

Analytical Report

Control Union Certifications Germany GmbH

Attn: . .
 Dorotheastrasse 30
 D-10318 Berlin
 Germany

Reportnr. : **1130671 version 2**
 Sample Arrival Date : 09-Nov-2020 17:01
 ReportDate Version : **17-Nov-2020 12:43**
 Packing : Plastic, ambient
 Sampling Date * : 29-Oct-2020
 Samplesize (kg) : 7,396

Sample information *

Sealed / Seal Code : No /
 Product specification : Woodpellets 6 mm
 AWB / BarCode : 6968942595

* 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	6,34			%		O
Moisture Airdry			7,14	%	Q	R
Ash	0,46	0,49	0,46	%	Q	R
Volatile matter incl. moisture.			85,97	%	Q	R
Volatile matter	79,51	84,90	78,84	85,31 %		
Fixed Carbon	13,69	14,61		%		
Gross Calorific Value	4612,8	4925,0	4573,6	4949,3 kcal/kg	Q	R
	19,31	20,62	19,15	20,72 GJ/mt		
	8303,0	8865,1	8232,5	8908,8 B.T.U.'s/Lb		
Nett Calorific Value (cV)	4298,0			kcal/kg	Q	
	17,99			GJ/mt		
	7736,4			B.T.U.'s/Lb		
	5,0			kWh/kg		
Nett Calorific Value (cP)	17,92			GJ/mt	Q	
Emissionfactor CO2 (cV)	97,16			t CO2/TJ		
Emissionfactor CO2 (cP)	97,57			t CO2/TJ		
Hydrogen	5,68	6,07	6,43	6,10 %	Q	R
Carbon	47,68	50,91	47,28	51,16 %	Q	R
Nitrogen.	< 0,05	< 0,05	< 0,05	< 0,05 %	Q	R
S. (Sulfer)	< 0,010	< 0,010	< 0,010	< 0,010 %	Q	R
Oxygen (by difference)				42,710 %		

Preparation

Common

Parameter	Result (as received)	Result (on dry)	Result (as det)		
Preparation sample	Biomass preparation in accordance with NEN EN 14780 and NEN EN 15443			Q	R

Composition Determination

Common

Parameter	Result (as received)	Result (on dry)	Result (as det)
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AFT. (oxid) DT	1230	gr. C		R
Diameter pellets (n=25)	6,1	mm	Q	R
Length of pellets	14,8	mm	Q	R
Sieve < 3,15 mm.	0,3	%		R

Metal and other elements

Parameter	Result (as received)	Result (on dry)	Result (as det)			
Cd (Cadmium)	0,099	0,106	0,098	mg/kg	Q	R
Pb (Lead)	0,12	0,13	0,12	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)	7,8	8,3	7,7	mg/kg		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

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

This is version number 2 of the certificate. It cancels and replaces version number 1.

Demanded 09-Nov-2020 by Control Union Certifications Germany GmbH
 Analyses according to annex
 Drs. ing. H. Janssens Director TLR International Laboratories

