

WALLACE LABS
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El Segundo, CA 90245
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SOILS REPORT

Print Date Sep. 17, 2010 Receive Date 9/16/10

Location site
 Requester customer
 graphic interpretation: * very low, ** low, *** moderate

ammonium bicarbonate/DTPA

*** high, ***** very high

extractable - mg/kg soil	Sample ID Number	10-259-22
Interpretation of data	Sample Description	Sample #2 Soil 9-14-10
low medium high	elements	graphic
0 - 7 8-15 over 15	phosphorus	12.78 ****
0-60 60 -120 121-180	potassium	357.56 *****
0 - 4 4 - 10 over 10	iron	22.85 *****
0- 0.5 0.6- 1 over 1	manganese	6.35 ****
0 - 1 1 - 1.5 over 1.5	zinc	10.04 *****
0- 0.2 0.3- 0.5 over 0.5	copper	9.18 *****
0- 0.2 0.2- 0.5 over 1	boron	0.20 ***
ratio of calcium to magnesium	calcium	340.35 ***
needs to be more than 2 or 3	magnesium	363.25 *****
should be less than potassium	sodium	374.10 *****
	sulfur	367.09 ***
	molybdenum	0.09 ***
	nickel	1.05 **
The following trace elements may be toxic	aluminum	nd *
The degree of toxicity depends upon the pH of the soil, soil texture, organic matter, and the concentrations of the individual elements as well as to their interactions.	arsenic	0.03 *
	barium	0.31 *
	cadmium	0.11 *
	chromium	0.05 *
	cobalt	0.14 *
	lead	3.78 **
	lithium	0.13 *
	mercury	nd *
	selenium	0.51 **
	silver	nd *
	strontium	1.47 *
	tin	nd *
	vanadium	1.15 **
	Saturation Extract	
The pH optimum depends upon soil organic matter and clay content- for clay and loam soils: under 5.2 is too acidic 6.5 to 7 is ideal over 9 is too alkaline	pH value	7.62 ****
The ECe is a measure of the soil salinity: 1-2 affects a few plants 2-4 affects some plants, > 4 affects many plants.	ECe (milli-mho/cm)	2.42 ****
	calcium	161.5 8.1
	magnesium	70.1 5.8
	sodium	254.4 11.1
	potassium	38.7 1.0
	cation sum	26.0
problems over 150 ppm	chloride	479 13.5
	nitrate as N	35 2.5
	phosphorus as P	0.7 0.0
toxic over 800	sulfate as S	152.2 9.5
	anion sum	25.5
toxic over 1 for many plants	boron as B	0.12 *
increasing problems start at 6 est. gypsum requirement-lbs./per 1,000 square feet	SAR	3.5 ***
		101
	infiltration rate inches/hour	2.99
	soil texture	clay gravel > 2 mm
	sand	16.5% 9.9%
	silt	29.6%
	clay	53.9%
	lime (calcium carbonate)	yes
	Total nitrogen	0.092%
	Total carbon	1.161%
	carbon:nitrogen ratio	12.6
	organic matter based on carbon	2.32%
	moisture content of soil	21.7%
	half saturation percentage	45.0%

ideal percentages of cations		% saturation
abt 5 % potassium	0.81	4%
< 3% sodium	0.85	5%
abt 70% calcium	10.46	57%
15 - 20% magnesium	4.46	24%
5-10% hydrogen	1.68	9%
	total millieq/100 grams	18.26

Elements are expressed as mg/kg dry soil or mg/l for saturation extract.
 pH and ECe are measured in a saturation paste extract. nd means not detected.
 Sand, silt, clay and mineral content based on fraction passing a 2 mm screen.