Handelsweg 70
2988 DB Ridderkerk
The Netherlands
T. +31 (0)10-28 23 292
e-mail: info@tlr.nl

INTERNATIONAL LABORATORIES

Analytical Report

Control Union Certifications Germany GmbH
Attn: . .
Bornitzstraße 73-75
D-10365 Berlin
Germany

Reportnr.	: **1789666 version 1**		
Sample Arrival Date	: 27-Oct-2023 15:49	Sampling Date *	: 06-Oct-2023
ReportDate Version	: **06-Nov-2023 19:05**	Samplesize (kg)	: 15
Packing	: Plastic, ambient	Seal / Seal Code	: No /

Sample information *

Disponent Number	: 897728	Product specification	: Woodpellets
		Reference	: Seven_2023_10_06
		AWB / BarCode	: niet duidelijke
Disp. Remark	: Client : SEVEN PALLETS LIMITED LIABILITY COMPANY		

*** Information supplied by customer (TLR takes no responsibility for this information).**

Composition Determination

Parameter	Result (as received)	Result (on dry)	Result (as det)	Result (dry ash free)			
Total Moisture	5,88				%	Q	R
Moisture Airdry			7,16		%	Q	R
Ash	0,30	0,32	0,30		%	Q	R
Volatile matter incl. moisture.			87,12		%	Q	R
Volatile matter	81,07	86,13	79,97	86,41	%		
Fixed Carbon	12,75	13,55			%		
Gross Calorific Value	4684,1	4976,8	4620,6	4992,7	kcal/kg	Q	R
	19,61	20,84	19,35	20,90	GJ/mt		
	8431,4	8958,2	8317,1	8986,9	B.T.U.'s/Lb		
Nett Calorific Value (cV)	4361,2				kcal/kg	Q	
	18,26				GJ/mt		
	7850,2				B.T.U.'s/Lb		
	5,1				kWh/kg		
Nett Calorific Value (cP)	18,18				GJ/mt	Q	
Emissionfactor CO2 (cV)	97,31				t CO2/TJ		
Emissionfactor CO2 (cP)	97,72				t CO2/TJ		
Hydrogen	5,90	6,27	6,62	6,29	%	Q	R
Carbon	48,46	51,48	47,80	51,65	%	Q	R
Nitrogen.	0,06	0,06	0,06	0,07	%	Q	R
S. (Sulfer)	< 0,010	< 0,010	< 0,010	< 0,010	%	Q	R
Oxygen (by difference)				41,990	%		

Preparation

Common

Parameter	Result (as received)	Result (on dry)	Result (as det)			
Preparation sample	B-wood preparation according NEN EN 14780 and NEN EN 15443				Q	R

Composition Determination

Handelsweg 70
2988 DB Ridderkerk
The Netherlands
T. +31 (0)10-28 23 292
e-mail: info@tlr.nl

INTERNATIONAL LABORATORIES

Analytical Report

Reportnr.	: **1789666 version 1**		
Sample Arrival Date	: 27-Oct-2023 15:49	Sampling Date	*: 06-Oct-2023
ReportDate Version	: **06-Nov-2023 19:05**	Samplesize (kg)	: 15
Packing	: Plastic, ambient	Seal / Seal Code	: No /

Common

Parameter	Result (as received)	Result (on dry)	Result (as det)			
AFT. (oxid) DT			1330	gr. C		R
Diameter pellets (n=25)	6,2			mm	Q	R
Length of pellets	10,3			mm	Q	R
Sieve < 3,15 mm.	0,16			%		R

Metal and other elements

Parameter	Result (as received)	Result (on dry)	Result (as det)			
Cd (Cadmium)	0,140	0,149	0,138	mg/kg	Q	R
Pb (Lead)	0,09	0,09	0,09	mg/kg	Q	R
As (Arsenic)	< 0,040	< 0,040	< 0,040	mg/kg	Q	R
Hg (Mercury)	< 0,020	< 0,020	< 0,020	mg/kg	Q	R
Ni (Nickel)	< 3,0	< 3,0	< 3,0	mg/kg	Q	R
Cl (Chlorine)	< 0,005	< 0,005	< 0,005	%	Q	R
Cr.(Chromium)	< 5,0	< 5,0	< 5,0	mg/kg		R
Cu.(Copper)	< 5,0	< 5,0	< 5,0	mg/kg		R
Zn. (Zinc)	8,2	8,7	8,1	mg/kg		R

.

