

Balancing Body, Mind and Spirit with Pure Essential Oils Since 1995

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316 Old Hickory Blvd East, Madison, TN 37115 Tel (615)612-4270 fax (615)860-9171 sold@naturesgift.com

Certificate of Analysis

Ginger CO2-se (Organic)

Batch #DE-59382

production: November 2020 retest: November 2025

type 014.027 lab # 30484

raw material: Zingiber officinale Roscoe - Rhizome, dried from organic

country of origin of raw material: Indonesia country of origin of product: Germany

D/E - ratio: 43 - 56 kg raw material yield 1 kg product

Sensory Check

| feature | reference | result | |
|-------------|--|--------|--|
| Appearance: | clear, yellow liquid | meets | |
| Odour: | characteristic verbena citrus-like odour | Meets | |

Analytical Check

| Analytical Check | | | | |
|--|--------------------------|----------------|---------------|------------------|
| feature | method | limits | value | unit |
| Content of essential oil | 21.006.01, Distillation, | 82 - 95 | 88,4 | % (g/ 100g) |
| | gravimetric | | | |
| Composition of the volatile compounds: | GCMS, 100 % Method | | | |
| alpha Pinene | GCMS, 21.225.01 | n.s. | 1,9 | % |
| Camphene | GCMS, 21.225.01 | n.s. | 7,2 | % |
| beta Myrcene | GCMS, 21.225.01 | n.s. | 1,0 | % |
| Limonene | GCMS, 21.225.01 | n.s. | 1,3 | % |
| beta Phellandrene | GCMS, 21.225.01 | n.s. | 1,3 | % |
| 1,8 Cineol | GCMS, 21.225.01 | n.s. | 3,1 | % |
| Citronellol | GCMS, 21.225.01 | n.s. | n.d. | % |
| Linalool | GCMS, 21.225.01 | n.s. | 0,89 | % |
| Neral/Geranial | GCMS, 21.225.01 | < 9,0 | 7,6 (2,9+4,7) | % |
| Geraniol | GCMS, 21.225.01 | n.s. | 1,6 | % |
| ar-Curcumene | GCMS, 21.225.01 | n.s. | 13,8 | % |
| alpha Zingiberene | GCMS, 21.225.01 | > 15,0 | 18,8 | % |
| alpha Farnesene | GCMS, 21.225.01 | n.s. | 4,4 | % |
| beta Bisabolene | GCMS, 21.225.01 | n.s. | 6,2 | |
| Sesquiphellandrene | GCMS, 21.225.01 | n.s. | 11,3 | |
| Hexanal | GCMS, 21.225.01 | n.s. | n.d. | |
| Sum of Gingerols | 21.027.05, HPLC | n.s. | 1,4 | % |
| Sum of Shogaols | 21.027.05, HPLC | < 1,5 | 0,80 | |
| • | • | n.s. = not spe | | . = not detected |



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Analytical Check

| feature | method | limits | value | unit |
|-------------------------------|----------------------------------|------------------|---------------|-------|
| Sum of pungent compounds | 21.027.05, HPLC | < 5 | 2,2 | % |
| Refractive index (20°C) | 21.080.03, Abbe-Refractometer | 1,4880 - 1,4950 | 1,4894 | |
| Density (20°C) | 21.024.03, Pycnometer | 0,875 - 0,895 | 0,8914 | g/cm³ |
| Aflatoxine B1 | 21.193.02, HPLC | EC no. 1881/2006 | meets | ppb |
| Total Aflatoxines B1,B2,G1,G2 | 21.193.02, HPLC | EC no. 1881/2006 | meets | ppb |
| Ochratoxin A | 21.197.01, HPLC | EC no. 1881/2006 | meets | ppb |
| Monitoring of substances*: | | | | |
| Methyleugenol | GCMS | n.s. | n.d. (< 0,01) | % |
| | cified n.d. | . = not detected | | |

^{*}Substances to be monitored according to "Arrêté du Juin 2014" laying down the list of plants, authorized in food supplements

The product meets specifications no. 014.027_04_AS and 66.505.04; date of analysis: 2020.11.11

This computerized CoA has digital signature validated by Nature's Gift

Digitally signed by Anja Cawelius Reason: Quality Control Date: 2020.11.11 17:08:36 +01'00'

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.