Product specification for fats & oils		
Sales specification	Issue date: 20-07-2020	Version: 2

Product: Organic refined high oleic sunflower oil
Origin: EU/Non-EU
Organic certificate: 70868
Intended use: Used for human consumption.

1. Short description

Organic sunflower oil is extracted from the seeds of sunflower (Helianthus annuus). The oil is obtained by physical refining of crude (cold pressed) sunflower oil.

2. Composition product

1.	100% Vegetable oil (organic refined high oleic sunflower oil)	
2.	Additives	N/A

3. Packaging & stability

Kind of packing:	- Can 25 L - Drum 190 kg - IBC 920 kg - Bulk
The packaging materials are suitable for food and not harmful to health by normal use. The used packaging materials correspond to relevant food regulatory arrangements and directives in the EU *(Regulation EG No 1935/2004, Regulation EG No 2023/2006 and Regulation EU No 10/2011).*	
Maximum shelf life:	12 months
Storage conditions:	Cool (<20 °C), dry and dark
Transport conditions:	Sealed

4. Physical properties

Odour:	Neutral
Colour:	≤2.0 red (Lovibond 5¼ " cell)
Flavour:	Neutral
Appearance:	Clear, liquid

5. Nutritional value

		Dim.	Typical value	Method
5.1	**Fat**	%	100	
5.2	**Protein**	%	0	
5.3	**Carbohydrate**	%	0	
5.4	**Dietary fiber**	%	0	
5.5	**Sodium chloride**	%	0	
5.6	**Energy (calculated per 100g)**	Kcal	900	
		kJ	3760	
5.7	**Saturated fatty acids**	%	9	
5.8	**Monounsaturated fatty acids**	%	80	
5.9	**Polyunsaturated fatty acids**	%	11	

5.10	**Fatty acids composition**	**Dim.**	**Min.**	**Max.**	ISO 12966-4, GC-FID
	C-6:0 Caproic acid	%		ND	
	C-8:0 Caprylic acid	%		ND	
	C-10:0 Capric acid	%		ND	
	C-12:0 Lauric acid	%		ND	
	C-14:0 Myristic acid	%	ND	0.1	
	C-16:0 Palmitic acid	%	2.6	5.0	
	C-16:1 Palmitoleic acid	%	ND	0.1	
	C-18:0 Stearic acid	%	2.0	6.2	
	C-18:1 Oleic acid	%	75.0	90.0	
	C-18:2 Linoleic acid	%	2.1	17.0	
	C-18:3 Linolenic acid	%	ND	0.3	
	C-20:0 Arachidic acid	%	0.2	0.5	
	C-20:1 Eicosenoic acid	%	0.1	0.5	
	C-22:0 Behenic acid	%	0.5	1.6	
	C-22:1 Erucic acid	%	ND	0.3	
	C-24:0 Lignoceric acid	%	ND	0.5	
5.11	**Trans fatty acids**	%		≤2.0	ISO 12966-4, GC-FID
	*ND – non detectable, defined as ≤ 0.05%				

6. Contaminants

		Dim.	Max.	Method
6.1	**Pesticides**			
	Chlorine and phosphorous per single substance	mg/kg	≤ 0.01	Laboratory specific own method, GC-MS/MS & LC-MS/MS
	Total pesticide	mg/kg	≤ 0.02	
	BNN-Guideline 01/2014			
6.2	**Heavy metals**			
	Lead	mg/kg	≤ 0.10	NEN-EN 15763, ICP-MS
	Cadmium	mg/kg	-	
	Mercury	mg/kg	-	
	Arsenic	mg/kg	-	
	Regulation (EC) No 1881/2006			
6.3	**Dioxines/PCB's**			
	∑ Dioxins and furans (WHO-PCDD/F-TEQ)	pg/g fat	≤ 0.75	NEN-EN 16215, GC-HRMS
	∑ Dioxins, furans and dioxin-like PCB's (WHO-PCDD/F-PCB-TEQ)	pg/g fat	≤ 1.25	Laboratory specific own method, GPC-LC-GCMS
	ICES-6 (∑ PCB28, PCB52, PCB101, PCB 138, PCB153, PCB180)	ng/g fat	≤ 40	
	Regulation (EC) No 1881/2006 and Regulation (EU) 1259/2011			
6.4	**Mycotoxins**			
	Aflatoxin B_1	µg/kg	≤ 2.0	Laboratory specific own method, LC-MS/MS
	Aflatoxin B_1, B_2, G_1, G_2	µg/kg	≤ 4.0	
	Regulation (EC) No 1881/2006			
6.5	**PAH's**			
	Benzo(a)pyrene	µg/kg	≤ 2.0	Laboratory specific own method, GC-MS/MS
	∑ PAH4: (benzo(a)pyrene, benzo(a)antharecen, benzo(b)fluoranthene, chrysene)	µg/kg	≤ 10.0	
	Regulation (EU) No 835/2011 and Regulation (EC) No 1881/2006			
6.6	**Glycidyl esters**			
	Glycidyl fatty acid esters expressed as glycidol	µg/kg	≤ 1000	DGF C-VI 18 (10) A,B: 2012-05, GC-MS
	Regulation (EU) No 290/2018 and Regulation (EC) No 1881/2006			

