



## ANALYSIS OF GIANT REED AND MISCANTHUS

Test Name	Reference	Result		Measure
		Giant Reed	Miscanthus	
<b>Dry Basis</b>				
Ash, Dry	ASTM D 5142	3.91	4.19	% by Weight
Heat of Combustion, Dry	ASTM D 5865	8422	8023	BTU/LB
Carbon Fixed, Dry	ASTM D 3172	19.53	18.95	% by Weight
Volatiles, Dry Basis	ASTM D 5142	76.56	76.86	% by Weight
Sulfur, Dry Basis	ASTM D 4239	0.29	0.11	% by Weight
<b>As Received</b>				
Moisture, Total	ASTM D 2013	6.59	11.16	% by Weight
Ash, As Received	ASTM D 5142	3.65	3.72	% by Weight
Heat of Combustion, As Received	ASTM D 5865	7867	7128	BTU/LB
Carbon Fixed, As Received	ASTM D 3172	18.24	16.84	% by Weight
Volatiles, As Received	ASTM D 5142	71.51	68.28	% by Weight
Sulfur, As Received	ASTM D 4239	0.27	0.1	% by Weight
<b>Ignited as Element</b>				
Aluminum, Ignited Basis	ASTM D 3682	0.22	0.28	% by Weight
Barium, Ignited Basis	ASTM D 3683	329	465	mg/kg
Calcium, Ignited Basis	ASTM D 3682	7.43	5.2	% by Weight
Iron, Ignited Basis	ASTM D 3682	0.21	0.16	% by Weight
Magnesium, Ignited Basis	ASTM D 3682	3.73	8.43	% by Weight
Phosphorus, Ignited Basis	ASTM D 3682	3.2	2.9	% by Weight
Potassium, Ignited Basis	ASTM D 3682	27.31	15.5	% by Weight
Silicon, Ignited Basis	ASTM D 3682	11.99	15.38	% by Weight
Sodium, Ignited Basis	ASTM D 3682	0.18	5.06	% by Weight
Sulfur, Ignited Basis	ASTM D 5016	6.61	1.14	% by Weight
Titanium, Ignited Basis	ASTM D 3682	0.02	0	% by Weight
<b>Ignited as Oxide</b>				
Aluminum Oxide, Ignited	ASTM D 3682	0.42	0.53	% by Weight
Calcium Oxide, Ignited	ASTM D 3682	10.4	7.28	% by Weight
Iron Oxide, Ignited	ASTM D 3682	0.3	0.23	% by Weight
Magnesium Oxide, Ignited	ASTM D 3682	6.19	13.98	% by Weight
Phosphorus Pentoxide, Ignited	ASTM D 3682	7.33	6.65	% by Weight
Potassium Oxide, Ignited	ASTM D 3682	32.9	18.67	% by Weight
Silicon Oxide, Ignited	ASTM D 3682	25.65	32.9	% by Weight
Sodium Oxide, Ignited	ASTM D 3682	0.24	6.82	% by Weight
Sulfur Oxide, Ignited	ASTM D 5016	16.52	2.85	% by Weight
Titanium Oxide, Ignited	ASTM D 3682	0.03	0	% by Weight
Barium Oxide, Ignited	ASTM D 3683		5.19.2	mg/kg
<b>General</b>				
Heat of Combustion, MAF	ASTM D 5865	8765	8374	BTU/LB
Sulfur, lbs/mmBTU	ASTM D 3180	0.344	0.137	LBS/mmBTU
Initial Ash Fusion Temp, Red. At	ASTM D 1857	2140	2215	Deg F
Softening Ash Fusion Temp, Red	ASTM D 1857	2185	2230	Deg F
Hemispherical Ash Fusion, Reducin	ASTM D 1857	2260	2270	Deg F
Fluid Ash Fusion Temp, Reducing	ASTM D 1857	2380	2360	Deg F