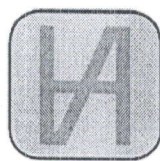


UKRAINE

THE INDEPENDENT CENTRE OF LABORATORY RESEARCHES «ETALON»

Accreditation Attestation NAAU (DSTU ISO/IEC 17025:2019) № 20846 till March 09, 2025

63, Prospekt Myru, Khmelnytsky, Tel/Fax (0382) 78-90-78, E-mail: etalon125@ukr.net20846
DSTU ISO/IEC 17025

PROTOCOL №3733

of testing

October, 10, 2023

The director of ICLR «Etalon»

Kravtsov O. M.

October, 10, 2023

Customer, address, Tel/Fax: LLC "NARKEVICHY SUGAR PLANT", Khmelnytskyi region, Khmelnytskyi district, Narkevychi, 1, Zavodska St.

Production name: Crystal white sugar I grade of the 2023 sugar beet crop

Date of production: 28.09 - 03.10.2023 (expiry date - 5 years from the date of manufacture)

Production consignment size/Lot: 4 000 000 kg

Statement of selection: № 07.XII.033-AB of October, 03, 2023 (commission members: head of the department, O.L. Zadorozhna; leading specialist in certification, O.A. Slobodyanuk; quality engineer LLC "NARKEVICHY SUGAR PLANT", H.M. Sass).

Sample state and description: in plastic bag

Producing company: LLC "NARKEVICHY SUGAR PLANT", Khmelnytskyi region, Khmelnytskyi district, Narkevychi, 1, Zavodska St.

Date of receiving the samples for the researches: October, 04, 2023

Period of the researches: October, 04, 2023 - October, 09, 2023

Object of the researches: is the samples testing for meeting the requirements of DSTU 4623:2023 SUGAR. The technical specifications, DSANPIN 8.8.1.2.3.4-000-2001 Acceptable dose, concentration, amounts and levels of pesticides in agricultural raw materials, food, air of working zone, atmosphere air, water reservoirs, soil and GN 6.6.1.1-130-2006 «Allowable levels of radioactive nuclides Cs-137 and Sr-90 in food products and drinking water

RESULTS OF THE RESEARCHES:

№	Name of the Parameter, Unit of Measure	Results	Required Level or Range	Testing Method	Uncertainty Level
Organoleptic (sensory) parameters					
1.	Appearance	meets the requirements	White, pure without stains and foreign impurities, a yellowish tint is permissible for semi-white sugar. Crystalline sugar should be free-flowing, without lumps	DSTU 4624:2006	undecided
2.	Taste	meets the requirements	Sweet without extraneous aftertaste both in dry sugar and in its aqueous solution	DSTU 4624:2006	undecided
3.	Smell	meets the requirements	Without extraneous smell both in dry sugar and in its aqueous solution	DSTU 4624:2006	undecided
4.	Purity of the solution	meets the requirements	The sugar solution should be transparent, without insoluble sediment, mechanical and other impurities	DSTU 4624:2006	undecided
Physical and chemical parameters					
5.	Moisture, %	0,06	not more than 0,06	DSTU 3659-97	0,004**
6.	Polarization, %	99,90	not less than 99,7	DSTU 3661-97	0,05**
7.	Invert sugar, %	<0,002*	not more than 0,04	DSTU 3945-2000	undecided
8.	Colour of the solution, ICUMSA	37,5	not more than 45,0	DSTU 4866:2007	0,4**
9.	Ferro-impurities, %	<0,0003*	not more than 0,0003	DSTU 4244:2003	undecided

Protocol applies only to samples subjected to testing.

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FSU 7.8-01-01

10.	Starch and products of destruction, %	<0,0015*	not more than 0,0015	DSTU 4865:2007	undecided
11.	Sulfur dioxide, %	<0,0002*	not regulated	DSTU ISO 5522:2004	undecided
12.	Melamine, mg/kg	< 1,0*	not more than 2,5	MUK 4.1.2420-08, MVV 613-033-19	undecided
Pesticides residual quantity content					
13.	γ – HCH (lindane), mg/kg	< 0,001*	not more than 0,005	DSTU EN 12393-2:2003, DSTU EN 12393-3:2003, MVV 610-005-19	undecided
14.	DDT and metabolites, mg/kg	< 0,005*	not more than 0,005	DSTU EN 12393-2:2003, DSTU EN 12393-3:2003, MVV 610-005-19	undecided
15.	Heptachlor, mg/kg	< 0,001*	not allowed	DSTU EN 12393-2:2003, DSTU EN 12393-3:2003, MVV 610-005-19	undecided
16.	Hexachloran, mg/kg	< 0,001*	not more than 0,005	DSTU EN 12393-2:2003, DSTU EN 12393-3:2003, MVV 610-005-19	undecided
Toxic elements content					
17.	Lead, mg/kg	<0,04*	not more than 0,5	GOST 30178-96, MVV 620-014-19	undecided
18.	Cadmium, mg/kg	<0,005*	not more than 0,05	GOST 30178-96, MVV 620-014-19	undecided
19.	Copper, mg/kg	0,74	not regulated	GOST 30178-96, MVV 620-014-19	0,03**
20.	Arsenic, mg/kg	< 0,04*	not more than 1,0	GOST 30178-96, MVV 620-014-19	undecided
21.	Mercury, mg/kg	< 0,002*	not more than 0,01	EN 13806:2002, MVV 620-014-19	undecided
22.	Chromium, mg/kg	<0,08*	not regulated	GOST 30178-96, MVV 620-014-19	undecided
23.	Calcium, mg/kg	16,0	not regulated	GOST 30178-96, MVV 620-014-19	0,12**
24.	Potassium, mg/kg	28,3	not regulated	GOST 30178-96, MVV 620-014-19	0,14**
25.	Manganese, mg/kg	<0,1*	not regulated	GOST 30178-96, MVV 620-014-19	undecided
26.	Iron, mg/kg	<0,04*	not regulated	GOST 30178-96, MVV 620-014-19	undecided
Microbiological indicators					
27.	Total plate count, CFU per 1 g	$4,2 \times 10^2$	not more than 1×10^3	DSTU ISO 4833:2006	undecided
28.	Pathogens and Salmonella, per 25 g	not found	not allowed	DSTU EN 12824-2004	undecided
29.	Coliformes, per 10,0 g	not found	not regulated	GOST 30518-97	undecided
30.	Mould fungi, CFU per 1 g	less than 10^*	not more than 1×10	DSTU ISO 7954:2005	undecided
31.	Yeast, CFU per 1 g	less than 10^*	not more than 1×10	DSTU ISO 7954:2005	undecided
Radioactivity					
32.	Cesium-137, Bq/kg	< 2,2*	not more than 50	DSTU 7868:2015, MI 12-08-99	40 %
33.	Strontium-90, Bq/kg	< 5,6*	not more than 30	DSTU 7867:2015, MI 12-08-99	40 %

