



# General Specification

## Ginger CO<sub>2</sub>-extract

### powder, 20 % gingerols, Type No. 014.019

**Raw material:**

*Zingiber officinale* Roscoe -  
 Rhizome, dried

**Production:**

By supercritical fluid extraction with natural carbon dioxide, no solvent residues, no inorganic salts, no heavy metals, no reproducible microorganisms [1]. The extract is standardised to a content of 20 % gingerols by addition of silicon dioxide and maltodextrin.

**D/E - ratio:**

15 - 20 kg ginger root to 1 kg product.

**Organoleptic description:**

Yellow powder.

**Composition:**

50 % Ginger CO<sub>2</sub>-extract  
 30 % carrier silicon dioxide  
 20 % carrier maltodextrin

**Ingredients:**

18 - 22 % gingerols and traces of other pungent compounds as shogaols and zingerone.

**Declaration:**

In food supplements:  
 Ginger extract, carrier silicon dioxide, maltodextrin

In cosmetics:

INCI-Name: Zingiber Officinale Root Extract, CAS-No. 84696-15-1, EINECS-No. 283-634-2 and Silica, CAS-No. 7631-86-9, EINECS-No. 231-545-4 and Maltodextrin, CAS-No. 9050-36-6, EINECS-No. 232-940-4

**Application:**

Traditional use:

In medicine, extracts of ginger are used in herbal remedies for the prevention of nausea and vomiting in motion sickness. Ginger has also been used for mild, cramp-like stomach problems and flatulence [2]. The extract is used for coughs and sore throats [3]. The gingerols in ginger have antioxidative and antimicrobial effects. Studies have shown an effect against cardiovascular diseases [4]. Also the primary degradation products of gingerols, the shogaols, also have antioxidant and anti-inflammatory properties [5,6]. Studies show that 6-shogaol is significantly more effective than 6-gingerol. In addition, shogaols are up to three times hotter than gingerols [7]. Therefore, ginger extract does not lose its pungency and efficacy even during storage.

In food supplements:

Due to its positive physiological properties, ginger extract can be used in various food supplements.



Version No. 014.019\_07\_S, Date: 25.02.2022

	In cosmetics: Because of its antioxidant and anti-inflammatory properties, ginger can reduce UV-induced wrinkling and protect against skin aging [8,9]. Ginger is also reported to improve blood circulation and thus help relieve tension [10]. The ginger extract is therefore suitable for use in anti-aging products, sun creams, massage oils and relaxation baths. In addition, the ginger extract has a characteristic and invigorating aroma. Therefore the extract is also suitable as a fragrance in perfume, deodorants, shower gel and shampoos.
<b>Handling:</b>	The concentrated FLAVEX extracts are the basic ingredients for the product formulation. They are therefore not intended for direct consumption in food, nor for direct application to the skin in cosmetics, perfumery and aromatherapy. Keep away from children!
<b>Stability:</b>	Unopened containers at least 2 years under exclusion of light and following conditions: Store in a cool, dry place!
<b>Transport:</b>	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains Ginger extract (Hot Flavour extract)), 9, III
<b>REACH - Status:</b>	The mixture contains following REACH registered substances: Silicon dioxide 01-2119379499-16-xxxx, Ginger extract (Hot Flavour extract) 01-2120771553-51-0000
<b>Certification:</b>	- HALAL certified by HCS (Halal Certification Services) - KOSHER certified by KLBD (Beth Din Kashrut Division)
<b>Conformity:</b>	The product complies with the requirements of Regulation (EC) No.1223/2009 on cosmetic products in the currently valid version.
<b>Literature:</b>	[1] P. Manninen, E. Häivilä, S. Sarimo, H. Kallio, Distribution of microbes in supercritical CO <sub>2</sub> extraction of sea buckthorn (Hippophae rhamnoides) oils, Zeitschrift für Lebensmitteluntersuchung und -Forschung / Springer-Verlag (1997) 204: 202-205 [2] Committee on Herbal Medicinal Products (HMPC), European Medicines Agency (EMA), Community herbal monograph on Zingiber officinale Roscoe, rhizoma, (2012) EMA/HMPC/749154/2010 [3] Wolfgang Blascheck u.a. (Hrsg.), HagerROM 2017, Hagers Enzyklopädie der Arzneistoffe und Drogen, Stuttgart: Wissenschaftliche Verlagsgesellschaft Stuttgart, 2017 [4] Mao QQ et al., Bioactive Compounds and Bioactivities of Ginger (Zingiber officinale Roscoe), Foods 2019, 8, 185 [5] Bischoff-Kont, I.; Fürst, R, Benefits of Ginger and Its Constituent 6-Shogaol in Inhibiting Inflammatory Processes, Pharmaceuticals 2021,14, 571 [6] S. Dugasani, M. Rao Pichika, V. Devi Nadarajah, M. Katyayani Balijepalli, S. Tandra, J. Narsimha Korlakunta, Comparative antioxidant and anti-inflammatory effects of [6]-gingerol, [8]-gingerol, [10]-gingerol and [6]-shogaol, Journal of Ethnopharmacology 127 (2010) 515–520 [7] , 6-Shogaol, Ingwer-Wirkung, Das unabhängige Ingwer-Portal; <a href="https://ingwer-wirkung.info/6-shogaol/">https://ingwer-wirkung.info/6-shogaol/</a> [8] I. Meyer, M. Herrmann, M. le Maire, E. Caviola, P. Pertile, The Reinvention of Ginger Root: A Traditional Plant Promoted to a Multifunctional Skin-Beautifying Active, SOFW-Journal, 141, 1/2-2015 [9] Mohaddese Mahboubi, Zingiber officinale Rosc. essential oil, a review on its composition and bioactivity, Clinical Phytoscience (2019) 5:6 [10] Dr. Kalpagam Polasa and K.Nirmala, Ginger: Its role in xenobiotic metabolism, ICMR Bulletin Vol.33, No.6, June 2006, Indian Council of Medical Research, New Delhi

**Disclaimer:**

This specification has been prepared to the best of our knowledge for customer information, but under exemption of liability, particularly regarding infringement of or prejudice to third party rights by the use of the product. Statements on application summarise literature evidence and have informative character. Statements have not been evaluated by competent authorities and do not refer to finished products. The marketer of a finished product containing a FLAVEX extract as an ingredient is responsible for ensuring that the product claims are lawful and that the applicable laws and regulations of the country in which the product is sold are complied with.