



**prof. Waclaw Dąbrowski Institute of Agricultural  
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**TEST REPORT No 831/ZK/2015**

page No 1 of 2 Copy No 1 of 3

Our ref.: ZK/.....1577...../ 2015

Poznań, 08.10.2015 r.

Reques No/OrderNo: 90/ZK/2015

Name and address of the customer: **Przedsiębiorstwo Przemysłu Ziemiaczanego S.A. ul. Przemysłowa 8  
56-215 Niechlów**

Test item(s): **Native potato starch Superior Standard, production date: 03.09.2015** Code of sample:  
**Schift D, 1 plastic bag 1000g, Sample delivered by mail.** ZK/90/1/15

Date of receipt of the test items: 10.09.2015 to the order of the day 10.09.2015r. L.dz.1408

Date of performance of the test: 11-28.09.2015r.

Test results:

Sensory attribute	Test results		Research done according to :
arsenicum content , ppm	<0,01		PN-EN ISO 11212-1:2002 Skrobia i produkty pochodne. Zawartość metali ciężkich - arsen
merkury kontent, ppm	<0,01		PN-EN ISO 11212-2:2002 Skrobia i produkty pochodne. Zawartość metali ciężkich - rtęć
lead content, ppm	0,014		PN-EN ISO 11212-3:2001 Skrobia i produkty pochodne. Zawartość metali ciężkich - ołów
cadmium content, ppm	0,011		PN-EN ISO 11212-4:2001 Skrobia i produkty pochodne. Zawartość metali ciężkich - kadm
Colour, CIE, L	Y 84,04 x 0,3117 y 0,3208	L 93,46 a -1,45 b +1,99	PB-ZK./PH 02 wyd.2. Oznaczanie barwy skrobi ziemniaczanej metodą aparaturową.
Ash content, % m/m.	0,30		PN-EN ISO 3593 : 2000
Insoluble ash content in. 10 %HCl, %m/m.	0,01		Skrobia Oznaczanie popiołu
pH	7,5		PN-A-74706:1984
SO <sub>2</sub> ppm	1		PN-EN ISO 1185 : 2000 Skrobia i produkty pochodne Oznaczanie zawartości dwutlenku siarki. Metoda acydymetryczna
Moisture, %	19,4		PN-EN ISO 1166 : 2000 Skrobia Oznaczanie wilgotności Metoda suszarkowa
Viscosity BU japanese method	864		PB-ZK/PSM 01 wyd.2 Oznaczanie lepkości na wiskozymetrze Brabendera
protein content % m/m	0,05		PN-EN ISO 3138 : 2000 Skrobia i produkty pochodne Oznaczanie zawartości azotu metodą Kjeldahla Metoda miareczkowa
Starch granule enclosed			PB-ZK./PH 01 wyd.2 Oznaczanie wielkości galeczek skrobi metodą fotosedymetograficzną

Authorized by:

mgr inż. Genowefa Starogardzka


Approved by:

Kierownik  
Zakładu Koncentratów Spożywczych  
i Produktów Skrobiowych IBPRS  
dr inż. Marian Remiszewski, prof. IBPRS

Test results relate only to the item tested.

Customer or other parties have right to submit written complains within 10 working days from the date of receiving this „Test report.”

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	<b>TEST REPORT No 831/ZK/2015</b>	page No <b>2</b> of <b>2</b> Copy No <b>1</b> of <b>3</b>

**Test results:**

	Tested microorganisms	Results	Identification of the method used
1	Aerobic bacteria in 1 g	1,4 x 10 <sup>3</sup>	PN-EN ISO 4833:2004 + Ap1:2005 Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of microorganisms – Colony-count technique at 30 degrees C
2	Yeasts in 1 g	23	PN-ISO 21527-2:2009 Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of yeasts and moulds – Part 2: Colony-count technique in product with water activity less than or equal to 0,95
3	Moulds in 1 g	less than 10	PN-EN ISO 7932:2005 Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of presumptive <i>Bacillus cereus</i> . Colony-count technique at 30 degrees C.
4	<i>Bacillus cereus</i> in 1 g	less than 10	PN- ISO 7251:2006 Microbiology of food and animal feeding stuffs – Horizontal method for the detection and enumeration of presumptive <i>Escherichia coli</i> .
5	<i>Escherichia coli</i> in 1 g	absent	PN-EN ISO 7937:2005 Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of <i>Clostridium perfringens</i> Colony-count technique
6	<i>Clostridium</i> in 1 g	absent	PN-EN ISO 6579:2003 Microbiology of food and animal feeding stuffs – Horizontal method for the detection of <i>Salmonella</i> spp.
7	<i>Salmonella</i> in 25 g	absent	

