

БГЦА	BY/112.1.0463
BSCA	GOST / ISO/IEC 17025

Institution of the Belarusian State University
RESEARCH AND DEVELOPMENT INSTITUTE OF PHYSICAL
AND CHEMICAL PROBLEMS
“LABORATORY OF FUELS, OILS AND FEEDS”

LFO&S meets the criteria of the National accreditation system of the Republic of Belarus and accredited for compliance of STB ISO/EIC 17025

Registration number of the certificate of accreditation

BY/112 1.0463, dated 14.11.2005

Valid till 21.11.2021

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APPROVED

Director of RDI FCP BSU

/ signature / T.V. Gaevsкая

04.07.2018

Official seal: RESEARCH AND DEVELOPMENT
INSTITUTE OF PHYSICAL AND CHEMICAL
PROBLEMS AT BELARUSIAN STATE
UNIVERSITY

TEST PROTOCOL No. 2926-TT, dated “04” July 2018

Sample name: wood fuel pellets

Manufacturer (supplier): -

The name of the TNPA, which establishes the requirements for the product: actual values

Applicant for testing: LLC “GranulaEcology”

Address: 225055, Brest region, Kamenets district, Rechitsa s/s, 13/4, 0,1 km to the south of the village Dymniki

Number of tested samples: 1 (one) - 2 kg in polymer package

Sample registration No: 2968-TT/18

Sample selection act: -

The name of the TNPA, which establishes test methods:

GOST EN 14774-1-2013 (EM 14774-1:2009) Solid biofuel. Determination of moisture content.

Method using drying in a drying cabinet. Part 1. General moisture. Standard method

GOST 32988-2014 (EN 14775:2009) Solid biofuel. Determination of ash content

GOST 33106-2014 (EN 14918:2009) Solid biofuel. Determination of the calorific value

GOST 33507-2015 Solid biofuel. Determination of particle density

STB EM 15210-1-2011 Solid biofuel. Determination of mechanical strength of granules and briquettes. Part 1. Granules

Date of delivery of samples (specimens): 27.06.2018

Date of tests: 28.06-04.07.2018

Test conditions: air temperature 24,8-25,2°C.

Relative humidity 50,0%

Applied testing equipment (TE) and measuring instruments (MI)

No.	Name and type (brand) of the test equipment and measuring tool	Production plant No.	Term of validity (metrological certification) of the control	Authority issuing the certificate
1	Bomb calorimeter isoperibolic BIC 100	13.01.001	till 13.12.2018	BelGIM
2	Scales DV-215CD	1128300188	till 01.11.2018	
3	Muffle furnace MIMP-3P	00325	till 08.06.2019	

4	Drying cabinet BINDER FD	07-27832	till 26.10.2018
5	Scales AV8101	1126461276	till 01.11.2018
6	Trammel 0-200	9252781	till 04.11.2018
7	Sieve (dynamic densitometer)	08002304	till 21.11.2018
8	Thermo-hygrometer IVA-6N	2220	till 04.12.2018

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TESTS RESULTS

No.	Name of the test object, technical requirements	The designation of the TNPA, which establishes the requirements for the products	Designation of the TNPA, which establishes the test method	Normalized value of the indicators established in the TNPA	The actual value of the indicators for each sample	Conclusion on compliance with the requirements of TNPA
wooden fuel pellets						
1	Density, %	-	GOST EN 14774-1	-	7.4	-
2	Ash content of working fuel,%	-	GOST 32988	-	0.48	-
3	Lower heat of combustion of working fuel, MJ/kg	-	GOST 33106	-	17.71	-
4	Mechanical strength,%	-	STB EN 15210-1	-	94.9	-
5	Granule density, kg / dm ³	-	GOST 33507	-	1.12	-

The tests were carried out by: chief scientific officer / signature / Y.V. Maksimuk
junior researcher / signature / V.V. Fesko

The test results concern only the tested sample.

Chief of LFO&S / signature / Z. A. Antonova

The protocol was checked.

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LFO&S

Minsk, Leningradskaya str., 14

The present protocol is issued on 2 pages in 2 copies and sent to:

1. LLC "GranulaEcology"
2. LTMiK

The translation from Russian into English is true and corresponds to the original text.
Director of "Brest Translations Bureau" Ltd. Filipuk Anna Vasilyevna.
Brest, 09.07.2018