

## **Analytical Report**

**Control Union Certifications Germany GmbH** 

Dorotheastrasse 30 D-10318 Berlin Germany

Reportnr. : 1715413 version 1

Sample Arrival Date \*: 17-Feb-2023 08-Mar-2023 19:31 Sampling Date ReportDate Version : 15-Mar-2023 17:46 Samplesize (kg) : 15 Seal / Seal Code Packing : Plastic, ambient : No /

Sample information \*

Disponent Number : NP.TR-2023/1 : Wood pellets 6 mm Product specification Reference : PRJ 892783

Disp. Remark : Client: NP Yenilenebilir Enerji Sis. Ve Orman

Ürn. San. Tic. Ltd. Sti

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

Composition Determination		¥ .			1		
Parameter	Result (as received)	Result (on dry)	Result (as det)	Result (dry ash free	a) // //	A	
Total Moisture	5,76				%	Q	7 R
Moisture Airdry			6,25		%	Q	R
Ash	0,77	0,82	0,77		%	Q	R
Volatile matter incl. moisture.			84,66		%	Q	R
Volatile matter Fixed Carbon	78,82 14,65	83,64 15,54	78,41	84,33	% %		
Gross Calorific Value	4685,9	4972,3	4661,4	5013,4	kcal/kg	Q	R
	19,62 8434,7	20,82 8950,2	19,52 8390,5	20,99 9024,2	GJ/mt B.T.U.'s/Lb		
Nett Calorific Value (cV)	4384,4 18,36 7891,9 5,1				kcal/kg GJ/mt B.T.U.'s/Lb kWh/kg	Q	
Nett Calorific Value (cP) Emissionfactor CO2 (cV) Emissionfactor CO2 (cP)	18,28 96,79 97,18				GJ/mt t CO2/TJ t CO2/TJ	Q	
Hydrogen	5,48	5,81	6,15	5,86	%	Q	R
Carbon	48,45	51,42	48,20	51,84	%	Q	R
Nitrogen.	0,07	0,07	0,07	0,07	%	Q	R
S. (Sulfer)	< 0,010	< 0,010	< 0,010	< 0,010	) %	Q	R
Oxygen (by difference)	. 1		// X	42,220	) %		
Preparation	1.1.7						
Common	/						
Parameter	Result (as received)	Result (on dry)	Result (as det)		The state of the s		
Preparation sample	B-wood prepar	B-wood preparation according NEN EN 14780 and NEN EN					R

**Composition Determination** 

Demanded 08-Mar-2023 by Control Union Certifications Germany GmbH Analyses according to annex

15443

Drs. ing. H. Janssens Director TLR International Laboratories



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\*: 17-Feb-2023

mg/kg

mg/kg

mg/kg

:15

: No /

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< 5,0

< 5,0

6,1

Common							
Parameter	Result (as received)	Result (on dry)	Result (as det)				
AFT. (oxid) DT			1380	gr. C			R
Diameter pellets (n=25)	6,1	1		mm		Q	R
Length of pellets	10,0			mm		Q	R
0'	0.00			0/	1		_

Sieve < 3, 13 min.	0,22			70	_ / _	Γ.
Metal and other elements				4		
Parameter	Result (as received)	Result (on dry)	Result (as det)		XX	<i>\}</i> :
Cd (Cadmium)	0,071	0,076	0,071	mg/kg	/ Q /	R
Pb (Lead)	0,27	0,28	0,27	mg/kg	1 Q	R
As (Arsenic)	0,209	0,222	0,208	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
CI (Chloride).	< 0,005	< 0,005	< 0,005	%	Q	R

< 5,0

< 5,0

6,0

< 5,0

< 5,0

6,5

Zn.	(Zinc)
Other	Analysis

Cr.(Chromium)

Cu.(Copper)

Common		. ///				
Parameter	Result	Result	Result	W/-		
	(as received)	(on dry)	(as det)			
Mechanical Durability	98,3	12 /		%	Q	R
Bulk density-	676	1.		kg/m3	0	R

Q - Analyses ISO 17025 accredited by RvA (ILAC)

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R

R - Carried out by TLR International Laboratories, location Ridderkerk

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**ANNEX** 

Packing

**Method Descriptions** 

**Composition Determination** 

Common

**Method Description** 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; acc EN-plus, ash formed (815°C), cube form

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-

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

Determination of total moisture in the sample; gravimetric method

Coal:NEN-ISO-589 MB biomasss: NEN-EN-ISO 18134-1; Secondary bio fuels: NPR-

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** 

Determination of chloride (CI); Ion chromatography

Biomass: according NEN-EN-ISO 16994 Coal: Own method

Determination of mercury (Hg); CV-AAS

Determination of minor elements. As, Cd, Co, Cr, Cu, Hg, Mn, Mo, Ni, Pb, Sb, V and Zn

Other Analysis

Common

**Method Description** 

**Method Code** 

Own method

Acc. NEN-EN-ISO17829

**Method Code** 

Acc. NEN-EN-ISO16968 eq.nen-en-iso16968

TLR.N.

**Method Code** 

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ALYSE THIS ABN Amro Bank Rotterdam; Accountno. 42.60.49.411. BTW nr. / VAT no.: NL - 0043.90.660.B01 ABIN All for sarry included in Accounting, 42:00.49-41. B I will in TVAT not. No. 1043-90.000.B01
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Determination of bulk density (poured) bulk density

Determination of mechanical durability of pellets

Sampling Date Samplesize (kg)

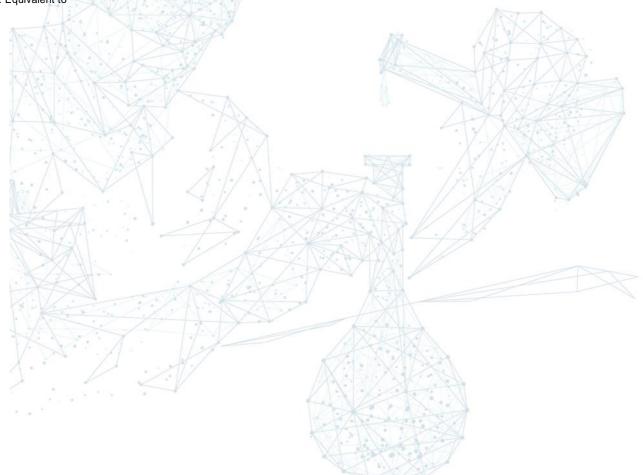
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> Acc.NEN-EN-ISO 17828 NEN-EN-ISO 17831-1

Abbreviations:

acc: in accordance with eq: Equivalent to





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