Authorized by:

mgr Hanna Stróżycka

Approved by:

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FRITSCH PARTICLE SIZER AUTOSIEB/A20

IBPRS - OKSiPS Poznań

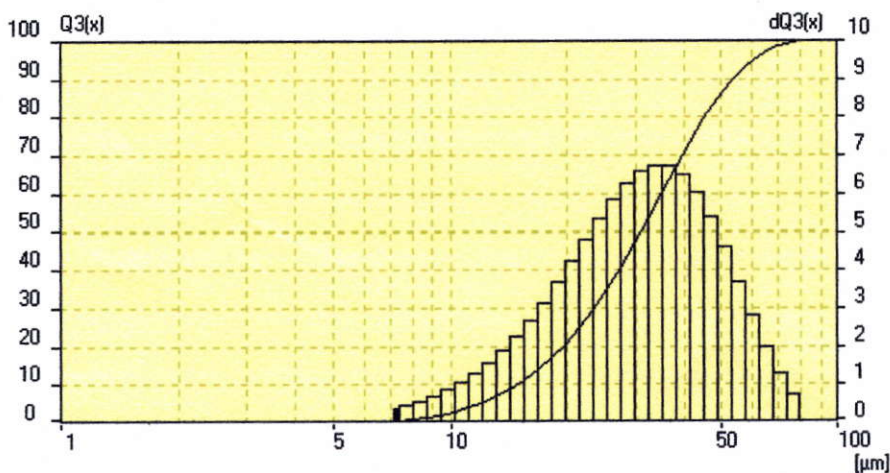
76	09-22-2015	12:39	Processor: Müller	Analyzing department: Labor A	Processing number: 130/10
<i>Type and designation of the analyzed material</i>					
<b>Sampling</b> skrobia ziemniaczana Superior Standard PPZ Niechlow S.A. ZK/90/1/2015					
<i>Preparation of sample</i>					
<b>Feststoff:</b> SKROBIA Feststoffdichte: 1.480 g/cm <sup>3</sup>					
<b>Flüssigkeit:</b> WASSER Flüssigkeitsdichte: 1.000 g/cm <sup>3</sup> Viskosität: .988 cP Temperatur: 23.000 °C					
Messmodus: norm Fallhöhe: 45.89 mm					

C:\A3WIN\PROBA.FPS

*****	% <	5.00	µm	2.66	% <	10.00	µm	10.24	% <	15.00	µm
21.21	% <	20.00	µm	34.29	% <	25.00	µm	60.31	% <	35.00	µm
86.52	% <	50.00	µm	94.83	% <	60.00	µm	98.58	% <	70.00	µm
100.00	% <	80.00	µm	*****	% <	90.00	µm	*****	% <	100.00	µm
*****	% <	110.00	µm								

PERCENTS.FPV

5.00	% <	11.84	µm	10.00	% <	14.87	µm	15.00	% <	17.33	µm
20.00	% <	19.51	µm	25.23	% <	21.59	µm	30.00	% <	23.41	µm
35.00	% <	25.26	µm	40.00	% <	27.11	µm	45.00	% <	28.97	µm
50.00	% <	30.87	µm	55.00	% <	32.83	µm	60.00	% <	34.87	µm
65.00	% <	37.09	µm	70.00	% <	39.48	µm	75.00	% <	42.10	µm
80.00	% <	45.08	µm	85.00	% <	48.63	µm	90.00	% <	53.29	µm
95.00	% <	60.30	µm	99.00	% <	71.88	µm				

