

1641 Sigman Road
PO Box 919
Conyers, GA 30012
1-770-922-8000 ext 164
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Report of Analysis

BEL2533

BioResources Management, Inc.
3520 NW 43rd St.
Gainesville, FL 32606

Company Contact: Brian Condon

BEL ID Number(s):	BEL123174	Sample Weight (kg):	0.66
Product/Commodity:	Biomass Fuel	Sample Received:	5/29/2013
Sample Designation:	ID 130524A	Report Date:	6/5/2013
Packaging:	Plastic Bag	Report ID:	BEL123174-1
Date Sampled:	5/24/2013	Purchase Order #	N/A

Compositional Analysis: Proximate/Ulimate Analysis

Parameter	As-Received	Oven Dry	Analytical Method
Total Moisture (%)	12.41		CEN/EN 14774-1
Ash (%)	7.25	8.28	CEN/EN 14775
Volatiles (%)	66.08	75.44	CEN/EN 15148
Fixed Carbon (%)	14.24	16.26	By Difference
Gross Calorific Value (GJ/Tonne)	16.09	18.37	CEN/EN 14918
Net Calorific Value (cV)(GJ/Tonne)	14.76	17.18	CEN/EN 14918
Net Calorific Value (cP)(GJ/Tonne)	14.69	17.11	CEN/EN 14918
Carbon (%)	42.57	48.61	CEN/EN 15104
Hydrogen (%)	5.04	5.76	CEN/EN 15104
Nitrogen (%)	0.53	0.60	CEN/EN 15104
Sulfur (%)	0.01	0.02	CEN/EN 15289
Oxygen (%)	32.17	36.73	By Difference
Chlorine (ppm)	272	310	CEN/EN 15289
Fluorine (ppm)	<5.0	<5.0	CEN/EN 15289
Mercury (ppm)	0.02	0.02	CEN/EN 15297

Prepared By: 

Results shown on this certificate represent only the quantity of sample which was submitted for analysis. BEL does not assume responsibility for selection, representation, and/or sample identifications. Analyses are carried out within the scope of Principal's instructions and with due care and skill in conformity with BEL Terms and Conditions of Business. Claims in respect of services provided will be considered only if based upon failure to take due care proven by the Principal. Liability shall in no circumstances whatsoever exceed a total aggregate sum equal to 10 (ten) times the amount of the fee paid for the service.

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Analysis of Ash: Mineral Ash Analysis

<u>Mineral Ash Analysis</u>	<u>Dry Basis</u>	<u>Units</u>	<u>CEN/EN 15290</u>
Silicon Dioxide in Ash (SiO ₂)	78.77	Wt. %	Wt. % in ash
Aluminum Oxide in Ash (Al ₂ O ₃)	1.39	Wt. %	
Titanium Dioxide in Ash (TiO ₂)	0.17	Wt. %	
Iron Oxide in Ash (Fe ₂ O ₃)	0.51	Wt. %	
Calcium Oxide in Ash (CaO)	11.63	Wt. %	
Magnesium Oxide in Ash (MgO)	0.98	Wt. %	
Potassium Oxide in Ash (K ₂ O)	1.31	Wt. %	
Sodium Oxide in Ash (Na ₂ O)	0.16	Wt. %	
Sulfur Trioxide in Ash (SO ₃)	0.60	Wt. %	
Phosphorus pentoxide in Ash (P ₂ O ₅)	1.16	Wt. %	
Strontium Oxide in Ash (SrO)	0.03	Wt. %	
Barium Oxide (BaO)	0.01	Wt. %	
Manganese Oxide in Ash (MnO)	0.06	Wt. %	

Prepared By: Chris Wiberg

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