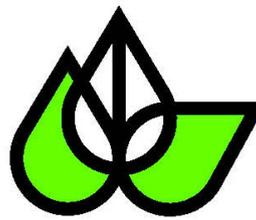


## General Specification

### Caraway CO<sub>2</sub>-se extract

#### Type No. 057.001

<b>Raw material:</b>	<i>Carum carvi</i> - Seeds, dried		 
<b>Production:</b>	By supercritical fluid extraction with natural carbon dioxide no solvent residues, no inorganic salts, no heavy metals, no reproducible microorganisms [1].		
<b>D/E - ratio:</b>	22 - 33 kg caraway seeds to 1 kg product.		
<b>Organoleptic description:</b>	Light yellow clear liquid.		
<b>Composition:</b>	100 % Caraway CO <sub>2</sub> -se extract		
<b>Ingredients:</b>	75 - 95 % essential oil with 45 - 75 % (S)-(+)-carvone, 25 - 50 % limonene.		
<b>Declaration:</b>	<p>In food: flavouring preparation or spice extract or caraway extract</p> <p>In food supplements: caraway extract</p> <p>In cosmetics: INCI-Name: Carum Carvi Seed Extract, CAS-No. 85940-31-4, EINECS-No. 288-921-6</p>		
<b>Application:</b>	<p>Traditional use: Caraway is used in traditional herbal medicines for the symptomatic treatment of digestive disorders such as flatulence and bloating. In addition, the spice is used in folk medicine as a lactating agent for breastfeeding women [2,3].</p> <p>In food: As a spice extract in hearty dishes, such as potato and vegetable dishes, sauerkraut, bread, pastries, cheese, sausage, curd cheese and spirits. In flatulent dishes (e.g. cabbage, fresh bread) the extract improves the tolerance.</p> <p>In food supplements: The caraway extract is also suitable for use in food supplements.</p> <p>In cosmetics: The CO<sub>2</sub>-extracted essential oil of caraway has a fresh, spicy, warm and characteristic scent and can therefore be used as a fragrance in perfumes, soaps and other cosmetic products. In addition, the essential oil has a good inhibitory effect against dermatophytes, which cause</p>		



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infections such as athlete's foot and has an antibacterial effect [4].

- Handling:** 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!
- Stability:** Unopened containers at least 5 years under exclusion of light and following conditions:  
Store in a cool, dry place!
- Transport:** UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID. N.O.S. (contains limonene); 9, III
- REACH - Status:** This product is currently not subject to registration.
- Certification:**
- HALAL certified by HCS (Halal Certification Services)
  - KOSHER certified by KLBD (Beth Din Kashrut Division)
- Conformity:** The product complies with the requirements of Regulation (EC) No. 1334/2008 on flavourings and with the requirements of Regulation (EC) No.1223/2009 on cosmetic products in the currently valid version.
- Literature:**
- [1] P. Manninen, E. Häivälä, 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] Wolfgang Blascheck u.a. (Hrsg.), HagerROM 2017, Hagers Enzyklopädie der Arzneistoffe und Drogen, Stuttgart: Wissenschaftliche Verlagsgesellschaft Stuttgart, 2017
- [3] F.C. Czygan, D. Frohne, Chr. Hölzel, A. Nagell, P. Pachaöy, H.J. Pfänder, M. Wichtl, g. Willhuhn, W. Buff, Teedrogen und Phytopharmaka, 3. Auflage., Stuttgart: Wissenschaftliche Verlagsgesellschaft GmbH 1997
- [4] Janssen AM, Scheffer JJC, Parhan-Van Atten AW and Baerheim Svendsen A., Screening of some essential oils for their activities on dermatophytes., Pharm. Weekblad Sci. Ed. 1988,10,277-280

**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.