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NORWAY

AR-19-SL-078893-01

EUSELI2-00626654

Client code:: SL7651201

Reference:
Ref:702449 Projekt nr:502002236

ANALYTICAL REPORT

Sample code:	177-2019-04081079			
Description:				
Matrix	Solid Recovered Fuels			
Received:	2019-04-08			
Report date:	2019-04-17			
Client Sample:	FB-1			
Analysis	Result	Unit	Unc.	Method
Sample Preparation	1.0			EN 15443:2011 a)
Moisture content	7.0	%	10%	CEN/TS 15414-1,2:2014/EN15414-3:2011 a)
Ash content incl. ash contaminants	2.78	% dw	10%	EN 15403:2011 a)
Ash incl ash contaminants, as received	2.58	%	10%	EN 15403:2011 a)
Volatile matter	82.5	% DM	5%	EN 15402:2011 a)
Volatile matter as received	76.7	%	5%	EN 15402:2011 a)
Sulfur S	0.044	% dw	10%	EN 15408:2011 a)
Sulfur S as received	0.041	%	10%	EN 15408:2011 a)
Chlorine Cl	0.022	% dw	25%	EN 15408:2011 c)
Chlorine Cl as received	0.021	%	25%	EN 15408:2011 c)
Carbon C	48.5	% dw	5%	EN 15407:2011 a)
Carbon C as received	45.1	%	5%	EN 15407:2011 a)
Hydrogen H	5.7	% dw	10%	EN 15407:2011 a)
Hydrogen H as received	6.1	%	10%	EN 15407:2011 a)
Nitrogen N	2.51	% dw	10%	EN 15407:2011 a)
Nitrogen N as received	2.33	%	10%	EN 15407:2011 a)
Oxygen O (calculated)	40.5	% dw		EN 15400:2011 a)
Oxygen O as received (calculated)	43.9	%		EN 15400:2011 a)
Aluminium Al	430	mg/kg dry matter	20%	EN 15410:2011 b)*
Antimony Sb	< 0.43	mg/kg dry matter	30%	EN 15411:2011 b)*
Arsenic As	0.64	mg/kg dry matter	15%	EN 15411:2011 b)*
Barium Ba	17	mg/kg dry matter	20%	EN 15411:2011 b)*
Beryllium (Be)	< 0.11	mg/kg dry matter	30%	EN 15411:2011 b)*
Lead Pb	0.66	mg/kg dry matter	20%	EN 15411:2011 b)*
Boron (B)	< 11	mg/kg dry matter	20%	EN 15411:2011 b)*
Phosphorus P	140	mg/kg dry matter	30%	EN 15410:2011 b)*
Iron Fe	70	mg/kg dry matter	20%	EN 15410:2011 b)*
Cadmium Cd	0.086	mg/kg dry matter	20%	EN 15411:2011 b)*
Calcium Ca	3500	mg/kg dry matter	15%	EN 15410:2011 b)*
Potassium K	390	mg/kg dry matter	10%	EN 15410:2011 b)*
Cobalt Co	0.11	mg/kg dry matter	15%	EN 15411:2011 b)*
Copper Cu	6.4	mg/kg dry matter	15%	EN 15411:2011 b)*
Chromium Cr	1.9	mg/kg dry matter	20%	EN 15411:2011 b)*
Mercury Hg	< 0.022	mg/kg dry matter	30%	EN 15411:2011 b)*
Magnesium Mg	350	mg/kg dry matter	15%	EN 15410:2011 b)*

This test report has been created electronically and has been verified and authorised.

Symbol description:

The laboratory/laboratories are accredited by the respective national accreditation body. Non-accredited tests are marked *.

For microbiological analyzes the confidence interval is specified. Further information regarding measurement uncertainty is available upon request.

The results may not be reproduced except in full, without a written approval of the laboratory. The results relate only to the sample analysed.

AR-007v22

Sample code:	177-2019-04081079				
Description:					
Matrix	Solid Recovered Fuels				
Received:	2019-04-08				
Report date:	2019-04-17				
Client Sample:	FB-1				
Analysis	Result	Unit	Unc.	Method	
Manganese	53	mg/kg dry matter	15%	EN 15411:2011	b)*
Molybdenum Mo	< 0.11	mg/kg dry matter	35%	EN 15411:2011	b)*
Sodium Na	4600	mg/kg dry matter	20%	EN 15410:2011	b)*
Nickel Ni	1.1	mg/kg dry matter	25%	EN 15411:2011	b)*
Tin Sn	0.46	mg/kg dry matter	30%	EN 15411:2011	b)*
Titanium Ti	110	mg/kg dry matter	20%	EN 15411:2011	b)*
Vanadium V	0.22	mg/kg dry matter	25%	EN 15411:2011	b)*
Zinc Zn	16	mg/kg dry matter	20%	EN 15411:2011	b)*
Total amount of removed ash contaminant	0.00	% dw			a)*
Silicium Si	1000	mg/kg dry matter	20%	EN 15410:2011	b)*
C-fix (calculated)	14.7	% DM	7%		a)*
C-fix as received (calculated)	20.7	%	7%		a)*

EN 15400:2011 1)		MJ/kg	kcal/kg	MWh/metric tonne
Calorific value	As received	18.101	4326	5.027
	Dry basis	19.468	4653	5.406
Net calorific value	Const volume As received	16.852	4025	4.680
	Const volume Dry basis	18.298	4370	5.081
	Const volume db ashfree	18.821	4495	5.227
	Const pressure As received	16.777	4007	4.659
	Const pressure Dry basis	18.228	4354	5.062
	Const pressure db ashfree	18.749	4478	5.207

1) Uncertainty 5%

Net calorific value includes removed ash contaminants i.e. metals, glass, stones, concrete, bricks, gypsum etc.

Test was performed by / subcontractor:

- a) Eurofins Biofuel & Energy Testing Sweden AB, SWEDEN
- b) Eurofins Environment Testing Sweden AB, SWEDEN
- c) Eurofins Water Testing Sweden, SWEDEN

Albin Klint, ASM

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