

Texas Plant & Soil Lab

Since 1938 - Still The First Soil Lab In Texas
Serving The World From The Rio Grande Valley.

5115 West Monte Cristo Road
Edinburg, Texas 78541-8852
Telephone: 956-383-0739 ♦ FAX: 956-383-0730



LAB N ^o FROM _____ TO _____
CLIENT N ^o : _____
RECEIVED: _____
BY: _____
RELEASED: _____
BY: _____
REPORT SENT: _____

WATER SAMPLE SUBMITTAL AND CHAIN OF CUSTODY

- BE SURE TO INCLUDE THIS FORM WITH YOUR SAMPLES -

NAME: _____ TELEPHONE: _____
 COMPANY: _____ E-MAIL: _____
 ADDRESS: _____ City: _____ State: _____ Zip: _____
 SEND REPORT BY: E-MAIL (PREFERRED) POSTAL MAIL

PAYMENT BY: Check (No. _____) Credit Card Money Order Cash
 - CREDIT CARD CHARGE INFORMATION -
 NAME ON CARD: _____ TYPE: Discover American Express VISA MasterCard
 BILLING ADDRESS: _____ CITY: _____ STATE: _____ ZIP: _____
 CREDIT CARD NUMBER: _____ EXPIRES: _____ / _____ 3-DIGIT SECURITY CODE: _____
 AUTHORIZED SIGNATURE: _____ **THIS MAY BE CALLED IN OR FAXED TO US.**

DATE SAMPLES TAKEN: _____ SAMPLES TAKEN BY: _____
 LOCATION: _____
 IRRIGATION METHOD: NONE FLOOD SPRINKLER PIVOT DRIP MICROJET OTHER COMMENT BELOW
 PROBLEMS OR COMMENTS: _____

- PLEASE MARK THE FOLLOWING INFORMATION IN THE COLUMNS BELOW -

WATER SOURCE: ① Municipal/Utility District/Co-op ② WELL ③ LAKE ④ RIVER/CREEK ⑤ EFFLUENT
SOIL TYPE (IF FOR IRRIGATION - OR LAB N^o IF WE TESTED SOIL): 1=SAND 2= LOAMY SAND 2- =SANDY LOAM 3- = LOAM
 3=SILTY LOAM 4- =SANDY CLAY LOAM 4+ =CLAY LOAM 4=SILTY CLAY LOAM 5- =SANDY CLAY 5+ =CLAY 5=SILTY CLAY
WATER USAGE: I = IRRIGATION L = LIVESTOCK P = POTABLE A = AQUACULTURE H = HYDROPONIC
 O = OTHER _____

SEE BACK OF THIS PAGE FOR ANALYSES SELECTION.

LINE	LAB NUMBER (LAB USE ONLY)	SAMPLE ID. (MAXIMUM 6 CHARACTERS)	WATER SOURCE N ^o	IF WELL, SHOW DEPTH	SOIL TYPE N ^o or LAB N ^o IF FOR IRRIGATION	U S A G E	PLANTING OR CROP IF FOR IRRIGATION
1				Ft			
2				Ft			
3				Ft			
4				Ft			
5				Ft			
6				Ft			
7				Ft			
8				Ft			

WATER TESTING SELECTION GUIDE

STD - STANDARD WATER ANALYSIS – includes Electrical Conductivity (EC), Total Soluble Salts (TSS) in ppm, Tons/Acre Foot of Dissolved Solids, pH, Chlorides, Carbonates, Bicarbonates, Calcium, Sodium, Potassium, Magnesium, Sodium Absorption Ratio (SAR), Sulfates and Nitrates.

PRI - PRIMARY WATER ANALYSIS – same as above – plus Boron.

COMP - COMPREHENSIVE WATER ANALYSIS – STANDARD plus Boron, Iron, Manganese, Copper and Zinc.

AQUA - AQUACULTURE SUITABILITY – COMPREHENSIVE plus Ammonia, Nitrite, Phosphorus, Alkalinity, Acidity and Total Hardness.

POT - DOMESTIC (POTABLE) SUITABILITY – STANDARD plus Total Hardness, Fluoride and Bacteria (Total Coliform, Fecal Coliform and E. Coli).

HYDRO - HYDROPONIC SUITABILITY – **Total Nutrient Analysis:** Nitrogen, Ammonia, Nitrate, Phosphorus, Calcium, Sodium, Magnesium, Potassium, Zinc, Iron, Manganese, Copper, Boron, Sulfur, Molybdenum, pH, Alkalinity, Acidity and Total Hardness.

LIVE - LIVESTOCK SUITABILITY – STANDARD plus Iron and Copper.

- OTHER PROTOCOLS -

*Please see **PROTOCOLS AND HEAVY METALS Sheet** for full descriptions of Protocols.*

FICAP – FULL SCREEN Inductively-Coupled Argon Plasma (ICAP) instrument analysis.

NPDES – National Pollutant Discharge Elimination System.

RCRA – Resource Conservation and Recovery Act.

QICAP – Quantitative ICAP screen.

TAL – Target Analyte List metals.

PP – Priority Pollutant metals.

MINI – Screen for most common Heavy Metals concerns.

CA – CANADA and CALIFORNIA Registrations.

WA – WASHINGTON State registration.

NR – Non-Registration screen.

INDIVIDUAL TESTS	
PHOS – Phosphorus	AMMON – Ammonia
ALKA – Alkalinity	NITR – Nitrite
ACID – Acidity	HARD – Hardness
FLUOR – Fluoride	

- Please ✓ check tests desired -

See
**WATER-SAMPLING
Sheet**
for sampling
procedures and
volumes needed.

LINE	TPSL® PACKAGES							INDIVIDUAL TESTS							PROTOCOLS										
	STD	PRI	COMP	AQUA	POT	HYDRO	LIVE	PHOS	ALKA	ACID	FLUOR	AMMON	NITR	HARD	FICAP	NPDES	RCRA	QICAP	TAL	PP	MINI	CA	WA	NR	
1																									
2																									
3																									
4																									
5																									
6																									
7																									
8																									

CUSTOM HEAVY METALS ANALYSES (check ✓ all desired) –

LINE	ALUMINIUM	ANTIMONY	ARSENIC	BARIUM	BERYLLIUM	BISMUTH	BORON	CADMIUM	CALCIUM	CHROMIUM	COBALT	COPPER	GOLD	IRON	LEAD	MAGNESIUM	MANGANESE	MERCURY	MOLYBDENUM	NICKEL	PHOSPHORUS	POTASSIUM	SELENIUM	SILICON	SILVER	SODIUM	STRONTIUM	SULFUR	THALLIUM	TITANIUM	VANADIUM	ZINC	
1																																	
2																																	
3																																	
4																																	
5																																	
6																																	
7																																	
8																																	

WATER PRICE LIST AND ORDER FORM

Prices effective Sep. 1st, 2011.
Prices subject to change without prior notice.

NAME: _____
COMPANY: _____
TELEPHONE: _____

LAB N ^{os} FROM: _____ TO: _____
DATE R ^{eq'd} : _____

*Please see **PROTOCOLS AND HEAVY METALS REFERENCE** for description of Heavy Metals Protocols and Elements Analyzed.*

PACKAGE, INDIVIDUAL TEST AND PROTOCOLS PRICE SCHEDULE

TPSL® PACKAGES	PRICE	INDIVIDUAL TESTS	PRICE	HEAVY METALS PROTOCOLS	PRICE
1. STANDARD	\$53.00	20. PHOSPHORUS	\$19.00	40. FICAP	\$436.00
2. PRIMARY	\$70.00	21. ALKALINITY	\$15.00	41. NPDES	\$141.00
3. COMPREHENSIVE	\$93.00	22. ACIDITY	\$18.00	42. RCRA	\$226.00
4. AQUACULTURE	\$165.00	23. FLUORIDE	\$21.00	43. QICAP	\$246.00
5. DOMESTIC	\$185.00	24. AMMONIA	\$19.00	44. TAL	\$381.00
6. HYDROPONIC	\$130.00	25. NITRITE	\$21.00	45. PP	\$331.00
7. LIVESTOCK	\$75.00	26. HARDNESS	\$21.00	46. MINI	\$91.00
				47. CA	\$225.00
				48. WA	\$195.00
				49. NR	\$95.00

YOUR ORDER:

From back of Water Sample Submittal Form.

LINE	TOTAL PRICE OF PACKAGES/TESTS/ PROTOCOLS	INDIVIDUAL HEAVY METALS		LINE TOTAL
		FIRST	ADDITIONAL	
1	\$ +	X \$26.00	X \$21.00 ea.	\$
2	\$ +	X \$26.00	X \$21.00 ea.	\$
3	\$ +	X \$26.00	X \$21.00 ea.	\$
4	\$ +	X \$26.00	X \$21.00 ea.	\$
5	\$ +	X \$26.00	X \$21.00 ea.	\$
6	\$ +	X \$26.00	X \$21.00 ea.	\$
7	\$ +	X \$26.00	X \$21.00 ea.	\$
8	\$ +	X \$26.00	X \$21.00 ea.	\$
ORDER TOTAL				\$

PROTOCOLS AND HEAVY METALS REFERENCE FOR SOIL, WATER, PLANTS & COMPOST.

NOTE THAT THE PROTOCOLS AND TESTS SHOWN MAY INCLUDE ANALYSES AND OTHER FEATURES NOT MENTIONED.

Heavy Metal Micronutrients – Even though this list consists of Heavy Metals, they are classified as Micronutrients as they are essential to plant health and development. However, any significant buildup of any of these can be toxic ☠ to humans, animals and plants.

☠ **Undesirable Heavy Metals** – Significant amounts of these can be toxic to plants or extremely hazardous to health.

