

Date : 2025-01-08

CERTIFICATE OF ANALYSIS - GC PROFILING

SAMPLE IDENTIFICATION

Internal code : 24L13-PTH03

Customer Identification : Peru Balsam - Central America - PN0111R

Type : Resin

Source : *Myroxylon balsamum*

Customer : Plant Therapy

Checked and approved by:

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

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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 : Sylvain Mercier, M. Sc., Chimiste 2014-005

Date : 2024-12-20

PHYSICOCHEMICAL DATA

Refractive index : 1.5734 ± 0.0003 (20 °C)

Method : PC-MAT-016 - Measure of the refractive index of a liquid.

Analyst : Cindy Caron B. Sc.

Date : 2024-12-16

CONCLUSION

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

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	0.98	Simple phenolic
Acetophenone	0.01	Simple phenolic
Benzyl formate	0.03	Phenolic ester
<i>ortho</i> -Guaiacol	0.02	Simple phenolic
Benzyl acetate	0.01	Phenolic ester
Ethyl benzoate	0.02	Phenolic ester
Terpinen-4-ol	tr	Monoterpenic alcohol
Benzoic acid	5.99	Simple phenolic
4-Vinyguaiacol	0.17	Simple phenolic
Unknown	0.02	Unknown
Eugenol	0.01	Phenylpropanoid
Methyl (<i>E</i>)-cinnamate	0.04	Phenylpropanoid ester
Vanillin	1.23	Simple phenolic
Coumarin	0.03	Coumarin
(<i>E</i>)- β -Farnesene	0.06	Sesquiterpene
Ethyl (<i>E</i>)-cinnamate	0.03	Phenylpropanoid ester
(<i>E</i>)-Cinnamic acid	4.87	Phenylpropanoid
(<i>E</i>)-Isoeugenol	0.01	Phenylpropanoid
Geranylacetone	0.01	Monoterpenic ketone
α -Muurolene	0.01	Sesquiterpene
Unknown	0.01	Unknown
Unknown	0.01	Unknown
β -Bisabolene	0.03	Sesquiterpene
(3 <i>E</i> ,6 <i>E</i>)- α -Farnesene	0.04	Sesquiterpene
Guaiacylacetone	0.31	Phenylpropanoid
(<i>E</i>)- α -Bisabolene	0.02	Sesquiterpene
Unknown	0.07	Unknown
(<i>E</i>)-Nerolidol	3.99	Sesquiterpenic alcohol
Unknown	0.08	Unknown
Butyrovaniellone?	0.01	Phenylbutanoid
Methoxyeugenol	0.01	Phenylpropanoid
Unknown	0.05	Unknown
(<i>E</i>)-Stilbene?	0.02	Stilbene
(2 <i>E</i> ,6 <i>Z</i>)-Farnesol	0.01	Sesquiterpenic alcohol
Unknown	0.04	Unknown
(<i>E</i>)-Coniferaldehyde	0.03	Phenylpropanoid
Benzyl benzoate	56.14	Phenolic ester
Benzyl hydrocinnamate	0.07	Phenylpropanoid ester

Unknown	0.02	Unknown
Benzyl (Z)-cinnamate	0.81	Phenylpropanoid ester
Geranyl benzoate	0.02	Phenolic ester
Benzyl (E)-cinnamate	23.28	Phenylpropanoid ester
(E)-Cinnamyl (E)-cinnamate	0.03	Phenylpropanoid ester
Benzyl (E)-ferulate	0.10	Phenylpropanoid ester
Benzyl α -linolenate	0.03	Phenolic ester
Consolidated total	98.86	

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

Note: no correction factor was applied

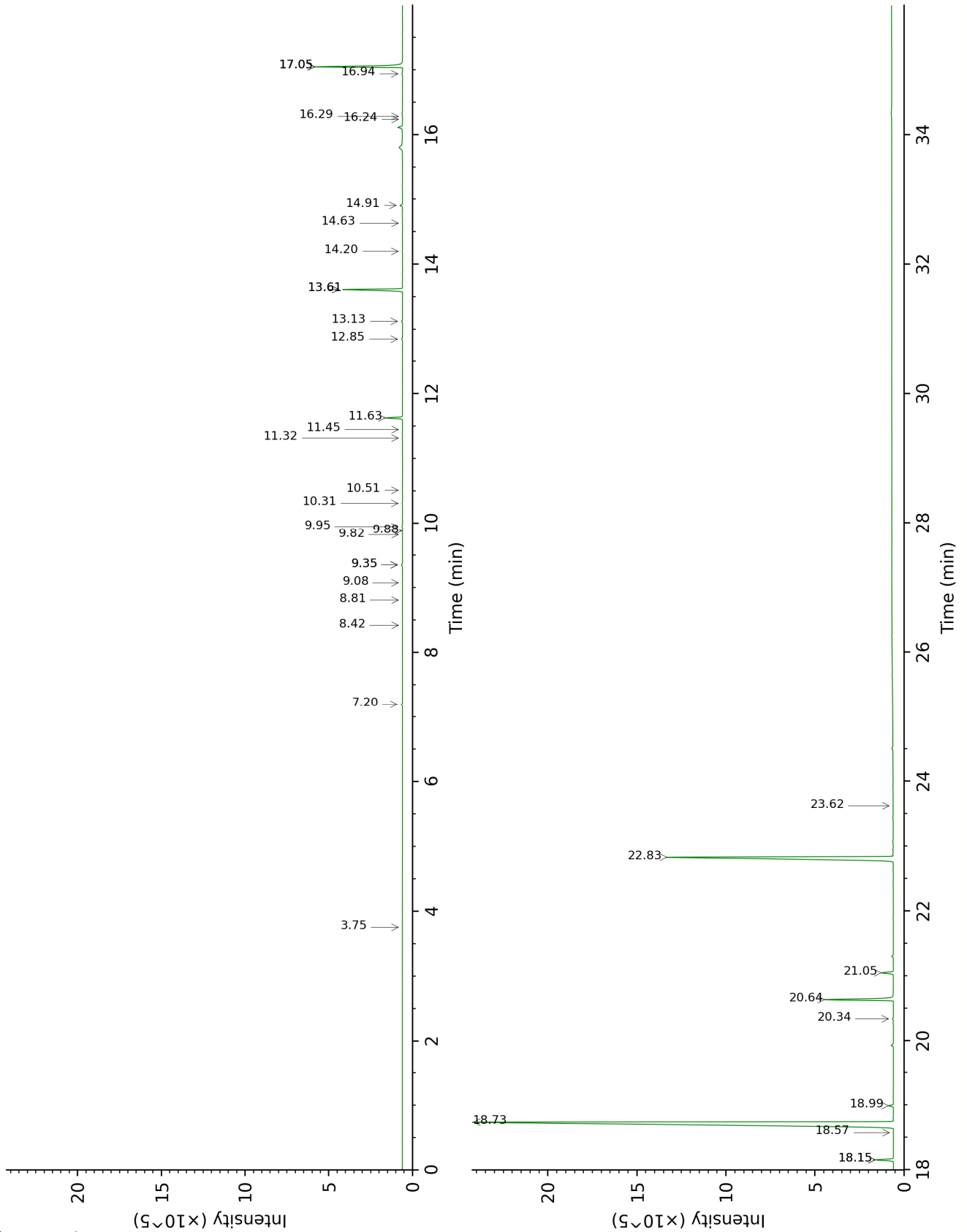
About "consolidated" data: The table above presents the breakdown of the sample volatile constituents after applying an algorithm to collapse data acquired from the multi-columns system of PhytoChemia into a single set of consolidated contents. In case of discrepancies between columns, the algorithm 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.

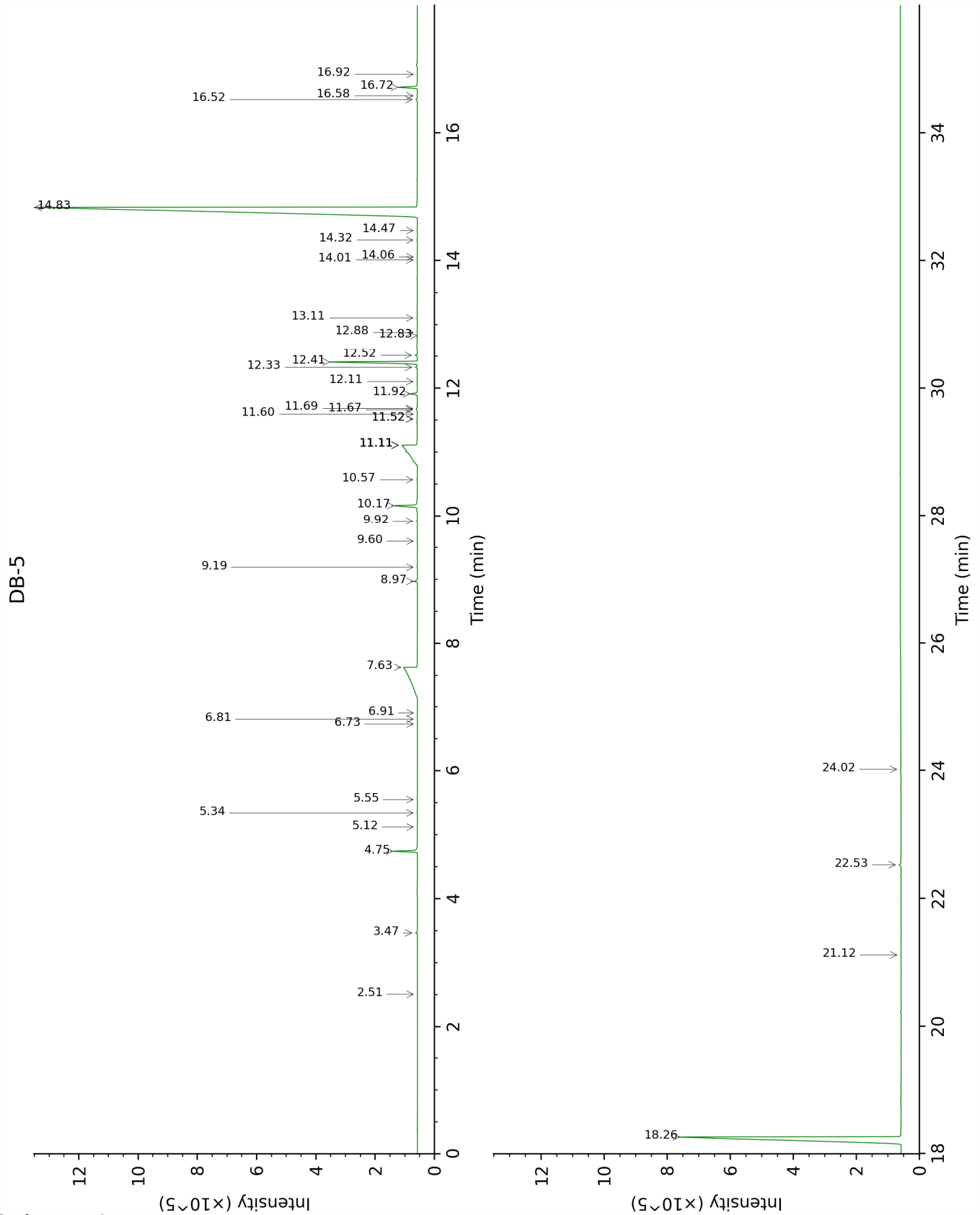
Unknowns: Unknown compounds' mass spectral data is presented in the "Full analysis data" table. The occurrence of unknown compounds is to be expected in many samples, and does not denote particular problems unless noted otherwise in the conclusion.

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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DB-WAX





FULL ANALYSIS DATA

Styrene	Column DB-WAX			Column DB-5		
	3.76	1211.2	0.01	2.51	887.2	0.01
Benzaldehyde	7.20	1463.1	0.08	3.47	954.2	0.07
Benzyl alcohol	11.63	1822.1	1.04	4.74	1037.2	0.98
Acetophenone	8.81	1586.9	0.01	5.12	1060.9	0.01
Benzyl formate	9.35*	1630.6	[0.09]	5.34	1074.7	0.03
<i>ortho</i> -Guaiacol	11.32	1794.4	0.02	5.55	1087.8	0.02
Benzyl acetate	9.82	1668.7	0.01	6.73	1163.1	0.01
Ethyl benzoate	9.08	1608.1	0.02	6.81	1168.0	0.02
Terpinen-4-ol	8.42	1556.8	tr	6.90	1174.1	tr
Benzoic acid	17.05*	2350.5	[6.08]	7.63	1221.3	5.99
4-Vinylguaiacol	14.91	2128.2	0.17	8.97	1311.7	0.17
Unknown MYBA I [m/z 105, 77 (59), 122 (29), 51 (18), 106 (8), 50 (8)...]				9.19	1327.3	0.02
Eugenol	14.63	2101.0	0.02	9.60	1356.1	0.01
Methyl (<i>E</i> - cinnamate	13.61*	2002.8	[3.95]	9.92	1378.7	0.04
Vanillin	18.15*	2472.0	[1.17]	10.17	1396.0	1.23
Coumarin	16.94	2338.8	0.05	10.57	1425.8	0.03
(<i>E</i>)- β -Farnesene	9.35*	1630.6	[0.09]	11.11*	1466.1	[4.85]
Ethyl (<i>E</i> - cinnamate	14.20	2059.1	0.03	11.11*	1466.1	[4.85]
(<i>E</i>)-Cinnamic acid	20.64	2765.5	4.87	11.11*	1466.1	[4.85]
(<i>E</i>)-Isoeugenol	16.29	2269.0	0.01	11.11*	1466.1	[4.85]
Geranylacetone	11.45	1806.0	0.01	11.11*	1466.1	[4.85]
α -Muurolene	9.88	1673.5	0.01	11.52*	1496.6	[0.02]
Unknown MYBA II [m/z 151, 166 (47), 77 (35), 147 (35), 105 (25), 148 (24)...]				11.52*	1496.6	[0.02]
Unknown MYBA III [m/z 93, 105 (98), 147 (85), 77 (75), 148 (58), 122 (55)...]				11.60	1502.3	0.01
β -Bisabolene	9.95	1679.0	0.03	11.67	1507.6	0.03
(3 <i>E</i> ,6 <i>E</i>)- α - Farnesene	10.31	1709.0	0.03	11.69	1509.3	0.04
Guaiacylacetone	18.99	2567.5	0.30	11.92	1527.2	0.31

(E)- α -Bisabolene	10.51	1726.2	0.02	12.11	1542.3	0.02
Unknown MYBA IV [m/z 109, 69 (74), 43 (55), 41 (30), 93 (28), 55 (23)...]	12.85	1932.0	0.06	12.33	1559.7	0.07
(E)-Nerolidol	13.61*	2002.8	[3.95]	12.41	1566.3	3.99
Unknown MYBA V [m/z 109, 69 (75), 43 (55), 41 (29), 93 (28), 55 (26), 71 (22)...]	13.13	1957.3	0.07	12.52	1574.5	0.08
Butyrovanihone?				12.83	1599.1	0.01
Methoxyeugenol	18.15*	2472.0	[1.17]	12.88	1603.1	0.01
Unknown MISC CXXXVI [m/z 131, 103 (51), 77 (32), 148 (23), 51 (12)...]				13.11	1621.9	0.05
(E)-Stilbene?	17.05*	2350.5	[6.08]	14.01	1696.5	0.02
(2E,6Z)-Farnesol	16.24	2264.2	0.01	14.06	1700.3	0.01
Unknown MYBA VI [m/z 194, 115 (73), 193 (59), 179 (42), 116 (41), 91 (38)...]	17.05*	2350.5	[6.08]	14.32	1723.0	0.04
(E)- Coniferaldehyde	23.62	3157.9	tr	14.47	1735.8	0.03
Benzyl benzoate	18.73	2538.3	55.10	14.83	1767.2	56.14
Benzyl hydrocinnamate	20.34	2729.1	0.07	16.52	1920.4	0.07
Unknown MYBA VII [m/z 91, 107 (51), 180 (40), 105 (32), 77 (29), 57 (26)...]				16.58	1926.0	0.02
Benzyl (Z)- cinnamate	21.05	2817.3	0.81	16.72	1938.6	0.81
Geranyl benzoate	18.57	2519.8	0.01	16.92	1957.9	0.02
Benzyl (E)- cinnamate	22.83	3049.5	22.92	18.26	2089.1	23.28
(E)-Cinnamyl (E)- cinnamate				21.12	2396.1	0.03
Benzyl (E)-				22.53	2562.2	0.10

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Benzyl α -linolenate			24.02	2749.2	0.03
Total reported		97.10%		98.73%	

*: 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