



Healing Body, Mind, and Spirit
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Certificate of Analysis: Rosemary Antioxidant Extract, *Rosmarinus officinalis*, Germany.

Batch No: GE-861106

Lab No: 20699

Type No: 027.010 / 14% Diterpene Phenols / DE-ÖKO-013

Raw material: *Rosmarinus officinalis* dried leaves from organic farming in Greece, Spain, Morocco

Country of origin of product: Germany

D/E - ratio: 5,0–7,1 kg raw material which yields 1 kg product

Product contains: about 60% organic sunflower oil

Production: May 2016

Retest: May 2021

Storage: Store in a cool, dry place.

Sensory Check

Feature	Reference	Result
Appearance	Dark brown, viscous liquid (at room temperature)	meets
Odor	Weak odor	meets

Analytical Check

Feature	Method	Limits	Value/Unit
Rosmanol	21.028.05, HPLC	n.s.	0,04 %
7-Methyl-Rosmanol	21.028.05, HPLC	n.s.	0,07 %
Carnosol	21.028.05, HPLC	n.s.	0,42 %
Carnosic Acid	21.028.05, HPLC	> 9	12,7 %
12-Methyl-Carnosic Acid	21.028.05, HPLC	n.s.	0,19 %
Sum of phenolic diterpenes (calculated as Diacetyl Carnosic Acid)	21.028.05, HPLC	13 - 15	13,4 %
Reference AO Compounds Carnosol + Carnosic Acid (calc. as Carnosic Acid)	21.028.05, HPLC	7 - 10	8,7 %
Betulinic Acid	21.028.05, HPLC	n.s.	0,36 %
Ursolic Acid	21.028.05, HPLC	n.s.	0,09 %
Oleanolic Acid	21.028.05, HPLC	n.s.	0,02 %
Content of essential oil	21.006.01, Steam distillation	< 2	1,9 % (g/ 100g)
Content of water	Karl Fischer method	< 1	0,52 %
Residual content of ethanol	21.025.02, GCFID	< 2	0,96 %

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. 16.166.06/66.165.07; date of analysis: 2016.05.06