

Certificate of Analysis

Rosemary Antioxidant extract 14 (organic)

Batch no. GE-58834

production: October 2018 retest: October 2023

lab no. 25887

raw material: Rosmarinus officinalis - Leaves, dried, from organic farming

country of origin of rawmaterial: Morocco, Greece

country of origin of product: Germany

D/E - ratio: 2,8 - 4,0 kg raw material yield 1 kg product.

Product contains: about 60 % 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. | 0.03 % |
| 7-Methyl-Rosmanol | 21.028.06, HPLC | n.s. | 0.08 % |
| Carnosol | 21.028.06, HPLC | n.s. | 0.44 % |
| Carnosic Acid | 21.028.06, HPLC | > 6 | 7.5 % |
| 12-O-Methyl-Carnosic Acid | 21.028.06, HPLC | n.s. | 1.2 % |
| Sum of phenolic diterpenes (calculated as Carnosic Acid) | 21.028.06, HPLC | n.s. | 9.3 % |
| Reference AO Compounds Carnosol + Carnosic Acid (calc. as Carnosic Acid) | 21.028.06, HPLC | 7 - 10 | 8.0 % |
| Betulinic Acid | 21.028.06, HPLC | n.s. | 1.3 % |
| Ursolic Acid Oleanolic Acid | 21.028.06, HPLC 21.028.06, HPLC | n.s. n.s. | 0.25 % 0.27 % |
| Total volatile flavour compounds | 21.135.02, GCMS, quantitative | < 2 | 0.86 % (g/100g) |
| Total content of Borneol, Bornyl acetate, Camphor, 1,8-Cineol, Verbenone | 21.135.02, GCMS, quantitative | n.s. | 0.51 % |
| Content of water | 21.220.01, Karl Fischer method | <1 | 0.47 % |



316 Old Hickory Blvd East Madison, TN 37115 Tel (615)612-4270 fax (615)860-9171

orderdesk@naturesgift.com

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Residual content of ethanol 21.025.04, GCFID < 0.5 0.04 %

Pesticides external analysis EC No. 396/2005 Monitoring*

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

^{*}Compliance with the maximum residue levels of pesticides (EC no. 396/2005) is ensured by suitable monitoring.



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|---------|--------|--------|------------|
| | | | |

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

Storage conditions: Store in a cool, dry place!

Digitally signed by Anja Cawelius Reason: Quality Control Date: 2018.10.22 10:38:33 +02'00'

The product meets specifications no. 16.166.08/66.165.11; date of analysis: 2018.10.22 This computerized CoA has digital signature validated by Nature's Gift.

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.