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Certificate of Analysis: Seabuckthorn Pulp CO₂, *Hippophae rhamnoides*, dried fruit pulp from organic farming in Germany and Italy, extracted in Germany.

Batch No: GE-751002

Date of Analysis: 2015.04.15

Type No: 041.007, DE-ÖKO-013

Lab No: 18526

Production: February 2015

Retest: February 2020

D/E - ratio: 8,0 - 14,0 kg raw material yield 1 kg product.

Sensory Check

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

Analytical Check

Feature	Method	Limits	Value	Unit
Fatty acid composition:				
Palmitic Acid C16:0	21.156.02, GCFID	30 - 40	33,4	%
Palmitoleic Acid C16:1 w7	21.156.02, GCFID	22 - 33	31,3	%
Stearic Acid C18:0	21.156.02, GCFID	< 3	0,87	%
Oleic Acid C18:1 w9	21.156.02, GCFID	10 - 28	19,2	%
Vaccenic Acid C18:1 w7	21.156.02, GCFID	4 - 9	6,3	%
Linoleic Acid C18:2 w6	21.156.02, GCFID	1 - 9	6,8	%
alpha Linolenic acid C18:3 w3	21.156.02, GCFID	< 5	1,9	%
Arachidic Acid C20:0	21.156.02, GCFID	n.s.	0,10	%
Fat numbers:				
Unsaponifiables	21.020.02, DGF	1 - 7	5,8	%
Peroxide Value	21.015.02, DGF, Wheeler	< 11	3,6	meq O ₂ /kg
Acid value	21.016.02, DGF	4 - 18	9,9	mg KOH/g
Saponification value	21.017.01, DGF	170 - 210	196	mg KOH/g
Ester value	= SV - AV	160 - 210	186	mg KOH/g
Sum of Carotenoids (calc. as β-Carotene)	21.010.04, UV-VIS	0,14 - 0,27	0,16	%
Sum of Sterols (calc. as Sitosterol)	21.132.02, GCFID	> 1	1,6	%
Sum of Tocopherols (calc. as alpha Tocopherol)	21.113.02, HPLC	> 0,1	0,11	%
Content of water	Karl Fischer method	< 1	0,05	%
Refractive index (20°C)	Abbe-Refractometer	1,460- 1,480	1,4715	
Density (20°C)	21.024.02, Pycnometer	0,900 - 0,925	0,9136	g/cm ³

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

Storage conditions: Store in a cool, dry place.

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