


Report No: USR:W223-0203-01  
Issue No: 1

## Analytical Test Report

Client: Vermont Natural Forest Products  
64 Patch Road  
Enosburg Falls, VT 05450  
Attention: Joshua Gervais  
PO No:

Signed:   
Amber Anderson  
Chemist  
Date of Issue: 4/14/2023  
THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

### Sample Details

Sample Log No: W223-0203-01  
Sample Designation: 40 lb. Pellet Bag  
Sample Recognized As: Biomass Pellets  
Sample Date: 4/10/2023  
Sample Time:  
Arrival Date:

### Test Results

	METHOD	UNITS	MOISTURE FREE	AS RECEIVED
Moisture Total	ASTM E871	wt. %		5.07
Ash	ASTM D1102	wt. %	0.45	0.43
Volatile Matter	ASTM D3175	wt. %		
Fixed Carbon by Difference	ASTM D3172	wt. %		
Sulfur	ASTM D4239	wt. %	0.008	0.007
SO <sub>2</sub>	Calculated	lb/mmBtu		0.017
Net Cal. Value at Const. Pressure	ISO 1928	GJ/tonne		
Gross Cal. Value at Const. Vol.	ASTM E711	Btu/lb	8826	8379
Carbon	ASTM D5373	wt. %		
Hydrogen*	ASTM D5373	wt. %		
Nitrogen	ASTM D5373	wt. %		
Oxygen*	ASTM D3178	wt. %		
*Note: As received values do not include hydrogen and oxygen in the total moisture.				
Chlorine	ASTM D6721	mg/kg	11	11
Fluorine	ASTM D3761	mg/kg		
Mercury	ASTM D6722	mg/kg		
Bulk Density	ASTM E873	lbs/ft <sup>3</sup>		47.89
Fines (Less than 1/8")	TPT CH-P-06	wt. %		0.92
Durability Index	Kansas State	PDI		98.5
Sample Above 1.50"	TPT CH-P-06	wt. %		0.0
Maximum Length (Single Pellet)	TPT CH-P-06	inch		0.936
Diameter, Range	TPT CH-P-05	inch	0.239 to	0.249
Diameter, Average	TPT CH-P-05	inch		0.244
Stated Bag Weight	TPT CH-P-01	lbs		40.0
Actual Bag Weight	TPT CH-P-01	lbs		40.6

Comments:



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# Our Pellets



## Moisture

Moisture content is also measured as a percentage. A premium pellet must have less than 8% moisture, but **higher quality fuels will have 6.5% or less.**

- Vermont Department of Forests, Parks & Recreation

**5.07%**

## ASH

Ash content is measured as a percentage of weight and **should be at most 1%.** In other words: when you burn a 40-pound bag of pellets, you should have less than 6 oz. of ash (or about 3/4 cup).

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**.43%**

## HEAT

Heat Output is measured in BTU/lb. Many retailers will display the "moisture-free BTU value," which is substantially higher than the "as received BTU value." However, the "moisture-free" value isn't very useful for you, since it represents the heat output of a pellet after all the moisture is removed. So, **the best fuels have an as received BTU value of 8000-8400.**

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**8379**