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**Certificate of Analysis:** Ginger CO<sub>2</sub>, *Zingiber officinalis*, dried rhizomes from Nigeria, CO<sub>2</sub> extracted in Germany.

Batch No: NI-441114

Lab No: 16732

Type No: 014.002

Production: May 2014

Retest: May 2019

Country of origin of raw material: Nigeria

D/E - ratio: 18 - 28 kg raw material yield 1 kg product.

#### Sensory Check

Feature	Reference	Result
Appearance:	brown clear liquid	meets
Odour:	characteristic pungent smell	meets

#### Analytical Check

Feature	Method	Limits	Value	Unit
Content of essential oil	21.006.01, Distillation, gravimetric	38 - 46	38,5 %	(g/100g)
Zingerone	21.027.03, HPLC	n.s.	0,02	%
6-Gingerol	21.027.03, HPLC	n.s.	15,8	%
8-Gingerol	21.027.03, HPLC	n.s.	3,5	%
6-Shogaol	21.027.03, HPLC	n.s.	2,2	%
10-Gingerol	21.027.03, HPLC	n.s.	5,8	%
8-Shogaol	21.027.03, HPLC	n.s.	0,48	%
10-Shogaol	21.027.03, HPLC	n.s.	0,20	%
Sum of Gingerols	21.027.03, HPLC n.s.	25,0	%	
Sum of Shogaols	21.027.03, HPLC	< 3	2,9	%
Sum of pungent compounds	21.027.03, HPLC	25 - 33	28,0	%
Composition of the volatile compounds in distillate:	GCMS, 100 % Method			
Neral/Geranial	GCMS, ginger.met	n.s.	2,7 (1,0+1,7)	%
ar-Curcumene	GCMS, ginger.met	n.s.	7,4	%
alpha Zingiberene	GCMS, ginger.met	20 - 45	32,7	%
alpha Farnesene	GCMS, ginger.met	n.s.	7,6	%
beta Bisabolene	GCMS, ginger.met	n.s.	7,0	%
Sesquiphellandrene	GCMS, ginger.met	n.s.	13,3	%
Pestizides	EC No. 396/2005		meets	
Aflatoxins	EC No. 1881/2006, EC	No. 165/2010	meets	
Ochratoxin A	EC No. 1881/2006, EC	No. 594/2012	meets	
Refractive index (20°C)	Abbe-Refractometer	1,500 - 1,510	1,5096	
Density (20°C)	21.024.02, Pycnometer	0,950 - 0,980	0,9721	g/cm <sup>3</sup>

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

Storage conditions: Store in a cool, dry place!

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