



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

www.naturesgift.com

Certificate of Analysis: Ginger Root Total CO₂, *Zingiber officinalis*, organically grown in Indonesia, CO₂ extracted in Germany.

Batch No: GE-841416

Lab No: 19306

Type No: 014.018 / DE-ÖKO-013

Raw material: *Zingiber officinalis* rhizome, dried, from organic farming, Indonesia

Country of origin of product: Germany

D/E - ratio: 17–20 kg raw material which yields 1 kg product

Production: June 2015

Retest: June 2018

Storage: Store in a cool, dry place.

Sensory Check

Feature	Reference	Result
Appearance	Clear, brown liquid oil	meets
Smell / Taste	Pungent taste and characteristic smell	meets

Analytical Check

Feature	Method	Limits	Value/Unit
Content of essential oil	21.006.01, Distillation, gravimetric	30 - 50	35,5% (g/100g)
Zingerone	21.027.03, HPLC	< 1	0,03 %
6-Gingerol	21.027.03, HPLC	14 - 20	15,0 %
8-Gingerol	21.027.03, HPLC	n.s.	3,0 %
6-Shogaol	21.027.03, HPLC	n.s.	3,4 %
10-Gingerol	21.027.03, HPLC	n.s.	2,5 %
8-Shogaol	21.027.03, HPLC	n.s.	0,81 %
10-Shogaol	21.027.03, HPLC	n.s.	0,09 %
Sum of Gingerols	21.027.03, HPLC	n.s.	20,4 %
Sum of Shogaols	21.027.03, HPLC	< 5	4,3 %
Sum of pungent compounds	21.027.03, HPLC	24 - 35	24,7 %
Relative composition of the essential oil:	GCMS, 100 % Method		
Neral/Geranial	GCMS, ginger.met	n.s.	1,5 / 2,6 %
ar-Curcumene	GCMS, ginger.met	n.s.	19,9 %
alpha Zingiberene	GCMS, ginger.met	n.s.	19,6 %
alpha Farnesene	GCMS, ginger.met	n.s.	4,5 %
beta Bisabolene	GCMS, ginger.met	n.s.	10,1 %
Sesquiphellandrene	GCMS, ginger.met	n.s.	16,1 %
Refractive index (20°C)	Abbe-Refractometer	1.500 - 1,510	1,5070
Content of water	Karl Fischer Titr.	n.s.	1,1 %
Density (20°C)	21.024.02, Pycnometer	0,950 - 0,980	0,9754 g/cm ³
Aflatoxins	EC No. 1881/2006, EC No. 165/2010	meets	
Ochratoxin A	EC No. 1881/2006, EC No. 594/2012	meets	
Pesticides*	EC 396/2005	*	

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



*Healing Body, Mind, and Spirit
with Pure Essential Oils Since 1995*

www.naturesgift.com

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.

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. 16.507.03/66.219.02; date of analysis: 2015.07.15