



Soil & Plant Laboratory, Inc.

Leaders in Soil & Plant Testing Since 1946

4741 E. Hunter Ave, Suite A Anaheim, CA 92807 714-282-8777 (phone) 714-282-8575 (fax)
www.soilandplantlaboratory.com

SOIL ANALYSIS

Send To : Randall Sand & Gravel 214 West River Ln. Garberville CA 95542	Project : Product Testing	Report No : 13-078-0050 Cust No : 05028 Date Printed : 03/25/2013 Date Received : 03/19/2013 Page : 1 of 4 Lab Number : 22385
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Sample Id : **Mt. Mix**

SATURATION EXTRACT - PLANT SUITABILITY

Test	Result	Effect on Plant Growth				
		Negligible	Sensitive Crops Restricted	Many Crops Restricted	Only Tolerant Crops Satisfactory	Few Crops Survive
Salinity (ECe)	5.3 dS/m					
Sodium Adsorption Ratio (SAR) *	2.57					
Boron (B)	0.81 ppm					
Sodium (Na)	13.1 meq/L					
Chloride (Cl)						
Carbonate (CO3)						
Bicarbonate (HCO3)						
Fluoride (F)						

* Structure and water infiltration of mineral soils potentially adversely affected at SAR values higher than 6.

Test	Result	Strongly Acidic	Moderately Acidic	Slightly Acidic	Neutral	Slightly Alkaline	Moderately Alkaline	Strongly Alkaline	Qualitative Lime
pH	7.2 s.u.								None

EXTRACTABLE NUTRIENTS

Test	Result	Sufficiency Factor	SOIL TEST RATINGS					NO3-N
			Very Low	Low	Medium	Optimum	Very High	
Available-N	492 ppm	3.1						485 ppm
Phosphorus (P) - Olsen	124 ppm	1.3						NH4-N
Potassium (K)	1649 ppm	5.1						
Potassium - sat. ext.	19.0 meq/L							7 ppm
Calcium (Ca)	2598 ppm	1.4						Total Exchangeable Cations(TEC)
Calcium - sat. ext.	33.2 meq/L							
Magnesium (Mg)	478 ppm	1.7						102 meq/kg
Magnesium - sat. ext.	18.9 meq/L							
Copper (Cu)	3.3 ppm	2.5						
Zinc (Zn)	20 ppm	3.8						
Manganese (Mn)	28 ppm	2.5						
Iron (Fe)	134 ppm	2.7						
Boron (B) - sat. ext.	0.81 ppm	2.7						
Sulfate - sat. ext.	44.6 meq/L	14.9						
Exch Aluminum								

Cu, Zn, Mn and Fe were analyzed by DTPA extract.

PARTICLE SIZE ANALYSIS

Half Sat	Organic Matter	Gravel		Weight Percent of Sample Passing 2mm Screen					USDA Soil Classification
		Coarse 5-12	Fine 2-5	Very Coarse 1-2	Sand Coarse 0.5-1	Med. to Very Fine 0.05-0.5	Silt .002-.05	Clay 0-.002	
80 %									

Graphical interpretation is a general guide. Optimum levels will vary by crop and objectives.



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Sample Id : **Sand**

SATURATION EXTRACT - PLANT SUITABILITY

Test	Result	Effect on Plant Growth				
		Negligible	Sensitive Crops Restricted	Many Crops Restricted	Only Tolerant Crops Satisfactory	Few Crops Survive
Salinity (ECe)	0.4 dS/m					
Sodium Adsorption Ratio (SAR) *	0.53					
Boron (B)	0.11 ppm					
Sodium (Na)	1.0 meq/L					
Chloride (Cl)						
Carbonate (CO3)						
Bicarbonate (HCO3)						
Fluoride (F)						

* Structure and water infiltration of mineral soils potentially adversely affected at SAR values higher than 6.

Test	Result	Strongly Acidic	Moderately Acidic	Slightly Acidic	Neutral	Slightly Alkaline	Moderately Alkaline	Strongly Alkaline	Qualitative Lime
pH	8.1 s.u.								None

EXTRACTABLE NUTRIENTS

Test	Result	Sufficiency Factor	SOIL TEST RATINGS					NO3-N
			Very Low	Low	Medium	Optimum	Very High	
Available-N	7 ppm	0.3						6 ppm
Phosphorus (P) - Olsen	33 ppm	2.6						NH4-N
Potassium (K)	125 ppm	1.8						1 ppm
Potassium - sat. ext.	0.7 meq/L							Total Exchangeable Cations(TEC)
Calcium (Ca)	845 ppm	1.0						57 meq/kg
Calcium - sat. ext.	2.0 meq/L							
Magnesium (Mg)	162 ppm	1.4						
Magnesium - sat. ext.	4.7 meq/L							
Copper (Cu)	0.4 ppm	0.6						
Zinc (Zn)	1 ppm	0.4						
Manganese (Mn)	5 ppm	0.8						
Iron (Fe)	24 ppm	1.0						
Boron (B) - sat. ext.	0.11 ppm	0.4						
Sulfate - sat. ext.	2.6 meq/L	0.9						
Exch Aluminum								

Cu, Zn, Mn and Fe were analyzed by DTPA extract.

