing MUST be scheduled with the laboratory prior to sample submittal.

ORGANISM IDENTIFICATION AND QUANTIFICATION

ALGAE

COST / SAMPLE

Identification (only) to Division level	\$45.00
Identification (only) to Genus level	\$75.00
Quantification (total cell count)	\$50.00
Golden Algae Screen	\$50.00
Identification and Differential Quantification to Genus	\$100.00
Identification and Differential Quantification to Species	\$250.00
Chlorophyll a	\$50.00
Chlorophyll a & Pheophytin a	\$60.00
Chlorophyll a,b,c & Pheophytin a	\$80.00

ZOOPLANKTON

Identification (only) to major taxa	\$60.00
Quantification (total count)	\$50.00
Identification and Differential Quantification, by major taxa	\$100.00

AQUATIC INVERTEBRATES

Identification-includes	\$125.00
Insects (to Order level)	
Nematodes (to Phylum level)	
Flatworms (to Class level)	
Annelids (to Class level)	
Mollusks (to Family level)	
Identification and Differential Quantification, by major taxa	\$150.00

MICROSCOPIC EVALUATIONS

COST / SAMPLE

Microscopic Particulate Analysis (MPA)	\$375.00
MPA Pump rental	\$50.00
General microscopic identification of unknown material	\$75.00 / hr*
Particle Count / Identification	\$75.00 / hr*
Enteric Virus	\$600.00
Parasites - extraction, plus	\$425.00
Giardia lamblia	\$65.00
Cryptosporidium	\$65.00
Ascaris (common large tapeworm)	\$65.00
Entamoeba histolytica	\$65.00
Common tape worm	\$65.00
Ascaris only	\$75.00
Common tapeworm only	\$75.00

**75.00 minimum*

GENERAL CHEMISTRY ANALYSIS

Water / Wastewater

<u>ANALYTE</u>	<u>COST /SAMPLE</u>	<u>ANALYTE</u>	<u>COST / SAMPLE</u>
Alkalinity	\$20.00	Oil & Grease	
Biochemical Oxygen Demand	\$40.00	Gravimetric (413.1)	\$100.00
Bromide	\$20.00	Spectrometric (413.2)	\$100.00
Cation Exchange Capacity	\$50.00	Gravimetric (1664)	\$100.00
Carbon Dioxide	\$30.00	pH	\$15.00
Chemical Oxygen Demand	\$40.00	Phenol, total (EPA 420.1)	\$100.00
Chloride	\$20.00	Phosphorus	
Chlorine, free	\$20.00	Total	\$30.00
Chlorine, total	\$20.00	Ortho	\$20.00
Chromium, Hexavalent	\$65.00	Silt Density Index (lab)	\$50.00
Color	\$40.00	Silica, Soluble	\$25.00
Cyanide, total or amenable	\$60.00	Solids	
Electrical Conductivity	\$20.00	Dissolved	\$20.00
Fluoride	\$20.00	Suspended	\$20.00
Formaldehyde	\$50.00	Settleable	\$20.00
Hardness, total	\$20.00	Total	\$20.00
Iron, Ferrous	\$50.00	Volatile	\$40.00
Nitrogen		Sulfate	\$20.00
Ammonia	\$20.00	Sulfide	
Kjeldahl	\$35.00	Total	\$25.00
Organic	\$35.00	Dissolved	\$25.00
Nitrate + Nitrite	\$20.00	Sulfite	\$40.00
Nitrate (only)	\$40.00	Surfactants (MBAS)	\$85.00
Nitrite	\$20.00	Tannin/Lignin	\$100.00
Total N (TKN+NO3 +NO2)	\$55.00	Total Organic Carbon	\$60.00
Oxygen, dissolved (electrode)	\$20.00	TPHC (418.1 Freon)	\$100.00
Oxygen, dissolved (Winkler)	\$35.00	Turbidity	\$20.00
ORP (Redox Potential)	\$50.00	Threshold Odor Number	\$100.00
		UV254	\$50.00

METALS ANALYSIS

COST / ELEMENT

INDUCTIVELY COUPLED ARGON PLASMA (ICP)

Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Cu, Fe, Pb, Li, Mg, Mn, Mo Ni, K, Se, Ag, Na, Sr, Tl, Sn, V, Zn \$15.00

