

### 1. PRODUCT

#### 1.1 Product identifier

product trade name	Cedrat Oil Italy - Ref. 16980
relevant identified uses	flavouring agent
botanical origin	<i>Citrus medica</i> , (L)
production process	obtained by cold pressing fresh citron fruits
status	100% Natural Complex Substance
EC name	Citrus medica, ext.
EC number	285-359-3
CAS number (EC inventory)	85085-28-5
Other CAS number	68991-25-3 / 92346-90-2
CoE number	2035

### 2. PHYSICAL AND CHEMICAL PROPERTIES

#### 2.1 Organoleptic characteristics

appearance & color	liquid - yellow to dark yellow/greenish
odor	typical of cedrat oil - green, peely citrus note

#### 2.2 Physical & chemical data

analysis	ranges	instruments
relative density $d_{4}^{20}$	0.8430 ÷ 0.8530	ANTON PAAR - DMA 4500
relative density $d_{20}^{20}$	0.8445 ÷ 0.8545	ANTON PAAR - DMA 4500
optical rotation $\alpha_{D}^{20}$	+48.00° ÷ +58.00°	Optical Activity - POLAAR 20
refractive index $n_{D}^{20}$	1.4700 ÷ 1.4800	ANTON PAAR - RXA 170
peroxides	≤20 mmol/l	CDR - FoodLab
flash point	52 °C (126 °F)	GRABNER - Miniflash FLP
solubility	alcohol - other oils	-

#### 2.3 Key peaks

common name	ranges	instruments
limonene	52.00% ÷ 62.00%	GC - internal method
linalool	≤1.50%	GC - internal method
citronellal	≤0.20%	GC - internal method
citronellol	≤0.10%	GC - internal method
citral	2.5% ÷ 6.00%	GC - internal method
geraniol	≤0.60%	GC - internal method
bergaptene	≤10 ppm	HPLC - internal method
furocoumarins	≤2500 ppm	HPLC - internal method

### 3. CERTIFICATIONS

#### 3.1 Statements

Food & Natural (EU - US)	this product is solvents, preservatives and other technical adjuvants free; it is a <b>100% natural flavouring agent</b> obtained by physical processes only from one botanical source [ <i>Citrus medica</i> , (L)], <b>according to Reg. (EC) N. 1334/2008 Art. 3 (2)(d) &amp; Code of Federal Regulation (CFR) Title 21 - 101.22 (a)(3)</b>
Food Allergens Free	this product is <b>single-ingredient</b> , it is a 100% natural flavouring agent obtained by physical processes only from one botanical source [ <i>Citrus medica</i> , (L)] and <b>it does not contain any food allergens listed in the Annex II of Reg. (EU) Nr. 1169/2011</b>
GMO Free	this product has been extracted from non-genetically modified plants; no enzyme and/or no GMO enzymes has been used during the production process and consequently, <b>with reference to Regulations (EC) 1829/2003 and 1830/2003, it does not contain GMO or GMO-derived product.</b>
FEMA GRAS	this product is a 100% natural flavoring agent obtained only by physical processes from one botanical source i.e. <i>Citrus medica</i> , (L) and all its naturally presents components are FEMA GRAS Flavouring Substances.

### 4. STORAGE / SHELF LIFE

#### 4.1 Precautions for safe storage

container & conditions	to be stored in stainless steel drums, preferably under inert atmosphere (nitrogen) with minimum head space, protected from day-light in a dry, aerated place, away from any heat source and ignition source
temperature	from 5 °C to 21 °C
shelf life	18 months, as per recommended storage conditions