

Version No. 0	Position (full name)	Signature	Date of entry into force	7.3-03-04 СП-10/0
Approved	Head	<i>Signature</i>		
	Head of Refining and Deodorizing Workshop Nikiforov R.S.	<i>Signature</i>		
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Formed	Head of VTL Turkuman Yu.O.	<i>Signature</i>		
	Process Manager Nikolaichuk Yu.V.	<i>Signature</i>		

Name: Product Specification for refined, deodorized, winterized pressed "P" grade organic sunflower oil.

No.	Name of Requirement Section	Requirements of Regulations of Ukraine
1	Product / Product category (name, type)	<p>– Refined, deodorized, winterized (pressed) sunflower oil packed and not packed (hereinafter referred to as sunflower oil).</p> <p>Organic products are the products (raw materials) grown, produced, packaged, certified, and labeled in accordance with the requirements of the Standard for Organic Production and Processing, which is equivalent to the EU Regulations 834/2007 and 889/2008 and/or the US NOP Standards, and/or according to the standards of Vio Suisse, the Law of Ukraine No. 425-VII on Production and Circulation of Organic Agricultural Products and Raw Materials dated September 3, 2013.</p> <p>Organic products during loading, transportation, acceptance, storage, production, packaging and sale should in no way contact with or mix with inorganic products or any other substances.</p>
2	Raw material	<p>No. 1 Grade, unrefined, not winterized (pressed) organic sunflower oil.</p> <p>The batch of raw materials coming to the enterprise must be collected in accordance with the requirements of the Standard for Organic Production and Processing, which is equivalent to the EU Regulations 834/2007 and 889/2008 and/or the US NOP Standards, and/or according to the standards of Vio Suisse, the Law of Ukraine No. 425-VII on Production and Circulation of Organic Agricultural Products and Raw Materials dated September 3, 2013.</p>
3	Process	<p>The production of refined, deodorized, winterized (pressed) organic sunflower oil includes main processes, as follows:</p> <p>the process of acceptance of No. 1 Grade, unrefined, not winterized (pressed) organic sunflower oil;</p> <p>storage process;</p> <p>transfer process to Refining and Deodorizing Workshop;</p>

		processing process; transfer process to the storage; packing process; shipment process.																
4	Method for producing	<p>Includes the basic technological stages of the production of refined, deodorized, winterized (pressed) organic sunflower oil:</p> <ul style="list-style-type: none"> - processing of oil with citric acid for the elimination of forms of phospholipids that are not hydrated; - alkaline neutralization - elimination of free fatty acids from oil with the separation of phases in a centrifugal field: neutralized oil - soapstock; - oil washing with softened water with phase separation in a centrifugal field: neutralized washed oil - washing water; - drying of neutralized washed oil; - adsorption purification of oil with bleaching clay and activated carbon with phase separation: neutralized bleached oil - fat bleaching clay; - oil winterization using filtering pearlite powders and phase separation: neutralized bleached winterized sunflower oil - fat filtering pearlite powder; - oil deodorization - elimination of odor substances from oil. 																
5	Target market	Enterprises of oil and fat production, population.																
6	Customer / Way of application and consuming	Finished for processing and consuming.																
7	Known and potential uses of the product for other purposes and possible dangerous consequences	Not detected																
8	Ways of realization (distribution)	Wholesale by lorries. Wholesale packed in glass bottles, PET bottles and other packaging used for food products.																
9	Regulation for the product	TR of Ukraine Technical Requirements.																
10	Energy and nutrition value (100 g of the product)	<p>Energy value - 899 Kcal (3761 kJ)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">Nutrition (food) value of 100 g of the product</th> </tr> </thead> <tbody> <tr> <td>Proteins</td> <td style="text-align: right;">0 g</td> </tr> <tr> <td>Carbohydrates</td> <td style="text-align: right;">0 g</td> </tr> <tr> <td>Fats</td> <td style="text-align: right;">99.9 g</td> </tr> <tr> <td colspan="2">Of these, fatty acids:</td> </tr> <tr> <td>Saturated fatty acids:</td> <td style="text-align: right;">5.3-14.0 g</td> </tr> <tr> <td>Monounsaturated fatty acids:</td> <td style="text-align: right;">14.0-35.0 g</td> </tr> <tr> <td>Polyunsaturated fatty acids</td> <td style="text-align: right;">50.0-75.0 g</td> </tr> </tbody> </table>	Nutrition (food) value of 100 g of the product		Proteins	0 g	Carbohydrates	0 g	Fats	99.9 g	Of these, fatty acids:		Saturated fatty acids:	5.3-14.0 g	Monounsaturated fatty acids:	14.0-35.0 g	Polyunsaturated fatty acids	50.0-75.0 g
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Composition and tolerances

