	PRODUCT SPECIFICATION	<b>Version:</b> 01 <b>Date:</b> 05.04.2023
	LIQUID SAFFRON	

#### ARTICLE-KEY FIGURES:

<b>Designation:</b>	Liquid Saffron
<b>Item-No.:</b>	102012.10, 102012.Box
<b>Country of origin:</b>	Switzerland/Germany (carrier substances), Iran (saffron)
<b>Composition:</b>	Saffron extract (propylene glycol, water, saffron threads, emulsifiers (soy lecithin, vitamin E))

#### PRODUCT DESCRIPTION:

*Liquid Saffron* is a highly bioavailable natural liquid saffron extract derived from real saffron threads (*Crocus sativus*), of Iranian origin. It's characterized by its high bioavailability, intense saffron smell, and taste, excellent coloring power, and 2 – 3 times lower saffron consumption. The product is water soluble, free of alcohol (ethanol), and vegan.

The saffron threads were gently extracted in a special extraction and made highly bioavailable with a patented process. This significantly improves physical absorption and combines new and traditional applications as a food additive or dietary supplement.

#### SPECIFICATIONS:

##### Dyes <sup>(1)</sup>:

Prohibited dyes <sup>(a)</sup>	< 10 µg/kg (per substance)
Synthetic dyes <sup>(b)</sup>	< 4 mg/kg (per substance and as sum)

##### Pesticides <sup>(2)</sup>:

≤ 0.01mg/kg (≤ 10 ppb per substance)

##### Heavy Metals <sup>(3)</sup>:

Lead (Pb)	≤ 3.0 mg/kg (ppm)
Cadmium (Cd)	≤ 1.0 mg/kg (ppm)
Arsenic (As)	≤ 1.0 mg/kg (ppm)
Mercury (Hg)	≤ 0.1 mg/kg (ppm)

##### Residual Solvents:


Ethanol is used as a processing agent but does not come in direct contact with the product. Cross-contamination cannot be avoided 100 %. The values are far below the legal limits for food (SR 817.022.42, Appendix 1).

##### Microbiology <sup>(4)</sup>:

Total count of aerobic microorganisms	≤ 10'000 CFU/g
Total count of yeasts and molds	≤ 100'000 CFU/g
Escherichia coli	≤ 10'000 CFU/g
Salmonella	Absent (pro 25 g)
Clostridium perfringens	≤ 10'000 CFU/g
Presumptive <i>Cacillus cereus</i>	≤ 10'000 CFU/g

#### PHYSICAL PROPERTIES:

Appearance	Dark red/orange liquid.
Odor/Smell/Taste	Characteristic of saffron.
Consistency	Liquid
Melting point	< -10 °C (14 °F)

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Solubility	Fully soluble in water and ethanol. Very good soluble in fatty liquid foods (e. g. edible oil, cream, milk, yogurt).
Density	1.040 – 1.060 g/mL
pH-Value	5.20 – 5.70

#### PACKAGING, APPLICATION & STORAGE:

Primary packaging	Miron glass (violet glass; soda-lime glass class 3) with LDPE dropper mount, HDPE/PP cap (inside/outside).
Secondary packaging	Cardboard folding box (102012.10). Cardboard box (102012.Box).
Application areas	Liquid saffron extract as a food additive or food dietary supplement.
Consuming unit	3 drops / 200 mL liquid/beverage. 8 drops / 200 g food.
Consumption recommendation	3 times a day 3 drops in 200 mL liquid/beverage resp. 3 times a day 8 drops in 200 g food.
Application instructions/tips	Drop the required amount onto the finished dish or beverage and distribute well. For solid dishes (e. g. rice, pasta) it's recommended to add a small amount of cooking oil or butter before adding <i>Liquid Saffron</i> .
Container sizes	10 mL (102012.10). 3x 10 mL (102012.Box).
Shelf life	15 months ex manufacturing date (under recommended storage conditions).
Storage conditions	15 – 30 °C (59 – 86 °F) – Tightly closed and protected from light and humidity.

