

Wilson Hago
V-Grid
513 Calle San Pablo
Camarillo, CA 93012

Date: June 26, 2020
Request Number: 39696
Date Received: 6/12/20
Matrix: Biochar

REPORT OF ANALYSIS

Lab Number: S0626B

Sample ID: Pistachio Shell Biochar 2/4/20

Proximate Analysis	As Received wt%	Moisture Free wt%	Moisture & Ash Free wt%	ASTM Method	Date Analyzed	Analyst
Moisture	1.52	*****	*****	D7582	6/24/2020	AZ
Ash	3.90	3.96	*****	D7582	6/24/2020	AZ
Volatile Matter	5.37	5.45	5.68	D7582	6/24/2020	AZ
Fixed Carbon	89.21	90.59	94.32	calculated		
Total	100.00	100.00	100.00			

Ultimate Analysis	As Received wt%	Moisture Free wt%	Moisture & Ash Free wt%	ASTM Method	Date Analyzed	Analyst
Moisture	1.52	*****	*****	D7582	6/24/2020	AZ
Ash	3.90	3.96	*****	D7582	6/24/2020	AZ
Carbon	89.20	90.58	94.31	D5373	6/23/2020	AZ
Hydrogen	0.72	0.73	0.76	D5373	6/23/2020	AZ
Nitrogen	< 0.01	< 0.01	< 0.01	D5373	6/23/2020	AZ
Sulfur	0.057	0.058	0.060	D4239	6/22/2020	AZ
Oxygen	4.60	4.67	4.87	calculated		
Total	100.00	100.00	100.00			

Hydrogen and Oxygen values reported do not include hydrogen and oxygen in the free moisture associated with the sample.

Reported results calculated by ASTM D3180.



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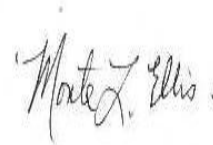
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	Result	Units	Method	Date Analyzed	Analyst
Chromium	0.72	mg/kg	EPA 3052/6020	2/25/2020	RRJ
Manganese	7.22	mg/kg	EPA 3052/6020	2/25/2020	RRJ
Cobalt	0.09	mg/kg	EPA 3052/6020	2/25/2020	RRJ
Nickel	1.43	mg/kg	EPA 3052/6020	2/25/2020	RRJ
Copper	1.42	mg/kg	EPA 3052/6020	2/25/2020	RRJ
Arsenic	0.06	mg/kg	EPA 3052/6020	2/25/2020	RRJ
Selenium	0.02	mg/kg	EPA 3052/6020	2/25/2020	RRJ
Molybdenum	0.28	mg/kg	EPA 3052/6020	2/25/2020	RRJ
Cadmium	0.01	mg/kg	EPA 3052/6020	2/25/2020	RRJ
Mercury	0.04	mg/kg	EPA 3052/6020	2/25/2020	RRJ
Lead	0.37	mg/kg	EPA 3052/6020	2/25/2020	RRJ
Iron	1,137	mg/kg	EPA 3052/6010	2/25/2020	RRJ
Potassium	5,992	mg/kg	EPA 3052/6010	2/25/2020	RRJ
Sodium	58.1	mg/kg	EPA 3052/6010	2/25/2020	RRJ
Boron	3.23	mg/kg	EPA 3052/6010	2/25/2020	RRJ
Silica, as SiO ₂	43.4	mg/kg	EPA 3052/6010	2/25/2020	RRJ
Phosphorus, as P	502	mg/kg	EPA 3052/6010	3/2/2020	RRJ
Chlorine	0.01	wt.% dry basis	XRF	3/3/2020	CW

End of Report
MLE/tab



Monte L. Ellis
Laboratory Manager



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