



Healing Body, Mind, and Spirit
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Certificate of Analysis: Rosemary Antioxidant Extract, *Rosmarinus officinalis*, organically grown and CO₂ extracted in Germany.

Batch No: GE-861310

Lab No: 21529

Type No: 027.010 / DE-ÖKO-013

Raw material: *Rosmarinus officinalis*, organically grown dried leaves from Greece

Country of origin of product: Germany

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

Product contains: about 60% Sunflower oil (organic)

Production: September 2016

Retest: September 2021

Storage: Store in a cool, dry place.

Sensory Check

Feature	Reference	Result
Appearance	Dark brown and at room temperature viscous liquid	meets
Odor	weak odor	meets

Analytical Check

Feature	Method	Limits	Value/Unit
Rosmanol	21.028.06, HPLC	n.s.	0,03 %
7-Methyl-Rosmanol	21.028.06, HPLC	n.s.	0,05 %
Carnosol	21.028.06, HPLC	n.s.	0,29 %
Carnosic Acid	21.028.06, HPLC	> 6	8,7 %
12-Methyl-Carnosic Acid	21.028.06, HPLC	n.s.	0,25 %
Sum of phenolic diterpenes (calculated as Carnosic Acid)	21.028.06, HPLC	8 - 10	9,3 %
Reference AO Compounds Carnosol + Carnosic Acid (calc. as Carnosic Acid)	21.028.06, HPLC	7 - 10	8,9 %
Betulinic Acid	21.028.06, HPLC	n.s.	2,3 %
Ursolic Acid	21.028.06, HPLC	n.s.	0,43 %
Oleanolic Acid	21.028.06, HPLC	n.s.	1,0 %
Steam volatile flavor compounds	21.006.01, GCMS	< 2	1,8 % (g/ 100g)
Content of water	Karl Fischer method	< 1	0,55 %
Residual content of ethanol	21.025.02, GCFID	< 2	n.d. %

n.s. = not specified

n.d. = not detected

Antioxidative activity compared with 500 ppm alpha tocopherol
(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

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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 guaranty 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: 2016.09.29