PARTICLE SIZE ANALYSIS

Half Sat	Organic Matter	Gravel		Weight Percent of Sample Passing 2mm Screen				Clay 0-.002	USDA Soil Classification
		Coarse 5-12	Fine 2-5	Very Coarse 1-2	Sand Coarse 0.5-1	Med. to Very Fine 0.05-0.5	Silt .002-.05		
10 %									

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Sample Id : **Base Mix**

SATURATION EXTRACT - PLANT SUITABILITY

Test	Result	Effect on Plant Growth				
		Negligible	Sensitive Crops Restricted	Many Crops Restricted	Only Tolerant Crops Satisfactory	Few Crops Survive
Salinity (ECe)	3.6 dS/m					
Sodium Adsorption Ratio (SAR) *	2.45					
Boron (B)	0.63 ppm					
Sodium (Na)	8.5 meq/L					
Chloride (Cl)						
Carbonate (CO3)						
Bicarbonate (HCO3)						
Fluoride (F)						

* Structure and water infiltration of mineral soils potentially adversely affected at SAR values higher than 6.

Test	Result	Strongly Acidic	Moderately Acidic	Slightly Acidic	Neutral	Slightly Alkaline	Moderately Alkaline	Strongly Alkaline	Qualitative Lime
pH	7.3 s.u.								None

EXTRACTABLE NUTRIENTS

Test	Result	Sufficiency Factor	SOIL TEST RATINGS					NO3-N
			Very Low	Low	Medium	Optimum	Very High	
Available-N	257 ppm	2.0						252 ppm
Phosphorus (P) - Olsen	153 ppm	2.0						NH4-N
Potassium (K)	1790 ppm	5.3						
Potassium - sat. ext.	13.4 meq/L							5 ppm
Calcium (Ca)	2489 ppm	1.0						Total Exchangeable Cations(TEC)
Calcium - sat. ext.	13.1 meq/L							
Magnesium (Mg)	291 ppm	0.8						151 meq/kg
Magnesium - sat. ext.	10.9 meq/L							
Copper (Cu)	3.0 ppm	1.5						
Zinc (Zn)	18 ppm	2.4						
Manganese (Mn)	19 ppm	1.1						
Iron (Fe)	99 ppm	1.3						
Boron (B) - sat. ext.	0.63 ppm	2.1						
Sulfate - sat. ext.	24.5 meq/L	8.2						
Exch Aluminum								

Cu, Zn, Mn and Fe were analyzed by DTPA extract.

PARTICLE SIZE ANALYSIS

Half Sat	Organic Matter	Gravel		Weight Percent of Sample Passing 2mm Screen					USDA Soil Classification
		Coarse 5-12	Fine 2-5	Very Coarse 1-2	Sand Coarse 0.5-1	Med. to Very Fine 0.05-0.5	Silt .002-.05	Clay 0-.002	
63 %									

Graphical interpretation is a general guide. Optimum levels will vary by crop and objectives.



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Sample Id : **Coffee Mix**

SATURATION EXTRACT - PLANT SUITABILITY

Test	Result	Effect on Plant Growth				
		Negligible	Sensitive Crops Restricted	Many Crops Restricted	Only Tolerant Crops Satisfactory	Few Crops Survive
Salinity (ECe)	3.8 dS/m					
Sodium Adsorption Ratio (SAR) *	2.59					
Boron (B)	0.67 ppm					
Sodium (Na)	9.8 meq/L					
Chloride (Cl)						
Carbonate (CO3)						
Bicarbonate (HCO3)						
Fluoride (F)						

* Structure and water infiltration of mineral soils potentially adversely affected at SAR values higher than 6.

Test	Result	Strongly Acidic	Moderately Acidic	Slightly Acidic	Neutral	Slightly Alkaline	Moderately Alkaline	Strongly Alkaline	Qualitative Lime
pH	7.6 s.u.								None

EXTRACTABLE NUTRIENTS

Test	Result	Sufficiency Factor	SOIL TEST RATINGS					NO3-N
			Very Low	Low	Medium	Optimum	Very High	
Available-N	84 ppm	0.6						68 ppm
Phosphorus (P) - Olsen	90 ppm	1.2						NH4-N
Potassium (K)	1791 ppm	5.6						
Potassium - sat. ext.	14.1 meq/L							16 ppm
Calcium (Ca)	2229 ppm	1.0						Total Exchangeable Cations(TEC)
Calcium - sat. ext.	16.0 meq/L							
Magnesium (Mg)	315 ppm	1.0						132 meq/kg
Magnesium - sat. ext.	12.7 meq/L							
Copper (Cu)	3.2 ppm	1.9						
Zinc (Zn)	19 ppm	2.8						
Manganese (Mn)	43 ppm	2.9						
Iron (Fe)	171 ppm	2.6						
Boron (B) - sat. ext.	0.67 ppm	2.2						
Sulfate - sat. ext.	36.1 meq/L	12.0						
Exch Aluminum								

Cu, Zn, Mn and Fe were analyzed by DTPA extract.

PARTICLE SIZE ANALYSIS

Half Sat	Organic Matter	Gravel		Weight Percent of Sample Passing 2mm Screen					USDA Soil Classification
		Coarse 5-12	Fine 2-5	Very Coarse 1-2	Sand Coarse 0.5-1	Med. to Very Fine 0.05-0.5	Silt .002-.05	Clay 0-.002	
65 %									

Graphical interpretation is a general guide. Optimum levels will vary by crop and objectives.