

[Coat of Arms]

UKRAINE

STATE SERVICE OF UKRAINE ON FOOD SAFETY AND CONSUMER PROTECTION
KHMELYNYSKYI REGIONAL STATE-OWNED LABORATORY OF THE STATE SERVICE OF UKRAINE ON FOOD
SAFETY AND CONSUMER PROTECTION

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20757
DSTU ISO/IEC 17025

EXPERT OPINION No 005886 d.k./1/19

December 10, 2019

Test object(-s) and identification number(-s): 005886 d.k./1/19-Sunflower oil, unrefined, unwinterized

Sampling date and place: December 04, 2019 "Podillia Gold" LLC, 26 Harnizonna Str., Khmelnytskyi

Sampled by: Director of "Podillia Gold" LLC, Tymoshchuk Yu.V.

Order form No: b/n as of December 04, 2019

Sample delivery date: December 04, 2019 02:38 p.m

Sampling according to: Resolution No 833 of the Cabinet of Ministers of Ukraine as of June 14, 2002 "On approval of the sampling procedure for animal, plant, biotechnological products for research purposes".

Manufacturer: 005886 d.k./1/19-"Podillia Gold" LLC, 26 Harnizonna Str., Khmelnytskyi, UKRAINE

Manufacture date: 005886 d.k./1/19- December, 2019

Weight (volume) of the sampled batch: 005886 d.k./1/19-50 t

Client name and address: "Podillia Gold" LLC, 26 Harnizonna Str., Khmelnytskyi

Test purpose: Verification of the sample 005886 d.k./1/19-Sunflower oil, unrefined, unwinterized for mycotoxins, organoleptic parameters, pesticides, radionuclides, toxic elements, physical and chemical parameters compliance with DSTU 4492:2017

Test duration: December 04, 2019 – December 10, 2019

005886 d.k./1/19-Sunflower oil, unrefined, unwinterized

Mycotoxins

Parameter and units of measure	MAL as per regulatory documents	Test results	RD symbols on testing method	Measurement error or uncertainty*	Compliance mark
Aflatoxin B1 mg/kg	Not more than 0.005	<0.001	MU 2273-80	Not determined	Complies
Zearalenone mg/kg	Not more than 1.0	<0.02	MV 5177-90	Not determined	Complies

Organoleptic tests

Parameter and units of measure	MAL as per regulatory documents	Test results	RD symbols on testing method	Measurement error or uncertainty*	Compliance mark
Appearance	For Classes Extra and I, availability of a	Transparent, no precipitate	GOST 5472-50	Not determined	Complies

	"mesh" over precipitate is allowable; for Class II, slight turbidity over precipitate is allowable				
Flavor and aroma	For Classes Extra and I, inherent in sunflower oil, odorless, without foreign taste and bitterness; for Class II, slight bitter flavor and slight stale odor are allowable	Inherent in sunflower oil, odorless, without foreign taste	GOST 5472-50	Not determined	Complies

Pesticides

Parameter and units of measure	MAL as per regulatory documents	Test results	RD symbols on testing method	Measurement error or uncertainty*	Compliance mark
DDT with metabolites, mg/kg	Not more than 0.1	<0.05	MV 2142-80	Not determined	Complies
HCCH gamma isomer, mg/kg	Not more than 0.05	<0.05	MV 2142-80	Not determined	Complies
Heptachlor, mg/kg	Not allowable	<0.05	MV 2142-80	Not determined	Complies

Radionuclides

Parameter and units of measure	MAL as per regulatory documents	Test results	RD symbols on testing method	Measurement error or uncertainty*	Compliance mark
The content of radionuclides Cs-137, Bq/kg	Not more than 100.0	<3.0	Activity measurement technique on scintillation gamma-ray spectrometer using "Progress" software	The result includes measurement uncertainty	Complies
The content of radionuclides Sr-90, Bq/kg	Not more than 30.0	<5.8	Activity measurement technique on scintillation beta-ray spectrometer using "Progress" software	The result includes measurement uncertainty	Complies
Safety criterion	Not more than 1.0	0.14	GN 6.6.1.1-130-2006	-	Complies

Toxic elements

Parameter and units of measure	MAL as per regulatory documents	Test results	RD symbols on testing method	Measurement error or uncertainty*	Compliance mark
Mass fraction of lead, mg/kg	Not more than 0.1	0.042	GOST 30178-96	Not determined	Complies
Mass fraction of	Not more than 0.5	0.20	GOST 30178-96	Not determined	Complies

copper, mg/kg					
Mass fraction of cadmium, mg/kg	Not more than 0.05	0.007	GOST 30178-96	Not determined	Complies
Mass fraction of zinc, mg/kg	Not more than 5.0	1.57	GOST 30178-96	Not determined	Complies
Mass fraction of mercury, mg/kg	Not more than 0.03	<0.0025	MV 04-46-2007	Not determined	Complies
Mass fraction of arsenic, mg/kg	Not more than 0.1	0.0021	MU GRG-107-2005	Not determined	Complies
Mass fraction of iron, mg/kg	Not more than 5.0	1.05	GOST 30178-96	Not determined	Complies

Physical and chemical tests

Parameter and units of measure	MAL as per regulatory documents	Test results	RD symbols on testing method	Measurement error or uncertainty*	Compliance mark
Mass fraction of non-fat impurities, %	Not more than: Extra Class – 0.05; Class I – 0.10; Class II – 0.20	N/a	DSTU 5063:2008	Not determined	Complies
Mass fraction of phosphorus-containing substances, not more than: in terms of stearo-oleo- lecithin and P ₂ O ₅ , %	Not more than: in terms of stearo-oleo- lecithin: Extra Class – 0.40; Class I – 0.60; Class II – 0.80; in terms of P ₂ O ₅ : Extra Class – 0.03; Class I – 0.05; Class II – 0.070	N/a	DSTU 7082:2009	Not determined	Complies
Peroxide index, ½ O, mmol/kg	Not more than 10.0	2.145	DSTU 4808:2007	Not determined	Complies
Acid index, mg KOH	Not more than: Extra Class – 1.5; Class I – 4.0; Class II – 6.0	1.5	DSTU 4350:2004	Not determined	Complies
Mass fraction of moisture and volatiles, %	Not more than: Extra Class – 0.20; Class I – 0.20; Class II – 0.30	0.08	DSTU 4603:2006	Not determined	Complies
Color index, mg of iodine	Not more than: Extra Class – 15; Class I – 25; Class II – 35	5.0	DSTU 4568:2006	Not determined	Complies

Conclusion: The delivered sample 005886 d.k./1/19-Sunflower oil, unrefined, unwinterized complies with DSTU 4492:2017 in terms of mycotoxins, organoleptic parameters, pesticides, radionuclides, toxic elements, physical and chemical parameters.

Recommendations on disposal: To act in accordance with the current legislation of Ukraine.

Notes: