

General Specification

Curcuma Longa CO₂-to extract (organic)

DE-ÖKO-013, Type No. 094.005



Raw material:	<i>Curcuma longa</i> - Rhizome, dried, from organic farming
Production:	By supercritical fluid extraction with natural carbon dioxide, no solvent residues, no inorganic salts, no heavy metals, no reproducible microorganisms [1].
D/E - ratio:	10 - 20 kg curcuma rhizome to 1 kg product.
Organoleptic description:	Yellow - orange clear to slightly turbid liquid oil with typical smell.
Composition:	100 % Curcuma Longa CO₂-to extract (organic)
Ingredients:	70 - 90 % essential oil containing mainly alpha- and beta-turmerone and ar-turmerone; in addition alpha-phellandrene, alpha-zingiberene, sesquiphellandrene. The extract contains only traces of curcumin.
Declaration:	In food: flavouring preparation or spice extract or curcuma extract In food supplements: curcuma extract In cosmetics: INCI-Name: Curcuma Longa Root Extract, CAS-No. 84775-52-0, EINECS-No. 283-882-1
Application:	Traditional use: Curcuma longa is used in the traditional medicine for the relief of digestive disturbances, such as feelings of fullness, slow digestion and flatulence [2]. In food: Curcuma mainly is used as spice in the Indian kitchen. It is ingredient of several spice mixtures, for example curry. Due its high content of essential oil that include Turmerone that is responsible of the typical curcuma flavour, the Curcuma longa CO₂-to extract is suitable for flavouring food and beverages [3]. In food supplements: Even though the Curcuma longa CO₂ extract contains curcuminoids in only low concentrations, the turmerones contained in the essential oil nevertheless contribute to a physiological effect as they increase the bioavailability of curcumin [4]. In combination with curcumin, the extract can therefore be used in dietary supplements for general well-being and to support normal



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gastrointestinal function.

In cosmetics:

The essential oil of *Curcuma longa*, with turmerone as main component, shows in vitro antifungal effect against dermatophytes, which cause specific fungal infections of the skin, e.g. athlete's foot. Therefore the turmeric extract is suitable for use in alternative creams for the treatment and prevention of dermatophytosis [5].

Handling:	The concentrated 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:	No dangerous good in the sense of the transport regulations.
REACH - Status:	This product is currently not subject to registration.
Certification:	- ORGANIC certified by QC&I (Quality, Certification and Inspection) - HALAL certified by HCS (Halal Certification Services) - KOSHER certified by KLBD (Beth Din Kashrut Division) - COSMOS certified by IONC (International Organic and Natural Cosmetics Corporation), 100 % certified ingredients (COSMOS-Standard)
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 CO₂ extraction of sea buckthorn (<i>Hippophae rhamnoides</i>) oils, Zeitschrift für Lebensmitteluntersuchung und -Forschung / Springer-Verlag (1997) 204: 202-205 [2] Committee on Herbal Medicinal Products (HMPC), European Medicines Agency (EMA), European Union herbal monograph on <i>Curcuma longa</i> L., rhizoma, (2018) EMA/HMPC/329755/2017 [3] V. A. Parthasarathy, B. Chempakam, T. J. Zachariah, Chemistry of Spices, Oxfordshire: CABI, 2008 [4] Yue GG, Cheng SW, Yu H, Xu ZS, et al., The role of turmerones on curcumin transportation and P-glycoprotein activities in intestinal Caco-2 cells., J Med Food. 2012 Mar;15(3):242-52. [5] M. Jankasem, M. Wuthi-udomlert, W. Gritsanapan, Antidermatophytic Properties of Ar-Turmerone, Turmeric Oil, and <i>Curcuma longa</i> Preparations, Hindawi Publishing Corporation, ISRN Dermatology, Volume 2013

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