7. Chemical properties

		Dim.	Min.	Max.	Method
7.1	**Specific gravity (20 °C)**	g/cm^3	0.909	0.915	
7.2	**Free fatty acids**	%	-	≤0.1	ISO 660
7.3	**Peroxide value (at loading)**	$meqO_2/kg$	-	≤2.0	ISO 3960
7.4	**Moisture**	%	-	≤0.10	ISO 8534
7.5	**Iodine value**	-	78	90	
7.6	**Colour (Lovibond $5^{1/4"}$ cell)**	-			ISO 27608 (Refined oils)
	Red	-	-	≤2.0	
	Yellow	-	-	N/A	
7.7	**Saponification value**	mg KOH/g	182	194	ISO 3657
7.8	**Unsaponifiable matter**	g/kg	-	≤ 15.0	ISO 18609
7.9	**Solid fat content**			N/A	ISO 8292-2
	20°C	%			
	25°C	%			
	30°C	%			
	35°C	%			

8. Microbiological parameter

		Dim.	Max.	Method
8.1	**Yeasts**	cfu/g	≤100	NEN-ISO 21527-2
8.2	**Moulds**	cfu/g	≤100	NEN-ISO 21527-2
8.3	**Aerobic plate count**	cfu/g	≤100	NEN-ISO 4833-1
8.4	**Enterobacteriaceae**	cfu/g	≤10	NEN-ISO 21528-2
8.5	**Salmonella**	25g	Absent	NEN-EN-ISO 6579

9. GMO parameters

		Dim.	Max.	Method
9.1	**Genetically modified components**			
	Regulation (EG) No 1829/2003	%	≤ 0.10	Laboratory specific own method, PCR-Screening

The product in question has been produced without the use of genetically modified organisms and/or products derived from these. All relevant safety precautions haven been taken to prevent contamination with genetically modified organisms or products derived from these.

10. Allergenes

LeDa code	GS1 code	Allergen	Recipe without (Z)	Recipe contains (M)	May contain (and recipe without) (K)
		Legal allergens			
1.1	UW	Wheat	☒	☐	☐
1.2	NR	Rye	☒	☐	☐
1.3	GB	Barley	☒	☐	☐
1.4	GO	Oats	☒	☐	☐
1.5	GS	Spelt	☒	☐	☐
1.6	GK	Kamut	☒	☐	☐
1	AW	*Gluten*			
2.0	AC	Crustaceans	☒	☐	☐
3.0	AE	Egg	☒	☐	☐
4.0	AF	Fish	☒	☐	☐
5.0	AP	Peanuts	☒	☐	☐
6.0	AY	Soy	☒	☐	☐
7.0	AM	Milk	☒	☐	☐
8.1	SA	Almonds	☒	☐	☐
8.2	SH	Hazelnuts	☒	☐	☐
8.3	SW	Walnuts	☒	☐	☐
8.4	SC	Cashews	☒	☐	☐
8.5	SP	Pecan nuts	☒	☐	☐
8.6	SR	Brazil nuts	☒	☐	☐
8.7	ST	Pistachio nuts	☒	☐	☐
8.8	SM	Macadamia/ Queensland nuts	☒	☐	☐
8	AN	*Nuts*			
9.0	BC	Celery	☒	☐	☐
10.0	BM	Mustard	☒	☐	☐
11.0	AS	Sesame	☒	☐	☐
12.0	AU	Sulpher dioxide and sulphites (E220 - E228) at concentrations of more than 10 mg/kg or 10 mg/l, expressed as SO_2	☒	☐	☐
13.0	NL	Lupin	☒	☐	☐
14.0	UM	Molluscs	☒	☐	☐
		Additional allergens			
20.0	ML	Lactose	☒	☐	☐
21.0	NC	Cocoa	☒	☐	☐
22.0	MG	Glutamate (E620 – E625)	☒	☐	☐
23.0	MK	Chicken meat	☒	☐	☐
24.0	NK	Coriander	☒	☐	☐
25.0	NM	Corn/ maize	☒	☐	☐
26.0	NP	Legumes	☒	☐	☐
27.0	MC	Beef	☒	☐	☐
28.0	MP	Pork	☒	☐	☐
29.0	NW	Carrot	☒	☐	☐

11. Claims

	Yes	No
Organic	X	
Kosher	X	

12. Miscellaneous

	Yes	No
Product irradiation		X
Product fumigation		X
Suitable for vegans	X	
Suitable for vegetarians	X	

13. Transport labelling

- Product name
- Company name
- Quantity
- Lot number
- Expiry date
- Certification

SPACK B.V.

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