

Certificate of Analysis Amaranth Seed CO₂ total (organic) Batch #DE-59329

Production: January 2022 Retest: June 2023 Expiration: January 2025

country of origin of raw India

material: country of origin of Germany

product: 20 - 27 kg raw material yield 1 kg product.

D/E - ratio:

Product contains: 0,1 % Rosemary Antioxidant Extract (organic)

Sensory Check

feature	reference	result
Appearance:	yellow oil	meets

Analytical Check

feature	method	limits	value unit
Fatty acid composition:			
Palmitic Acid C16:0	21.156.03, GCFID	n.s.	19,4 %
Palmitoleic Acid C16:1 w7	21.156.03, GCFID	n.s.	0,13 %
Stearic Acid C18:0	21.156.03, GCFID	n.s.	3,7 %
Oleic Acid C18:1 w9	21.156.03, GCFID	20 - 35	23,5 %
Vaccenic Acid C18:1 w7	21.156.03, GCFID	n.s.	0,93 %
Linoleic Acid C18:2 w6	21.156.03, GCFID	40 - 55	50,2 %
alpha Linolenic acid C18:3 w3	21.156.03, GCFID	n.s.	1,0 %
Arachidic Acid C20:0	21.156.03, GCFID	n.s.	0,79 %
Total fat	DGF method, C-VI 10b	n.s.	100,0 %
Saturated fatty acids	DGF method, C-VI 10b	n.s.	24,3 %
Monounsaturated fatty acids	DGF method, C-VI 10b	n.s.	24,5 %
Polyunsaturated fatty acids	DGF method, C-VI 10b	n.s.	51,2 %
Fat numbers:			
Unsaponifiables	21.020.03, DGF	n.s.	12,7 %
Peroxide Value	21.015.03, DGF, Wheeler	< 10	6,8 meq O ₂ /kg
Acid value	21.016.03, DGF	< 25	6,6 mg KOH/g
Saponification value	21.017.02, DGF	n.s.	170 mg KOH/g
Ester value	= SV - AV	n.s.	163 mg KOH/g
Squalene	21.180.02, GCFID	> 5	7,6 %
Sitosterol	21.132.03, GCFID	n.s.	0,46 %
Other Sterols	21.132.03, GCFID	n.s.	0,79 %
Sum of Sterols (calc. as Sitosterol)	21.132.03, GCFID	n.s.	1,3 %

n.s. = not specified

n.d. = not detected

Certificate of Analysis
Amaranth Seed CO₂ total (organic)
Batch #DE-59329

Analytical Check

feature	method	limits	value	unit
gamma Tocopherol	21.113.03, HPLC	n.s.	0,045	%
alpha / delta Tocopherol	21.113.03, HPLC	n.s.	0,020 / 0,017	%
Sum of Tocopherols (calc. as alpha Tocopherol)	21.113.03, HPLC	n.s.	0,082	%
aw-value	LabSwift aw-value Measurement	< 0,8	0,389 (23,1 °C)	
Content of water	21.220.01, Karl Fischer method	n.s.	0,11	%
Benzo(a)pyrene	21.177.02, GCMS	n.s.	0,0003	ppm
Sum of benzo(a)pyrene, benz(a)anthracene, benzo(b)fluoranthene and chrysene	21.177.02, GCMS	n.s.	0,028	ppm
		n.s. = not specified	n.d. = not detected	

The product meets the current version of the analytical (168.002_04_AS) and of the general (168.002_09_S) specification. date of analysis: 2023.06.26 Lab no 35891

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



Digitally signed by Anja Cawelius
Reason: Quality Control
Date: 2023.06.26 11:19:08+02'00'

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. For further product-relevant substances, see IFRA list and cosmetic allergen list.