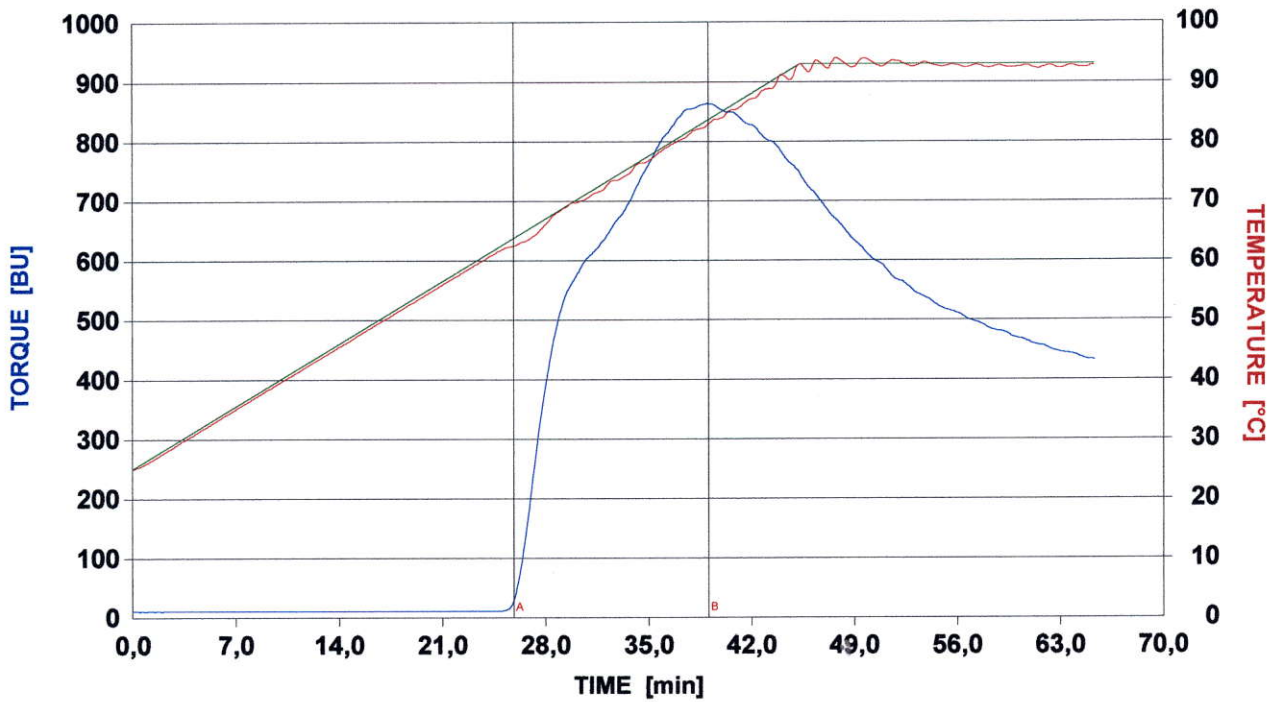


# BRABENDER VISCOGRAPH

## Parameter

Operator	: Starogardzka	Date	: 15-09-28
Sample	: ZK/90/1/2015	Method	: Jap skr 1
Moisture	: 19,4 [%]	Correction	: 0 [%]
Sample weight	: 23,7 [g]	Corr. to 0%	: 29,4 [g]
Water	: 450 [ml]	Corr. to 0%	: 444,2 [ml]
Note	: Skrobia ziemniaczana Superior Standard partia 03.09.2015 zm.D		
Note	: PPZ Niechlow S.A.		
Speed	: 75 [1/min]	Meas. range	: 700 [cmg]
Start temperature	: 25 [°C]	Heat./Cool. rate	: 1,5 [°C/min]
Max. temperature	: 93 [°C]	Upp. hold. time	: 20 [min]

MEASURING RANGE : 700 [cmg]



## Evaluation

Point	Name	Time [HH:MM:SS]	Torque [BU]	Temperature [°C]
A	Beginning of gelatinization	00:25:50	29	62,5
B	Maximum viscosity	00:39:05	864	82,9