



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

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## Certificate of Analysis

**Sea Buckthorn Pulp CO<sub>2</sub>**  
*Hippophae rhamnoides*

Batch # GE-951411

**Lab No:** 23117  
**Type No :** 041.007  
**Raw Material:** *Hippophae rhamnoides* – Fruit Pulp, dried, from organic farming  
**Country of Origin, raw material:** Germany  
**Country of origin of product:** Germany  
**D/E - ratio:** 8,0 - 14,0 kg raw material yield 1 kg product  
**Production:** Nov 2016  
**Retest:** Nov 2021  
**Product contains:** 0,08 % Rosemary Antioxidant Extract (organic)  
**Storage:** Store in a cool, dry place and exclusion of light

### Sensory Check

Feature	Reference	Result
Appearance:	orange-red oil, at room temperature turbidness by some precipitates possible	meets
Odour:	seabuckthorn typical smell	meets

### Analytical Check

Feature	Method	Limits	Value	Unit
Fatty acid composition:				
Palmitic Acid C16:0	21.156.03, GCFID	30 - 40	34,0	%
Palmitoleic Acid C16:1 w7	21.156.03, GCFID	22 - 33	33,0	%
Stearic Acid C18:0	21.156.03, GCFID	< 3	0,71	%
Oleic Acid C18:1 w9	21.156.03, GCFID	10 - 28	20,3	%
Vaccenic Acid C18:1 w7	21.156.03, GCFID	4 - 9	7,7	%
Linoleic Acid C18:2 w6	21.156.03, GCFID	1 - 9	3,2	%
alpha Linolenic acid C18:3 w3	21.156.03, GCFID	< 5	0,99	%
Arachidic Acid C20:0	21.156.03, GCFID	n.s.	0,13	%
Fat numbers:				
Unsaponifiables	21.020.03, DGF	1 - 7	4,9	%

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9/18/2017



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Peroxide Value	21.015.03, DGF, Wheeler	< 11	2,7	meq O <sub>2</sub> /kg
Acid value	21.016.03, DGF	4 - 18	8,6	mg KOH/g
Saponification value	21.017.02, DGF	170 - 210	205	mg KOH/g
Ester value	= SV - AV	160 - 210	196	mg KOH/g
Sum of Carotenoids (calc. as β-Carotene)	21.008.05, Spectrometer	0,14 - 0,27	0,147	%
Sum of Sterols (calc. as Sitosterol)	21.132.02, GCFID	> 1	0,67	%
Sum of Tocopherols (calc. as alpha Tocopherol)	21.113.02, HPLC	> 0,1	0,05	%
Content of water	21.220.01, Karl Fischer method	< 1	0,07	%
Refractive index (20°C)	21.080.03, Abbe-Refractometer	1,460- 1,480	1,4683	
Density (20°C)	21.024.03, Pycnometer	0,900 - 0,925	0,9137	g/cm <sup>3</sup>
Benzo(a)pyrene	GCMS	< 0,002	meets	ppm
Sum of benzo(a)pyrene, benz(a)anthracene, benzo(b)fluoranthene and chrysene	GCMS	< 0,010	meets	Ppm
aw-value	LabSwift aw-value Measurement	< 0,6	0,326 / 24,4°C	

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

Remark: OOS Release:

The content of tocopherols and sterols is lower than specified.

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.

The product meets specifications no. 16.132.09/66.043.06; date of analysis: 2017.08.14