TwinPortsTesting

Twin Ports Testing, Inc.
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Certificate of Analysis

Report No:	USR:W219-0697-01
Issue No:	2

Revised Report. Previous report is USR:W219-0697-01 issue number 1

Client:	Certispec Services, Inc.
	12240 April Street
	Montreal, Quebec H1B 5N5
Attention:	Montreal Laboratory
PO No:	13035

Signed:

Stephen Sundeen
Chemistry Laboratory Manager

Date of Issue: 8/27/2019

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Sample Details

Sample Log No:	W219-0697-01	Sample Date:	8/15/2019
Sample Designation:	MTL-19-9779	Sample Time:	
Sample Recognized As:	Wood Pellets	Arrival Date:	8/26/2019
Custody Seal #:	19470	Sample Weight:	10.1 kg

Test Results

	METHOD	UNITS	MOISTURE FREE	AS RECEIVED
Moisture Total	ISO 18134-1	wt.%		4.93
Ash	ISO 18122	wt.%	0.33	0.31
Sulfur	ISO 16994	wt.%	0.009	0.008
Gross Cal. Value at Const. Volume	ISO 18125	MJ/kg	20.34	19.34
Net Cal. Value at Const. Volume	ISO 18125	MJ/kg		18.03
Net Cal. Value at Const. Pressure	ISO 18125	MJ/kg	19.01	17.95
Carbon	ISO 16948	wt.%	50.29	47.81
Hydrogen	ISO 16948	wt.%	6.10	5.80
Nitrogen	ISO 16948	wt.%	< 0.21	< 0.20
Oxygen	ISO 16948	wt.%	43.06	40.94
Chlorine	ISO 16994	wt.%	<0.01	<0.01
Bulk density	ISO 17828	kg/m^3		671
Mechanical durability	ISO 17831-1	%		99.0
Average Pellet Length	ISO 17829	mm		13.2
Average Pellet Diameter	ISO 17829	mm		6.3
Pellet Length > 40 mm	ISO 17829	wt.%		0.0
Pellet Length > 45 mm	ISO 17829	wt.%		0.0
Pellet Length < 10 mm	ISO 17829	wt.%		20.4
Fines less than 3.15 mm	ISO 18846	wt.%		1.1

Comments: