



## Certificate of Analysis

### Cocoa CO2-se

Batch # GE-58930

lab no.: 27173  
production: May 2019 retest: May 2024  
raw material: *Theobroma cacao* - cocoa beans  
country of origin of raw material: Germany  
country of origin of product: Germany  
D/E - ratio: 19 - 21 kg raw material yield 1 kg product.

### Sensory Check

feature	reference	result
Appearance:	At room temperature white to light brown solid product, at 40° C liquid oil	meets
Odour:	typical sweet cocoa smell	meets

### Analytical Check

feature	method	limits	value unit
Content of essential oil	21.006.01, Distillation, gravimetric	n.s.	0,76 % (g/ 100g)
Fatty acid composition:			
Palmitic Acid C16:0	21.156.03, GCFID	n.s.	35,3 %
Palmitoleic Acid C16:1 w7	21.156.03, GCFID	n.s.	0,43 %
Stearic Acid C18:0	21.156.03, GCFID	n.s.	29,0 %
Oleic Acid C18:1 w9	21.156.03, GCFID	n.s.	29,7 %
Linoleic Acid C18:2 w6	21.156.03, GCFID	n.s.	4,7 %
Linolenic acid C18:3 w3	21.156.03, GCFID	n.s.	0,34 %
Arachidic Acid C20:0	21.156.03, GCFID	n.s.	0,60 %
Theobromine	21.144.02, HPLC	n.s.	0,01 %
Theophylline	21.144.02, HPLC	n.s.	0,0086 %
Caffeine	21.144.02, HPLC	< = 7	1,4 %
GCMS fingerprint	GCMS, 100 % Method	Standard	meets
Composition of the volatile compounds:			
Acetic Acid	GCMS, quantitative about Methyl decanoate	n.s.	0,26 %
2,3 Butandiol	GCMS, quantitative about Methyl decanoate	n.s.	0,11 %

n.s. = not specified

n.d. = not detected



## Certificate of Analysis

### Cocoa CO2-se

Batch # GE-58930

#### Analytical Check

feature	method	limits	value	unit
Nonadecanone	GCMS, quantitative about Methyl decanoate	n.s.	n.d.	%
Pentadecanone	GCMS, quantitative about Methyl decanoate	n.s.	0,038	%
Tetradecanamide	GCMS, quantitative about Methyl decanoate	n.s.	0,33	%
Undecane	GCMS, quantitative about Methyl decanoate	n.s.	n.d.	%
Dodecadienal	GCMS, quantitative about Methyl decanoate	n.s.	n.d.	%
Pyrazine, 2,6 dimethyl	GCMS, quantitative about Methyl decanoate	n.s.	0,0057	%
Tetramethyl pyrazine	GCMS, quantitative about Methyl decanoate	n.s.	0,038	%
Pyrazine, 2-ethyl-2,5-dimethyl	GCMS, quantitative about Methyl decanoate	n.s.	0,0032	%
2,3,5-Trimethyl-6-ethylpyrazine	GCMS, quantitative about Methyl decanoate	n.s.	0,0032	%
Phenylethyl alcohol	GCMS, quantitative about Methyl decanoate	n.s.	0,021	%
Phenylethyl acetate	GCMS, quantitative about Methyl decanoate	n.s.	0,075	%
Benzo(a)pyrene	21.177.02, GCMS	< 0,005	n.d. (< 0,001)	ppm
Sum of benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene and chrysene	21.177.02, GCMS	< 0,030	n.d. (< 0,001)	ppm

n.s. = not specified

n.d. = not detected

Storage conditions: Store in a cool, dry place!

Digitally signed by Anja Cawelius  
Reason: Quality Control  
Date: 2019.05.17 11:29:07 +02'00'

The product meets specifications no. 16.567.01/66.123.10; date of analysis: 2019.05.17

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

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.