

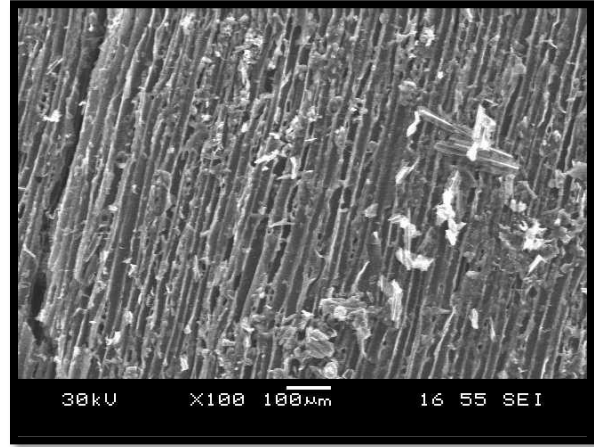
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Regarding: Biochar General Specifications

Confluence Energy produced biochar can be used in many soil and filtration applications. Confluence Energy (CE) is a high quality low cost producer located in Kremmling Colorado. At this time CE is able to provide bulk bag (2 yard) and special order small bag (1 cubic foot) biochar materials screened in two sizes.



1: Large and Small Screened Fractions of Ecochar

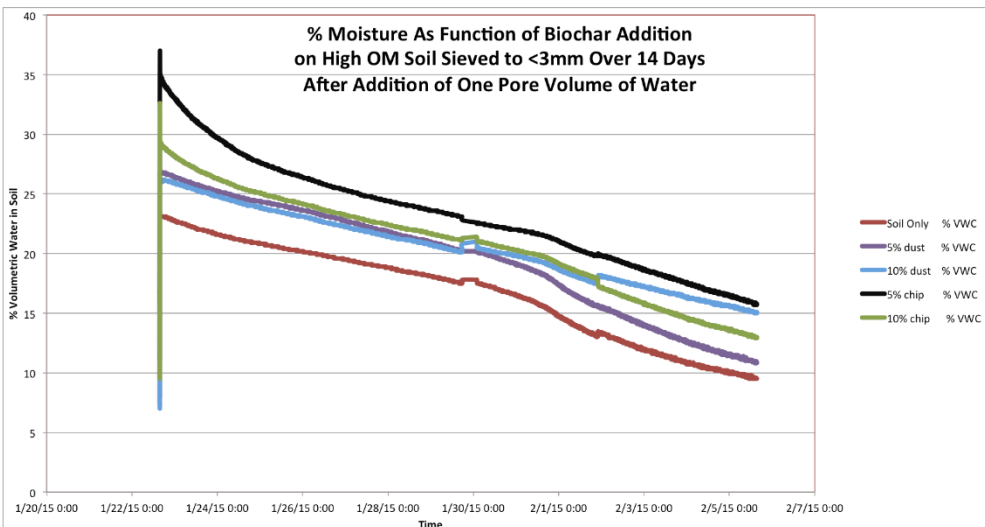


2: SEM image of CE Biochar

One gram of the material displayed in figures 1 and 2- has an effective surface area larger than a football field >100m²/g

International BioChar Initiative (IBI) Laboratory Tests for Certification Program

	Dry Basis Unless Stated: Range	Units	Method
Moisture (time of analysis)	37.8	% wet wt.	ASTM D1762-84 (105c)
Bulk Density	8.3	lb/cu ft	
Organic Carbon	85.4	% of total mass	Dry Combust-ASTM D 4373
Hydrogen/Carbon (H:C)	0.67 0.7 Max	Molar Ratio	H dry combustion/C(above)
Total Ash	1.7	% of total mass	ASTM D-1762-84
Total Nitrogen	0.51	% of total mass	Dry Combustion
pH value	8.12	units	4.11USCC:dil. Rajkovich
Electrical Conductivity (EC20 w/w)	0.121	dS/m	4.10USCC:dil. Rajkovich
Liming (neut. Value as-CaCO ₃)	2.7	%CaCO ₃	AOAC 955.01
Carbonates (as-CaCO ₃)	0.5	%CaCO ₃	ASTM D 4373
Butane Act.	10.7	g/100g dry	ASTM D 5742-95
Surface Area Correlation	473	m ² /g dry	G



Percent Moisture as a Function of Biochar Additions on High OM Soils

After applying the same volume of water to soil and allowed to dry for 14-days, soil with 5% chipped biochar had 39.5% more water than soil only control.

Morgan M Williams. Applied Soils, LLC 2.8.2015