#### CONFORMITIES:

Product	Compliant with basic food laws and with specific regulations on food dietary supplements in Switzerland, Germany, and Austria: SR 817. (LGV), SR 817.022.14 (VNem), Regulation (EU) No. 178/2002, Directive 2002/46/EC. Compliant with Swiss Contaminants Ordinance SR 817.022.15. Compliant with Swiss Pesticides Ordinance (VPRH) SR 817.021.23. Compliant with Swiss hygiene regulation on foods (HyV) SR 817.024.1 and the guidelines of the German Society for Hygiene and Microbiology (DGHM).
Allergens	Contains soy lecithin. Contains no other substances or products that trigger allergies or intolerances according to Regulation (EU) No. 1169/2011, Appendix II.
GMO	The product has been produced free of GMOs according to SR 817.02 (LGV), Regulation (EC) No. 1829/2006, and Regulation (EC) No. 1830/2003.
Packaging (bottle)	Compliant with SR 817.02, Regulation (EC) No. 1935/2004, Directive No. 94/62/EC (Art. 11, heavy metal total content), VO (EG) Nr. 1895/2005, LFGB §

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Packaging (cap)	30, 31, DIN ISO 719 (Version 1989-12), US FDA compliant. Compliant with SR 817.02, Regulation (EC) No. 1935/2004, Regulation (EU) No. 10/2011, Directive No. 94/62/EC (Art. 11, heavy metal total content), FDA 21 CFR § 177.1520, § 178.3297, Resolution AP (89) 1, BfR Recommendation IX, Ph. Eur. (9. Edition) Chapter 3.1.3, 3.1.4, 3.1.5, 3.1.6, 3.2.2, USP Chapter 661.1 (Edition USP 39).
Child proof closure	Compliant with ISO 8317, US 16 CFR § 1700.20.
Elemental impurities (ICH Q3D)	Class 1, 2A, 2B, and 3 elements are not part of the product formulation, nor intentionally added during manufacturing.
REACH	Compliant with Regulation (EC) No. 1907/2006, in particular regarding SVHCs.
Good Manufacturing Practice (GMP)	Compliant with relevant chapters of SR 817.02 resp. Regulation (EU) No. 2023/2006. Therefore a HACCP system is implemented, the production is carried out in suitable hygienic areas, and complete production documentation down to the raw material level is given.
BSE/TSE	No raw materials of animal origin are used. Compliant with Regulation (EC) No. 1069/2009, Regulation (EC) No. 142/2011, EMA/410/01.

- (1) (a) **Prohibited dyes:** Sudan I – IV, Sudan Red B, Sudan Orange G, Sudan Red G, Sudan Red 7B, Nitroaniline Red, Butter Yellow, Rhodamine B, Orange II, o-Aminoazotoluene, Toluidine Red, Metanil Yellow, Sudan Black B, p-Nitroaniline, Orange OT, Auramine O, cis-Bixine, Basic Red 46, Solvent Orange 3  
(b) **Synthetic dyes:** E102 tartrazine, E104 quinoline yellow, E110 Sunset Yellow FCF / Yellow orange S, E122 azorubin, E123 amaranth, E124 ponceau 4 R / cochineal red A, E127 erythrosine, E128 Red2G, E129 Allura Red AC, E131 Patent Blue, E132 indigotine / Indigo carmine, E133 Brilliant Blue FCF, E142 Green S, E151 Black PN, E155 Brown HT
- (2) According to SR 817.021.23 (VPRH), Appendix 2; Regulation (EC) No. 396/2005; Ph. Eur. Chapter 2.8.13, Table 1 (Pesticide residues).
- (3) According to SR 817.022.15 (Contaminants Ordinance); Ph. Eur. Chapter 2.4.27 (Heavy metals in herbal medicinal products and oils).
- (4) Related to saffron raw material – According to SR 817.024.1 (Hygiene Ordinance; Guideline values DGHM (German Society for Hygiene and Microbiology); Ph. Eur. Chapter 2.6.12 (Micro bacterial testing of non-sterile products), Kap. 2.6.31 (Micro bacterial quality of herbal medicinal products for oral use).

**Disclaimer:** This specification does not release the purchaser of our products from his quality responsibility and duty of care. The specifications of the products are subject to change without notice, the current valid specification at the time of contract conclusion applies. The specification was created digitally and is only valid with a 3-fold signature.