Date : 2024-10-08

Certificate of Analysis - GC Profiling

Sample Identification

Internal code : 24I24-PTH01
Customer Identification : Peru Balsam - Central America - PN0110R
Type : Resin
Source : *Myroxylon balsamum*
Customer : Plant Therapy

Checked an approved by:

Alexis St-Gelais, Ph. D., Chimiste 2013-174

Notes: This report may not be published, including online, without the written consent from Laboratoire PhytoChemia. This report is digitally signed, it is only considered valid if the digital signature is intact. The results only describe the samples that were submitted to the assays.

Méthode certifiée ISO 17025:2017 Certified method

Laboratoire PhytoChemia

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Gas Chromatographic Analysis

Method : PC-MAT-014 - Analysis of the composition of an essential oil or other volatile liquide by FAST GC-FID
ISO
Results : See analysis summary (next page)
Analyst : Alexis St-Gelais, Ph. D., Chimiste 2013-174
Date : 2024-10-07

Physicochemical data

Refractive index : 1.5733 ± 0.0003 (20 °C)
Method : PC-MAT-016 - Measure of the refractive index of a liquid.
Analyst : Cindy Caron B. Sc.
Date : 2024-09-26

Conclusion

No adulterant, contaminant or diluent has been detected using this method.

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Analysis Summary - Consolidated Contents

New readers of similar reports are encouraged to read table footnotes at least once.

Identification	%	Class
Styrene	0.01	Simple phenolic
Benzaldehyde	0.07	Simple phenolic
Benzyl alcohol	0.95	Simple phenolic
Acetophenone	0.01	Simple phenolic
Benzyl formate	0.02	Phenolic ester
ortho-Guaiacol	0.01	Simple phenolic
Methyl benzoate	tr	Phenolic ester
Ethyl benzoate	0.02	Phenolic ester
Terpinen-4-ol	0.01	Monoterpenic alcohol
Benzoic acid	6.04	Simple phenolic
4-Ethylguaiacol	tr	Norphenylpropanoid
4-Vinylguaiacol	0.17	Simple phenolic
Unknown	0.03	Unknown
Eugenol	0.01	Phenylpropanoid
Methyl (*E*)-cinnamate	0.03	Phenylpropanoid ester
Vanillin	1.25	Simple phenolic
Coumarin	0.03	Coumarin
(*E*)-Cinnamic acid	5.55	Phenylpropanoid
α-Selinene	0.02	Sesquiterpene
Unknown	0.02	Unknown
Unknown	0.02	Unknown
(3*E*,6*E*)-α-Farnesene	0.04	Sesquiterpene
Guaiacylacetone	0.34	Phenylpropanoid
Unknown	0.07	Unknown
(*E*)-Nerolidol	3.97	Sesquiterpenic alcohol
Unknown	0.07	Unknown
Methoxyeugenol	0.01	Phenylpropanoid
Unknown	0.04	Unknown
τ-Cadinol	0.03	Sesquiterpenic alcohol
(2*E*,6*Z*)-Farnesol	0.02	Sesquiterpenic alcohol
(*E*)-Coniferyl alcohol	0.02	Phenylpropanoid
(*E*)-Coniferaldehyde	0.01	Phenylpropanoid
Benzyl benzoate	55.70	Phenolic ester
Benzyl hydrocinnamate	0.06	Phenylpropanoid ester
Unknown	0.02	Unknown
Benzyl (*Z*)-cinnamate	0.81	Phenylpropanoid ester
Ethyl (*E*)-cinnamate	0.04	Phenylpropanoid ester
Benzyl (*E*)-cinnamate	23.19	Phenylpropanoid ester
(*E*)-Isoeugenol	0.08	Phenylpropanoid
(*E*)-Cinnamyl (*E*)-cinnamate	0.01	Phenylpropanoid ester

Benzyl (*E*)-ferulate	0.10	Phenylpropanoid ester
Benzyl α-linolenate	0.03	Phenolic ester
Consolidated total	**98.95**	

tr: The compound has been detected below 0.005% of the total signal

Note: no correction factor was applied

About "consolidated" data: The table above presents the breakdown of the sample volatile constituents after applying an algorithm to collapse data acquired from the multi-columns system of PhytoChemia into a single set of consolidated contents. In case of discrepancies between columns, the algorithm is set to prioritize data from the most standard DB-5 column, and smallest values so as to avoid overestimating individual content. This process is semi-automatic. Advanced users are invited to consult the "Full analysis data" table after the chromatograms in this report to access the full untreated data and perform their own calculations if needed.

Unknowns: Unknown compounds' mass spectral data is presented in the "Full analysis data" table. The occurrence of unknown compounds is to be expected in many samples, and does not denote particular problems unless noted otherwise in the conclusion.

Bracketed value ([xx]): A bracketed percent value indicate that two or more compound percentage could not be solved due to coelution.

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This page was intentionally left blank. The following pages present the complete data of the analysis.

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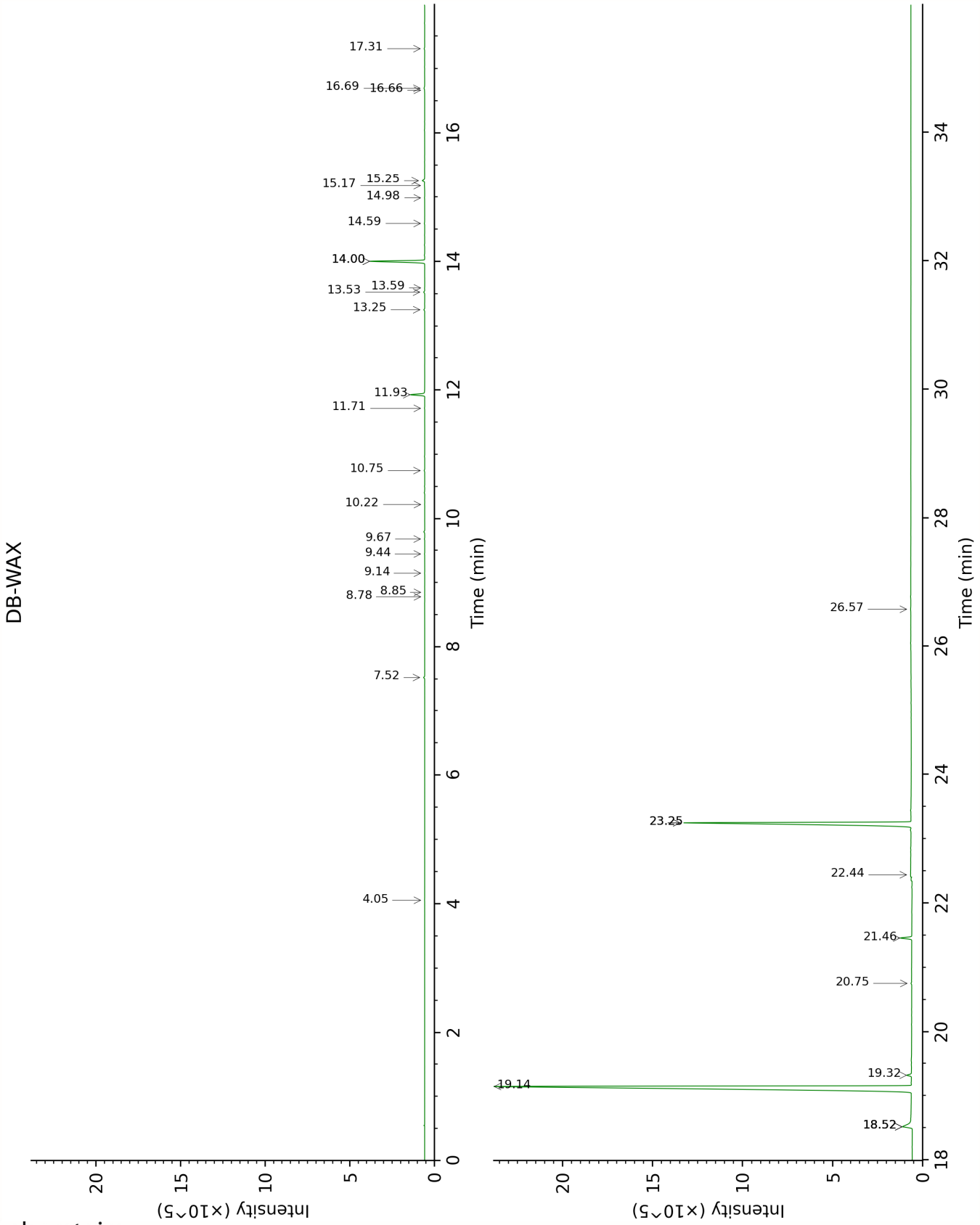
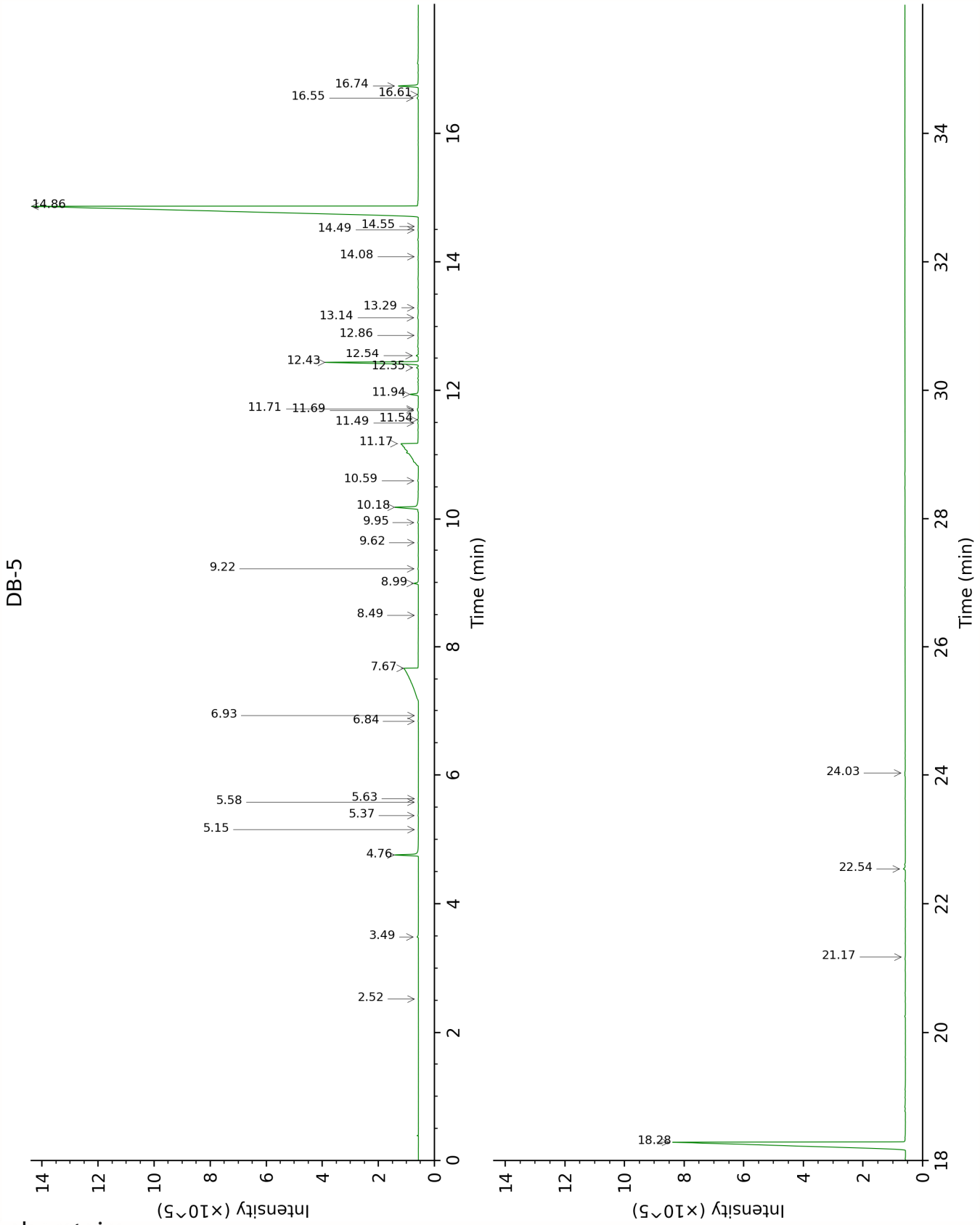

DB-WAX
17.31
16.69
16.66
15.17
15.25
14.98
14.59
14.00
13.53
13.59
13.25
11.93
11.71
10.75
10.22
9.67
9.44
9.14
8.78
8.85
7.52
4.05
Time (min)
Intensity (×10^5)
26.57
23.25
22.44
21.46
20.75
19.32
19.14
18.52
Time (min)
Intensity (×10^5)


DB-5
16.74
16.61
16.55
14.86
14.55
14.49
14.08
13.29
13.14
12.86
12.54
12.43
12.35
11.94
11.71
11.69
11.54
11.49
11.17
10.59
10.18
9.95
9.62
9.22
8.99
8.49
7.67
6.93
6.84
5.63
5.58
5.37
5.15
4.76
3.49
2.52
Time (min)
Intensity (×10^5)
24.03
22.54
21.17
18.28
Time (min)
Intensity (×10^5)

FULL ANALYSIS DATA

	Column DB-WAX			Column DB-5		
Styrene	4.06	1207.9	tr	2.52	886.5	0.01
Benzaldehyde	7.52	1458.7	0.08	3.49	953.7	0.07
Benzyl alcohol	11.92	1812.4	1.12	4.76	1036.2	0.95
Acetophenone	9.14	1582.2	0.01	5.15	1060.8	0.01
Benzyl formate	9.67	1624.5	0.02	5.37	1074.5	0.02
ortho-Guaiacol	11.71	1793.7	0.02	5.58	1087.6	0.01
Methyl benzoate	8.85	1559.2	tr	5.64	1091.0	tr
Ethyl benzoate	9.44	1605.7	0.02	6.84	1167.5	0.02
Terpinen-4-ol	8.78	1553.8	tr	6.93	1173.2	0.01
Benzoic acid	18.52*†	2466.5	[3.19]	7.67	1221.7	6.04
4-Ethylguaiacol	13.59	1962.3	0.02	8.49	1276.7	tr
4-Vinylguaiacol	15.25	2121.5	0.20	8.99	1310.3	0.17
Unknown MYBA I [m/z 105, 77 (59), 122 (29), 51 (18), 106 (8), 50 (8)...]				9.22	1326.3	0.03
Eugenol	14.98	2094.9	0.02	9.62	1354.9	0.01
Methyl (*E*)-cinnamate	14.00*	2000.6	[4.34]	9.95	1377.7	0.03
Vanillin	18.52*†	2466.5	[3.19]	10.18	1394.5	1.25
Coumarin	17.31	2333.9	0.05	10.59	1424.6	0.03
(*E*)-Cinnamic acid	22.44*†	2944.8	[2.54]	11.17†	1467.6	3.10
α-Selinene	10.22	1668.7	0.01	11.49	1491.4	0.02
Unknown MYBA II [m/z 151, 166 (47), 77 (35), 147 (35), 105 (25), 148 (24)...]				11.54	1495.2	0.02
Unknown MYBA III [m/z 93, 105 (98), 147 (85), 77 (75), 148 (58), 122 (55)...]				11.69	1506.1	0.02
(3*E*,6*E*)-α-Farnesene	10.75	1712.1	0.04	11.71	1507.8	0.04
Guaiacylacetone	19.32	2558.3	0.36	11.94	1525.8	0.34
Unknown MYBA IV [m/z 109, 69 (74), 43 (55), 41 (30), 93 (28), 55 (23)...]	13.25	1931.2	0.07	12.35	1558.2	0.07

(*E*)-Nerolidol	14.00*	2000.6	[4.34]	12.43	1564.8	3.97
Unknown MYBA V [m/z 109, 69 (75), 43 (55), 41 (29), 93 (28), 55 (26), 71 (22)...]	13.52	1956.3	0.08	12.54	1572.9	0.07
Methoxyeugenol	18.52*†	2466.5	[3.19]	12.86	1598.4	0.01
Unknown MISC CXXXVI [m/z 131, 103 (51), 77 (32), 148 (23), 51 (12)...]				13.14	1620.8	0.04
τ-Cadinol	15.17	2113.9	0.06	13.29	1633.5	0.03
(2*E*,6*Z*)-Farnesol	16.66	2265.4	0.02	14.08	1698.8	0.02
(*E*)-Coniferyl alcohol	23.25*†	3052.6	[24.96]	14.49	1734.4	0.02
(*E*)-Coniferaldehyde				14.55	1739.1	0.01
Benzyl benzoate	19.14*†	2538.1	[60.35]	14.86	1766.2	55.70
Benzyl hydrocinnamate	20.75	2730.4	0.05	16.55	1918.6	0.06
Unknown MYBA VII [m/z 91, 107 (51), 180 (40), 105 (32), 77 (29), 57 (26)...]				16.60	1923.9	0.02
Benzyl (*Z*)-cinnamate	21.46	2818.3	0.89	16.74	1936.5	0.81
Ethyl (*E*)-cinnamate	14.59	2056.8	0.04			
Benzyl (*E*)-cinnamate	23.25*†	3052.6	[24.96]	18.28	2087.2	23.19
(*E*)-Isoeugenol	16.69	2268.6	0.08			
(*E*)-Cinnamyl (*E*)-cinnamate	26.57	3526.4	0.04	21.17	2397.1	0.01
Benzyl (*E*)-ferulate				22.54	2558.3	0.10
Benzyl α-linolenate				24.03	2744.7	0.03
Total reported		98.90%			98.84%	

*: Two or more compounds are coeluting on this column

[xx]: Duplicate percentage due to coelutions, only the first one is taken into account in the consolidated total

†: Peaks apexes were resolved, but peaks overlapped and were summed for analysis

tr: The compound has been detected below 0.005% of total signal.

Note: no correction factor was applied
R.T.: Retention time (minutes)
R.I.: Retention index

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