Parameter	Result (as received)	Result (on dry)	Result (as det)			
Sieve < 5,6 mm			0,7	%		R

Other Analysis

Common

Parameter	Result (as received)	Result (on dry)	Result (as det)			
Mechanical Durability	98,7			%	Q	R
Bulk density-	655			kg/m3	Q	R
Particle density			1,28	g/cm3		R
Share of pellets< 10mm			33,3	w %		R
Category	Category S					R

Q - Analyses ISO 17025 accredited by RvA (ILAC)
R - Carried out by TLR International Laboratories, location Ridderkerk

Handelsweg 70
2988 DB Ridderkerk
The Netherlands
T. +31 (0)10-28 23 292
e-mail: info@tlr.nl

INTERNATIONAL LABORATORIES

Analytical Report

Reportnr.	: **1789666 version 1**		
Sample Arrival Date	: 27-Oct-2023 15:49	Sampling Date	*: 06-Oct-2023
ReportDate Version	: **06-Nov-2023 19:05**	Samplesize (kg)	: 15
Packing	: Plastic, ambient	Seal / Seal Code	: No /

ANNEX

Method Descriptions

Composition Determination

Common

Method Description	Method Code
Determination of ash; gravimetric method Coal: NEN-ISO 1171 Biomass: NEN-EN15403; Secondary bio fuels: NEN-EN- ISO 18122	..
Determination of carbon (C), nitrogen (N), hydrogen (H) with the element analyser Coal : NEN-ISO29541, Biomass: NEN-EN-ISO 16948 : Secondary bio fuels NEN-EN 15407	..
Determination of fusibility of ash; ash formed (815°C), cube form	NEN-EN-ISO 21404
Determination of gross caloric value by bombcaloric method and calculation of net caloric value Coal: NEN-ISO 1928, Solid Biofuels NEN-EN-ISO18125; secundairy biofuels NEN-EN15400	..
Determination of moisture in the analyse sample; gravimetric method Coal: NEN-ISO 11722;Biomass: NEN-EN-ISO 18134-3; Secondary bio fuels : NEN-EN15414-3	..
Determination of Sulphur (S); NEN-EN-ISO 16994	..
Determination of the amount of material passing through a sieve with 3,15 mm diameter round hole ISO 18846:2016	.
Determination of the length and diameter of the woodpellets; Own method	Acc. NEN-EN-ISO17829
Determination of total moisture in the sample; gravimetric method Coal:NEN-ISO-589 MB biomasss: NEN-EN-ISO 18134-1; Secondary bio fuels : NPR-CEN/TS 15414-1	..
Determination of volatile matter content; gravimetric method Coal: NEN-ISO 562; Biomass: NEN-EN-ISO 18123; secundairy biofuels: NEN-EN 15402	.

Metal and other elements

Method Description	Method Code
Determination of Chlorine (Cl); Ion chromatography Biomass: according NEN-EN-ISO 16994 Coal: Own method	NEN-EN-ISO 16994
Determination of mercury (Hg); CV-AAS	Acc. NEN-EN-ISO16968
Determination of minor elements. As, Cd, Co, Cr, Cu, Hg, Mn, Mo, Ni, Pb, Sb, V and Zn	eq.nen-en-iso16968

.

Method Description	Method Code
Determination of the amount of material passing through a sieve with 3,15 mm diameter round hole ISO 18846:2016	.

Handelsweg 70
2988 DB Ridderkerk
The Netherlands
T. +31 (0)10-28 23 292
e-mail: info@tlr.nl

INTERNATIONAL LABORATORIES

Analytical Report

Reportnr.	: **1789666 version 1**		
Sample Arrival Date	: 27-Oct-2023 15:49	Sampling Date	*: 06-Oct-2023
ReportDate Version	: **06-Nov-2023 19:05**	Samplesize (kg)	: 15
Packing	: Plastic, ambient	Seal / Seal Code	: No /

Other Analysis

Common

Method Description	Method Code
Determination of bulk density (poured) bulk density	Acc.NEN-EN-ISO 17828
Determination of mechanical durability of pellets	NEN-EN-ISO 17831-1
Determination of Share of pellets with a length < 10 mm	ISO 18847

Abbreviations:

acc: in accordance with
eq: Equivalent to

Demanded 27-Oct-2023 by Control Union Certifications Germany GmbH
Analyses according to annex
P.W. Platteschor, Managing Director TLR International Laboratories