Evaluation criterion $B + 0,6 \times \Delta B = 0,28 \leq 1,0$

* – Method Detection Limit (MDL)

** – Measurement uncertainty calculated according to PSU 7.6-01

NOTE:

Parameter: "Invert sugar" – Testing Method outside the scope of accreditation.

Parameter: "Starch and products of destruction" – outside the scope of accreditation.

Conclusion: the sample meets the requirements of DSTU 4623:202, DSanPIN 8.8.1.2.3.4-000-2001 and GN 6.6.1.1-130-2006 by indicated parameters.

The researchers:

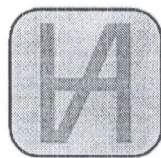
O.L. Bila
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of testing
October, 10, 2023

The director of ICLR «Etalon»

Kravtsov O. M.

October, 10, 2023

Customer, address, Tel/Fax: LLC "NARKEVICHY SUGAR PLANT", Khmelnytskyi region, Khmelnytskyi district, Narkevychi, 1, Zavodska St.

Production name: Crystal white sugar I grade of the 2023 sugar beet crop

Date of production: 28.09 - 03.10.2023 (expiry date - 5 years from the date of manufacture)

Production consignment size/Lot: 4 000 000 kg

Statement of selection: № 07.XII.033-AB of October, 03, 2023 (commission members: head of the department, O.L. Zadorozhna; leading specialist in certification, O.A. Slobodyanuk; quality engineer LLC "NARKEVICHY SUGAR PLANT", H.M. Sass).

Sample state and description: in plastic bag

Producing company: LLC "NARKEVICHY SUGAR PLANT", Khmelnytskyi region, Khmelnytskyi district, Narkevychi, 1, Zavodska St.

Date of receiving the samples for the researches: October, 04, 2023

Period of the researches: October, 04, 2023 - October, 09, 2023

Object of the researches: is the sample testing for meeting the requirements by actual value

RESULTS OF THE RESEARCHES:

№	Name of the Parameter, Unit of Measure	Results	Required Level or Range	Testing Method	Uncertainty Level
Physical and chemical parameters					
1.	Moisture, %	0,06	not regulated	DSTU 3659-97	0,004**
2.	Total ash on a dry matter, %	<0,05*	not regulated	DSTU 4872:2007	undecided
3.	Protein on a dry matter, %	<0,1*	not regulated	DSTU 7824:2015	undecided
4.	Fat on a dry matter, %	<0,5*	not regulated	DSTU 4941:2008 p.8	undecided
5.	Saturated fatty acids in the fat phase, %	33,14	not regulated	DSTU ISO 5508-2001	undecided
6.	Carbohydrate content on a dry matter, %	99,90	not regulated	MVV 201-053-19	undecided
7.	Crude fiber (dietary fiber) on a dry matter, %	<0,5*	not regulated	DSTU ISO 5498:2004	undecided
8.	Polarization, %	99,90	not regulated	DSTU 3661-97	0,05**
9.	Sodium in terms of NaCl, mg/100 g	3,7	not regulated	GOST 30178-96, MVV 620-014-19	0,08**
Nutritional value, g per 100 g					
10.	Nutritional value: - fats: saturated - carbohydrates sugars - proteins - crude fiber (dietary fiber) - salt	less 0,5* less 0,1* 99,9 99,9 less 0,1* less 0,5* 0,004	not regulated	MVV 201-053-19	undecided

11.	Energy value, kcal (kJ)/100 g	399,8 (1674,9)	not regulated	MYV 201-053-19	undecided
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* – Method Detection Limit (MDL)

** – Measurement uncertainty calculated according to PSU 7.6-01

The researchers:

O.L. Bila

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O.V. Studenets`

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