GRAPHITE FURNACE ATOMIC ABSORPTION SPECTROSCOPY (GFAA)

Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Cu, Fe, Au, Pb, Li, Mg, Mn, Mo Ni, K, Se, Ag, Na, Sr, Tl, Sn, V, Zn \$15.00

COLD VAPOR ATOMIC ABSORPTION SPECTROSCOPY

Mercury \$45.00

ANCILLARY TESTING

Ferric Iron \$25.00

Ferrous Iron \$50.00

Hexavalent Chromium \$65.00

Arsenic Speciation for source water treatment (As+3, As+5 and Total) \$75.00

Gold \$25.00

Palladium \$25.00

Zirconium \$25.00

SAMPLE PREPARATION

METHOD NUMBER

MATRICES

COST / SAMPLE

3005, 3010, 3020 Water, Wastewater \$30.00

3050 Soils, Sediments, Solids \$30.00

1311 Toxicity Characterization
Leaching Procedure (TCLP) \$100.00

1312 Synthetic Precipitation Leaching
Procedure (SPLP) \$125.00

ASTM Soluble Metals \$30.00

GROUP ANALYSIS

SAFE DRINKING WATER ACT MARICOPA COUNTY NEW SOURCE APPROVAL

COST / SAMPLE

Inorganic Compounds

Metals (Sb,As,Ba,Be,Cd,Cr,Ni,Hg,Se,Tl), Cyanide (as Free CN), Fluoride, Nitrate (as N), Nitrite (as N) \$300.00

Asbestos \$175.00

Recommended Inorganic Compounds

Metals (Ca, Cu, Fe, Pb, Mg,Mn,Na,Zn), Alkalinity, Chloride, Hardness, pH, Sulfate, Total Dissolved Solids \$150.00

Lead & Copper \$30.00

Langlier/Ryznar Index (pH, Temp., Calcium Hardness, Alk, TDS) \$75.00

Volatile Organic Compounds \$225.00

Semivolatile Organic Compounds (less Dioxin & Glyphosate*) \$1,275.00

(EPA Methods, 525.2, 531.1, 508, 515.1, 504, 548, 549.1)

* Waiver program available. Contact ADEQ for details.

Waiver program compounds

2,3,7,8-TCDD (Dioxin) (Method 1613) \$600.00

Glyphosate (Method 547) \$175.00

Radiochemical

Gross α ** \$50.00

** Additional testing may be required with positive detection.

Microbiology

Total Coliform (P/A or Colilert) \$25.00

MISCELLANEOUS

Trihalomethanes (THMs 524.2) \$150.00

Haloacetic Acids (HAAs 552.2) \$200.00

Perchlorate **\$120.00**

ICP Scan \$200.00

GROUP ANALYSIS

RESOURCE CONSERVATION AND RECOVERY ACT HAZARDOUS	<u>COST / SAMPLE</u>
WASTE CHARACTERIZATION	
pH	\$15.00
Paint Filter	\$25.00
Flash Point	\$75.00
Reactivity (Cyanide, Sulfide & Water)	\$180.00
<u>8 RCRA Heavy Metals by Toxicity Characteristic Leaching Procedure</u>	\$250.00
(As, Ba, Cd, Cr, Pb, Hg, Se, Ag)	
<u>8 RCRA Heavy Metals, Total, by digestion</u>	\$180.00
(As, Ba, Cd, Cr, Pb, Hg, Se, Ag)	
<u>13 Priority Pollutant Metals, Total</u>	\$255.00
(Sb, As, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Tl, Zn)	
CLEAN WATER ACT	
NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) MUNICIPAL DISCHARGE	
WATER QUALITY MONITORING	
pH	\$15.00
Sulfides	\$25.00
Total Petroleum Hydrocarbons (TPH)	\$100.00
Cyanide	\$60.00
Metals	See Metals Analysis Section
Total Toxic Organics (TTO)	\$925.00
<u>TTO Methods:</u>	
Volatile Organic Compounds by EPA Method 624	\$225.00
Semi-volatile Organic Compounds by EPA Method 625 (Dioxin Screen separate)	\$450.00
Chlorinated Pesticides by EPA Method 608	\$250.00