Fatty acid composition of sunflower oil

Reference designation of the acid	Name of the acid according to trivial nomenclature	Mass content of fatty acid, %
C _{16:0}	Palmitic	3.0-10.0
C _{18:0}	Stearic	1.0-10.0
C _{18:1}	Oleic	14.0-35.0
C _{18:2}	Linoleic	50.0-75.0
C _{20:0}	Arachidic	Up to 1.5
C _{22:0}	Behenic	Up to 1.5

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Mandatory requirements for the quality and safety of food products (chemical, biological, physical) and tolerances

Organoleptic parameters:

- Transparency — transparent without residue;
- Taste and odour: the taste of non-specific oil, no odour.

Physical and chemical parameters:

- Color value, mg max iodine – 10.0
- Acid value, mg KOH/g, max:
 - of fresh oil – 0.25
 - at the end of shelf life – 0.60
- Mass content of moisture and volatiles, %, max: 0.10
- Peroxide value, ½ O mmol/kg, max:
 - fresh oil – 2.0
 - at the end of shelf life – 10.0
- Mass content of phosphoruses, %, recalculated against:
 - stearo-oleo-lecithin: absence.
- Mass content of not fatty impurities, %: absence
- Iodine value, gJ₂/100g – 125-145.
- Anisidine value c.u. – is not subject to limitation
- Wax and waxlike substances – absence
- Saponification (qualitative test) – absence.
- Temperature of initial combustion of extracted oil, °C greater than: 234.
- Mass content of benzo(a)pyrene, in µg/kg, max – 2.0
- Mass content of unsaponifiable substances, %, max – 1.2.
- Content of mineral oils, mg/kg, max – 50.0
- Sum of benzo(a)pyrene, benz(a)anthracene, benzo(b)fluorathene µg/kg – 10.0
- Content of GMO, % max – 0.9

Safety parameters:

Name of toxic elements	Permissible levels, mg/kg, max
Lead	0.1
Arsenic	0.1
Cadmium	0.05
Mercury	0.03

Cuprum	0.1		
Iron	1.5		
Zink	5.0		
Mykotoxins: Aflatoxin B ₁ Zearalenone	0.005 1.0		
<p>Pesticides:</p> <ul style="list-style-type: none"> - Hexachlorocyclohexane (γ-isomers) - DDT - Heptachlor - Screening of pesticides <p>other list and MVD must comply with the established requirements of EU Regulations 834/2007 and 889/2008 and/or the US Standards NOP and/or according to the standards of Vio Suisse, the Law of Ukraine No. 425-VII on the Production and Circulation of Organic Agricultural Products and Raw Materials dated September 3, 2013.</p> <ul style="list-style-type: none"> - acidic herbicides - phosphines - amino acid AMPA - glyphosate - glyphosinate - chlormequat - mepiquat - bromides - carbendazim - thiamethoxam - metalaxyl - S421 	is not allowed		
Radionuclide, Bq/kg: Caesium – 137 Strontium – 90	100 30		
Maximum levels Total dioxins (WHO – PCDD/F-TEQ)	Maximum levels		
	Total dioxins (WHO-PCDD/F-TEQ) 0.75 pg/g of fat	Total dioxins (WHO-PCDD/F-TEQ) 0.75 pg/g of fat	Total dioxins (WHO-PCDD/F-TEQ) 0.75 pg/g of fat

- Microbiological parameters for refined, deodorized, winterized pressed "P" grade organic sunflower oil packed and unpacked: - not regulated (at the request).