⊙ **Sodium** – Although a Secondary Micronutrient, a significant buildup (as NaCl) is highly toxic to plants due to reverse osmosis.

■ **Sulfur** – While a Micronutrient, Sulfur is perhaps more significant as an acidifier in alkaline soils, acting to release water insoluble nutrient compounds into water soluble forms readily available for plant root absorption.

YOU ARE NOT RESTRICTED TO THE PROTOCOLS – ORDER ANY SINGLE OR COMBINATION OF INDIVIDUAL ELEMENTS DESIRED.

Standard Analytical Protocols (● = Total Content strong acid extraction) –

M3 – (SOIL) Standard Mehlich III Extraction (Total Content) – includes pH & N.

M3F – (SOIL) Full-Screen Mehlich III – Standard Mehlich III Extraction plus Water Soluble Extraction (+W).

FICAP – Full-screen Inductively Coupled Argon Plasma (ICAP) instrument analysis.

NPDES – National Pollutant Discharge Elimination System.

RCRA – Resource Conservation and Recovery Act.

QICAP – Quantitative ICAP screen.

TAL – Target Analyte List metals.

PP – Priority Pollutant metals.

COMP – (SOIL) TPSL Comprehensive CO₂ Extraction Method Soil Test – INCLUDES pH, N and MANY OTHER FEATURES.

STD – (SOIL) TPSL Standard CO₂ Extraction Method Soil Test – INCLUDES pH, N and MANY OTHER FEATURES.

BASIC – (SOIL) Basic Fertilizer Guide (Soil Nutrients Test) – specially-modified extraction.

MINI – Screen for most common Heavy Metals concerns.

CA – CANADA and CALIFORNIA Registrations.

WA – WASHINGTON State registration.

NR – Non-Registration screen.

① Primary Nutrient. ② Major Micronutrient. ③ Secondary Micronutrient. ④ Trace Element □ CO₂ Extraction
 +W = and Water Soluble Extraction. ⊗ Neutral Extraction (NH₄AoC). ○ Calculated Micronutrient.

ELEMENT	M3	M3F	FICAP	NPDES	RCRA	QICAP	TAL	PP	COMP	STD	BASIC	MINI	CA	WA	NR
Aluminum	③		●			●	●								
Antimony	④		●				●	●							
Arsenic	☠		●	●	●	●	●	●				●	●	●	●
Barium	☠		●	●	●	●	●								
Beryllium	☠		●				●	●							
Bismuth	☠		●												
Boron	②		●			●									
Cadmium	☠		●	●	●	●	●	●				●	●	●	●
Calcium	①	●	●+W	●		●			□+W	□+W	⊗				
Chromium	☠		●	●	●	●	●	●					●		●
Cobalt	④		●			●	●						●	●	
Copper	②		●	●		●	●	●	●				●	●	
Gold			●												
Iron	②		●			●	●		●		○				
Lead	☠		●	●	●	●	●	●				●	●	●	●
Magnesium	①	●	●+W	●		●	●		□+W	□+W					
Manganese	②		●			●	●		●		○				
Mercury	☠		●	●	●	●	●						●	●	
Molybdenum	④		●			●							●	●	
Nickel	④		●	●		●	●	●					●	●	
Phosphorus	①	●	●	●		●			□	□	⊗				
Potassium	①	●	●	●		●	●		□+W	□+W	⊗				
Selenium	④		●		●	●	●	●					●	●	
Silicon	③		●												
Silver	☠		●	●	●	●	●								
Sodium	⊙	●	●+W	●		●	●		□+W	□+W					
Strontium	④		●												
Sulfur	■	③	●			●									
Thallium	☠	④	●				●	●							
Titanium	④		●				●								
Vanadium	④		●				●								
Zinc	②		●	●		●	●	●	●		○		●	●	



WATER SAMPLING

Minimum Volumes of Samples -

20 ounces for most tests.

40 ounces for tests requiring biological assays (*Domestic Suitability*) and tests involving Alkalinity (including *Hydroponic Suitability*).

Containers –

For non-biological tests a clean plastic water or soda bottle may be used. Be sure that it has been thoroughly washed and clean before filling. Tightly cap the bottle and pack it securely in the shipping container.

For biological tests – **A sterile container must be used!** A readily-available container can be a new, unused bottled water bottle. Empty out the original contents, **taking care not to touch the inside of the cap or the inside of the neck of the bottle.** Fill with sample and tightly re-cap.

Special Circumstance Sampling Procedures –

Irrigation Systems – Take sample from an active system that is free of stagnant water and representative of the water being actually applied to the soil.

Pond or Lake – Samples should be taken from several depths and locations, if possible. These are to be combined into one composite sample to be sent to the lab for analysis.

Deep Well or Lake – If deeper than 100 feet, **Boron** testing is recommended, as Boron generally concentrates in deeper waters.

It is recommended that a container no larger than a quart should be used, due to possible breakage or leakage during shipment.