

# Healing Body, Mind, and Spirit with Pure Essential Oils Since 1995

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# Certificate of Analysis

#### Rosemary Antioxidant CO<sub>2</sub> extract

Rosemary officinalis

#### Batch # GE-471214

Organically grown, dried leaves from Greece CO<sub>2</sub> extracted in Germany

**Lab No:** 23047 **Type No:** 027.010

Raw Material: Rosemary officinalis, organically grown dried leaves from Greece

**Country of Origin of product:** Germany

**D/E – ratio**: 5.0 – 7.1 kg raw material yields 1kg product

**Product contains**: about 60% Sunflower oil (organic)

Production: June 2017 Retest: June 2022

**Storage**: Store in a cool, dry place and exclusion of light

## **Sensory Check**

Feature	Reference	Result
Appearance:	Dark brown and at room temperature viscous liquid product	meets
Odour	weak odour	meets

### **Analytical Check**

Feature	Method	Limits	Value	Unit
Rosmanol	21.028.06, HPLC	n.s.	0,01	%
7-Methyl-Rosmanol.	21.028.06, HPLC	n.s	0,08	%
Carnosol	21.028.06, HPLC	n.s.	1,1	%
Carnosic Acid	21.028.06, HPLC	> 6	6,4	%
12-O-Methyl-Carnosic Acid	21.028.06, HPLC	n.s.	1,4	%
Sum of phenolic diterpenes (calculated as Carnosic Acid)	21.028.06, HPLC	8 - 10	9,0	%
Reference AO Compounds	21.028.06, HPLC	7 - 10	7,5	%
Carnosol + Carnosic Acid (calc. as				
Carnosic Acid)				
Betulinic Acid	21.028.06, HPLC	n.s.	0,93	%
Ursolic Acid	21.028.06, HPLC	n.s.	0,10	%
Oleanolic Acid	21.028.06, HPLC	n.s.	0,10	%
Steam volatile flavor compounds	21.006.02, GCMS	< 2	0,68	% (g/ 100g)
Total volatile compounds (	GCMS, quantitative	n.s.	0,38	%
(Borneol, Bornyl acetate,				
Camphor, 1,8-Cineol, Verbenone)				



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Content of water	21.220.01, Karl Fischer method	< 1	0,41	%
Residual content of ethanol	21.025.03, GCFID	< 2	0,28	%

n.s = not specified n.d. = not detected

Antioxidative activity compared with 500 ppm alpha to copherol (Rancimat test in lard at 120°C and 15 Liter/ hour  $\,$  air flow)

Dosage Rosemary Antioxidant Relation to 500 ppm alpha tocopherol

200 ppm same activity

500 ppm 1,3 times stronger activity

The data in this report of analysis have been determined carefully and to the best of our knowledge. Depending on transport and storage conditions the indicated data can be subject to certain changes which are outside of our influence. Hence the report has not the meaning of a guarantee in the legal sense and does not dispense the customer from making his own quality control before using the product.

The product meets specifications no. 16.166.07/66.165.08; date of analysis: 2017.06.19