

Certificate of Analysis

Rosemary Antioxidant extract 25 (organic), type no. 027.025

DE-ÖKO-013

batch no. 591405, lab no. 28240

production: November 2019

retest: November 2024

raw material:

Rosmarinus officinalis - Leaves, dried, from organic farming

country of origin of raw material: Morocco, Greece

country of origin of product: Germany

D/E - ratio: 5,0 - 7,0 kg raw material yield 1 kg product.

Product contains: about 35 % Sunflower oil (organic)



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.	0,07	%
7-Methyl-Rosmanol	21.028.06, HPLC	n.s.	0,14	%
Carnosol	21.028.06, HPLC	n.s.	0,57	%
Carnosic Acid	21.028.06, HPLC	> 10	14,0	%
12-O-Methyl-Carnosic Acid	21.028.06, HPLC	n.s.	2,0	%
Sum of phenolic diterpenes (calculated as Carnosic Acid)	21.028.06, HPLC	16 - 18	16,8	%
Reference AO Compounds Carnosol + Carnosic Acid (calc. as Carnosic Acid)	21.028.06, HPLC	12 - 16	14,6	%
Betulinic Acid	21.028.06, HPLC	n.s.	2,2	%
Ursolic Acid	21.028.06, HPLC	n.s.	0,36	%
Oleanolic Acid	21.028.06, HPLC	n.s.	0,35	%
Total volatile flavour compounds	21.135.02, GCMS, quantitative	< 4	3,7	%(g/ 100g)
Reference Volatiles Borneol, Bornyl acetate, Camphor, 1,8-Cineol, Verbenone	21.135.02, GCMS, quantitative	n.s.	1,9	%
Content of water	21.220.01, Karl Fischer method	< 1	0,67	%
Residual content of ethanol	21.025.05, GCFID	< 2	0,33	%

n.s. = not specified

n.d. = not detected

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feature	method	limits	value	unit
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	1,2 times stronger activity			
500 ppm	1,6 times stronger activity			

Reason: Quality Control
Date: 2019.11.11 16:45:41 +01'00'

The product meets specifications no. 027.025_06_AS and 66.242.11; date of analysis:
2019.11.11

This computerized CoA has digital signature validated by _____ QC.

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.