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DIN CERTCO  
Gesellschaft für Konformitätsbewertung  
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## Test report 3144727

Order no. 3937300  
Client no. 10028880



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Environmental Services

SGS Institut Fresenius GmbH  
Goerzallee 305A  
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Berlin, 07.11.2016

Your project: DINplus test Arno-Bio Sp.Zo.o.  
Your order no.: 3196245  
Date of order: 21.10.2016

Testing period from 28.10.2016 until 07.11.2016  
First sample no. 161140015  
Sample entry 27.10.2016

SGS Institut Fresenius

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Sample matrix: Wood pellets  
 Sample delivery: Sample sent on behalf of the client  
 Sample entry: 27.10.2016  
 Testing period: 28.10.2016 until 07.11.2016

Sample no.: 161140015  
 Sample name: Wood pellets 6 mm, fines

Parameter	Unit	LOQ	Method <sup>4</sup>	Result	Limit DIN plus <sup>1</sup>	Lab <sup>5</sup>
Fines	mass % ar	0,1	DIN EN 15149-2	0,5	≤ 0,5 (1,0) <sup>2</sup>	B1

Sample no.: 161140016  
 Sample name: Wood pellets 6 mm, requirements DINplus without fines

Parameter	Unit	LOQ	Method <sup>4</sup>	Result	Limit DIN plus <sup>1</sup>	Lab <sup>5</sup>
Average diameter	Millimeter		DIN EN 16127	6,1	6 or 8 ± 1	B1
Average length	Millimeter		DIN EN 16127	10,5	3,15 to 40	B1
Pellets < 10 mm	mass % ar		DIN EN 16127	36,9	informational	B1
Overlengths > 40 and ≤ 45 mm	mass % ar		DIN EN 16127	not found	≤ 1	B1
Overlengths > 45 mm	mass % ar		DIN EN 16127	not found	not allowed	B1
Moisture	mass % ar	0,1	DIN EN 14774-2	7	≤ 10	B1
Ash (550°C)	mass % d	0,1	DIN EN 14775	0,61	≤ 0,7	B1
Mechanical Durability	mass % ar	0,1	DIN EN 15210-1	99	≥ 97,5	B1
Net CV, const. p	MJ/kg ar	0,5	DIN EN 14918	17,57	≥ 16,5 to ≤ 19	B1
Bulk density	kg/m <sup>3</sup> ar	1	DIN EN 15103	664	≥ 600 to ≤ 750	B1
Nitrogen	mass % d	0,1	DIN EN 15104	0,18	≤ 0,3	B1
Sulphur total	mass % d	0,01	DIN EN 15289	< 0,01	≤ 0,04	B1
Chlorine total	mass % d	0,01	DIN EN 15289	< 0,01	≤ 0,02	B1
Arsenic	mg/kg d	1	DIN EN 15297	< 1	≤ 1	B1
Cadmium	mg/kg d	0,3	DIN EN 15297	< 0,3	≤ 0,5	B1
Chromium	mg/kg d	1	DIN EN 15297	1	≤ 10	B1
Copper	mg/kg d	2	DIN EN 15297	9	≤ 10	B1
Lead	mg/kg d	3	DIN EN 15297	< 3	≤ 10	B1
Mercury	mg/kg d	0,05	DIN EN 15297	0,1	≤ 0,1	B1
Nickel	mg/kg d	1	DIN EN 15297	< 1	≤ 10	B1
Zinc	mg/kg d	1	DIN EN 15297	11	≤ 100	B1
Shrinkage starting temperature SST	°C		DIN CEN/TS 15370-1 <sup>3</sup>	1240	-	B1
Deformation temperature DT	°C		DIN CEN/TS 15370-1 <sup>3</sup>	1350	≥ 1200	B1
Hemisphere temperature HT	°C		DIN CEN/TS 15370-1 <sup>3</sup>	1360	-	B1
Flow temperature FT	°C		DIN CEN/TS 15370-1 <sup>3</sup>	1360	-	B1

ar - result calc. to 'as received' state

LOQ - Limit of quantitation

d - result calc. to 'bone dry' state

1) Issue 06/2015

2) Value is valid for packing units up to 20kg; Value in parenthesis is valid for bigger packing units and bulk ware

3) Determination was performed under oxidizing conditions. Pre ashing temperature was 815°C.

4) Deviant to the requirements of DINplus, regarding applicable standards according to DIN EN ISO 17225-2 the respective ones according to DIN EN 14961-2 were applied instead, approved by DIN CERTCO.

5) The laboratory locations of the SGS Group Germany and Switzerland according to the above abbreviations are listed at <http://www.institut-fresenius.de/filestore/89/laborstandortkuerzelsgs2.pdf>