		<p>– <i>Physical: absence of foreign objects such as metal, glass, stone, jewelry in the products.</i></p>
13	Labeling / Instructions on the label	<p>Labeling according to: Standard for Organic Production and Processing, which is equivalent to the EU Regulations 834/2007 and 889/2008 and / or the US NOP Standards, and / or according to the standards of Vio Suisse, the Law of Ukraine No. 425-VII on Production and Circulation of Organic Agricultural Products and Raw Materials dated September 3, 2013; the Law of Ukraine “On Protection of Consumers' Rights” Article 15, the Law of Ukraine “On general principles and requirements for food safety” Art. 39; the Law of Ukraine No. 1602-VII dated July 22, 2014; “Technical regulations on food labeling” approved by the Order of State Committee of Ukraine for Technical Regulation and Consumer Policy dated August 10, 2010 No. 487.</p>
14	Kind of packaging	<p>Primary packaging:</p> <ol style="list-style-type: none"> 1. for bulk – lorry, flexitanks; 2. for packed products, it is used packaging for food products, ensuring the preservation of qualitative parameters of the oil: polymeric cap, sealing cap, packaging of domestic and imported colored or non-colored polymeric materials, glass bottle, plastic canisters, metal cans, bag-in-box. <p>Packaging for transportation: For packaged products – corrugated box cardboard.</p>

15	Storage and shelf life	<p><u>Storage conditions</u> Before filling in railway tanks and lorries, flasks and barrels, refined, deodorized, winterized (pressed) organic sunflower oil shall be stored in enclosed containers in accordance with the manufacturer's instructions. Refined, deodorized, winterized (pressed) organic sunflower oil packed in containers of domestic and imported colored or non-colored polymeric materials, glass bottles, plastic canisters, bag-in-boxes and metal cans shall be stored in closed darkened premises with the recommended temperature range from + 0 °C to + 30 °C.</p> <p><u>Shelf life</u> – refined, deodorized, winterized (pressed) organic sunflower oil not packed – 12 months. – refined, deodorized, winterized (pressed) organic sunflower oil packed in bottles, in PET package, plastic canisters, bag-in-box – 24 months.</p>
16	Transport conditions	<p><u>Transportation within Ukraine:</u> “Organic products when transposing should not in any way should in no way contact with or mix with inorganic products or any other substances”.</p> <p>Organic products can be transported from one enterprise to another only if they comply with the following requirements: in bulk for transportation by lorries with tightly closed hatches in accordance with GOST 9218 and in other covered vehicles in accordance with the rules of carriage of cargoes for the corresponding type of transport.</p> <p>When transporting organic products in flexitanks, it should be placed under an approved scheme, which excludes damage to the packaging material during transportation;</p> <ul style="list-style-type: none"> – if the transport packaging is damaged or contaminated, which may result in the loss of the status of "organic" – it is prohibited to take products for carriage! <p>The vehicle must be properly cleaned (washed), if necessary steamed without the use of chemical agents, as well as without residues in it of the previous cargo;</p> <ul style="list-style-type: none"> – have a washing document exclusively with the use of Netra Alkainet – 100 reagent; – when transporting organic products in a disposable tare, the carrier must ensure that the flexitanks have labels indicating the following: the name of the consignor (coincides with the accompanying documents), the name of the product, organic status, the batch number, the date of manufacture. Information on the label must be agreed with the certification authority.

Organic status should be indicated in each accompanying document. Otherwise, the product cannot be accepted for carriage as organic!

Transportation outside Ukraine:

- transportation of organic products outside Ukraine is authorized by lorries with tightly closed hatches in accordance with GOST 9218 and in other covered vehicles in accordance with the rules of carriage of cargoes for the corresponding type of transport, by road in new disposable tare (packaging): flexitanks, polypropylene bags, etc.;
- all carriers are subject to the same requirements as for transportation within Ukraine;
- the accompanying documents (Invoices, B/L, CMR, packing letters, transaction certificates, etc.) must indicate (in addition to the basic mandatory information): organic status of the product, the name of the manufacturer (exporter), the batch number, the certification authority code, reference to the certification standard (NOP, etc.);
- the packaging shall mandatory have the marking (label), the contents of the information on the label shall always be pre-agreed with the Certification Authority, without the above (even one of the items) products with organic status are not allowed for transportation!
- shipment of products to the customer is carried out in a vehicle provided by the logistics department or the customer and must meet the following requirements:
 - have a washing document exclusively with the use of Netra Alkainet – 100 reagent;
 - the vehicle must be airtight, free of sharp propellant parts, which may damage the cargo, contain no ruptures, cracks or other damage, resulting in precipitation inside the vehicle;
 - the vehicle must comply with sanitary rules, be clean, dry, without foreign smells;
 - have means that can fix last pallets in the body in case of incomplete loading.