BIOTREATMENT

	COST / SAMPLE	
	<u>SOIL</u>	<u>WATER</u>
Plate count-heterotrophic, HC-degrading bacteria, moisture content (gravimetric)	\$75.00	\$75.00
Total Petroleum Hydrocarbons	\$100.00	\$100.00
pH	\$15.00	\$15.00
Soil water capacity	\$15.00	--
Phosphate - Ortho-P (water soluble)	\$25.00	\$20.00
Ammonia - N	\$25.00	\$20.00
Nitrate + Nitrite - N (water soluble)	\$25.00	\$20.00
Organic nitrogen - N	\$35.00	\$35.00
Total organic carbon (Walkley-Black)	\$60.00	\$60.00
Dissolved oxygen (Winkler)	--	\$35.00*
Written Evaluation	\$75.00	\$75.00

* *Minimum charge.*

Turnaround time estimated at 15 to 20 working days to permit slow-growing bacteria to colonize medium and be detected.

BIO-SOLIDS ANALYSIS

	COST / SAMPLE	
	<u>SOIL</u>	<u>WATER</u>
<u>503 Nutrients</u> (NH ₃ , TKN, NO ₃ + NO ₂ , P-T)	\$100.00	--
<u>503 Metals</u> (As, Cd, Cr, Cu, Pb, Hg, Mo, Ni, Se, Zn)	\$210.00	--
S.O.U.R. (includes TS & VSS)	\$135.00	--
<u>Total Solids</u> (TFS, TS, TVS)	\$60.00	--
<u>Hazardous Waste Disposal</u>		
8260 TCLP-ZHE (Volatiles)	\$300.00	--
8270 TCLP-ZHE (Semi-Volatiles)	\$450.00	--
8081 (Pesticides)	\$300.00	--
8151 (Herbicides)	\$375.00	
Enteric Virus	\$550.00	--
Salmonella	\$150.00	--
Helminth Ova	\$425.00	--

GENERAL AGRONOMY AND SOIL TESTS

<u>TEST GROUP</u>	<u>METHOD</u>	<u>COST/ SAMPLE</u>
<u>Cations:</u>		
Ca, Mg, Na, K, cation exchange capacity (CEC), exchangeable sodium	SPAC-NAA ICP	\$60.00
<u>Minor elements:</u>		
Fe, Zn, Cu, Mn	SPAC-DPTA	\$60.00
Boron	SPAC-ICP	\$20.00
Sulfate/Sulfur	ASA 79-4	\$20.00
Nitrate	SPAC DPTA	\$20.00
Kjeldahl nitrogen	ASA 83-7	\$40.00
Phosphate/Phosphorus	SPAC DPTA	\$30.00
Salinity (soluble salts or electrical conductivity)	ARIZ 237B	\$20.00
pH	ARIZ 237B	\$15.00
Organic matter	ASA 90-3	\$60.00
Cation exchange capacity	ASA 57-3	\$60.00
Chloride	ARIZ 736	\$20.00
Free lime (qualitated)		\$10.00
Lime (quantitated)		\$30.00
Petiole analysis (nitrate)		\$20.00
Petiole analysis (nitrate & phosphorus)		\$40.00
Soil herbicide bioassay		\$100.00
Agronomic/landscape data assessment		\$35.00

FIELD SAMPLING AND CONSULTATION FEES

<u>FIELD SAMPLING</u>	<u>COST</u>
Travel, per hour	\$50.00
Mileage, per mile	\$0.75
<u>Specimen Collection, per hour (3-hour minimum)</u>	
Field Biologist/Chemist	\$75.00
Project Manager	\$110.00
Principle, Sr. Staff	\$150.00
SAMPLE PICK-UP SERVICE	
Routine sample pick-up (Phoenix Metro Area) (24 hour notice required for scheduling)	\$30.00
CONSULTATION	
Expert Witness Testimony	\$250.00
<u>Research, or report preparation</u>	
Field Biologist/Chemist	\$75.00
Project Manager	\$110.00
Principle, Sr. Staff	\$150.00
Clerical	\$30.00
MISCELLANEOUS	
Disposal Fee*	\$2.00
Minimum Invoice (does not apply to contracts)	\$25.00
Sample hold charge	\$5.00/sample
Compositing fee	\$10.00/sample

*Applied to any sample that is determined to be a hazardous/special waste.