

Date : 2025-10-03

CERTIFICATE OF ANALYSIS - GC PROFILING

SAMPLE IDENTIFICATION

Internal code : 25H29-PTH05

Customer Identification : Peru Balsam - Central America - PN0112R

Type : Resin

Source : *Myroxylon balsamum*

Customer : Plant Therapy

Checked and 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Notes: This report may not be published, including online, without the written consent from Laboratoire PhytoChemia.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.

This report is an update from the first version issued on 2025-09-05 to correct the customer identification.

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 : 2025-09-03

PHYSICOCHEMICAL DATA

Refractive index : 1.5731 ± 0.0003 (20 °C)

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

Analyst : Cindy Caron B. Sc.

Date : 2025-08-29

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	tr	Simple phenolic
Benzaldehyde	0.08	Simple phenolic
Limonene	0.01	Monoterpene
Benzyl alcohol	1.12	Simple phenolic
Acetophenone	0.03	Simple phenolic
Benzyl formate	0.02	Phenolic ester
<i>ortho</i> -Guaiacol	0.03	Simple phenolic
Methyl benzoate	0.01	Phenolic ester
Ethyl benzoate	0.04	Phenolic ester
Benzoic acid	6.81	Simple phenolic
4-Ethylguaiacol	0.01	Norphenylpropanoid
4-Vinylguaiacol	0.21	Simple phenolic
Unknown	0.03	Unknown
Eugenol	0.02	Phenylpropanoid
Methyl (<i>E</i>)-cinnamate	0.05	Phenylpropanoid ester
Coumarin	0.04	Coumarin
Geranylacetone	0.01	Monoterpenic ketone
(<i>E</i>)-Isoeugenol	0.07	Phenylpropanoid
(<i>E</i>)- β -Farnesene	0.07	Sesquiterpene
(<i>E</i>)-Cinnamic acid	6.87	Phenylpropanoid
Ethyl (<i>E</i>)-cinnamate	0.01	Phenylpropanoid ester
α -Curcumene	0.02	Sesquiterpene
Unknown	0.01	Unknown
α -Muurolene	0.01	Sesquiterpene
Unknown	0.01	Unknown
β -Bisabolene	0.03	Sesquiterpene
(3 <i>E</i> ,6 <i>E</i>)- α -Farnesene	0.04	Sesquiterpene
Guaiacylacetone	0.35	Phenylpropanoid
(<i>E</i>)- γ -Bisabolene	0.01	Sesquiterpene
(<i>E</i>)- α -Bisabolene	0.02	Sesquiterpene
Unknown	0.07	Unknown
(<i>E</i>)-Nerolidol	4.04	Sesquiterpenic alcohol
Unknown	0.08	Unknown
Methoxyeugenol	0.03	Phenylpropanoid
Unknown	0.06	Unknown
α -Cadinol	0.01	Sesquiterpenic alcohol
(<i>E</i>)-Stilbene?	0.01	Stilbene
(2 <i>E</i> ,6 <i>Z</i>)-Farnesol	0.02	Sesquiterpenic alcohol
Unknown	0.03	Unknown
(<i>E</i>)-Coniferyl alcohol	0.03	Phenylpropanoid

Benzyl benzoate	52.81	Phenolic ester
Benzyl hydrocinnamate	0.06	Phenylpropanoid ester
Unknown	0.02	Unknown
Benzyl (Z)-cinnamate	0.67	Phenylpropanoid ester
Geranyl benzoate	0.02	Phenolic ester
Benzyl (E)-cinnamate	23.69	Phenylpropanoid ester
(E)-Cinnamyl (E)-cinnamate	0.04	Phenylpropanoid ester
Benzyl (E)-ferulate	0.18	Phenylpropanoid ester
Benzyl α-linolenate	0.03	Phenolic ester
Consolidated total	97.95	

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

Note: no correction factor was applied

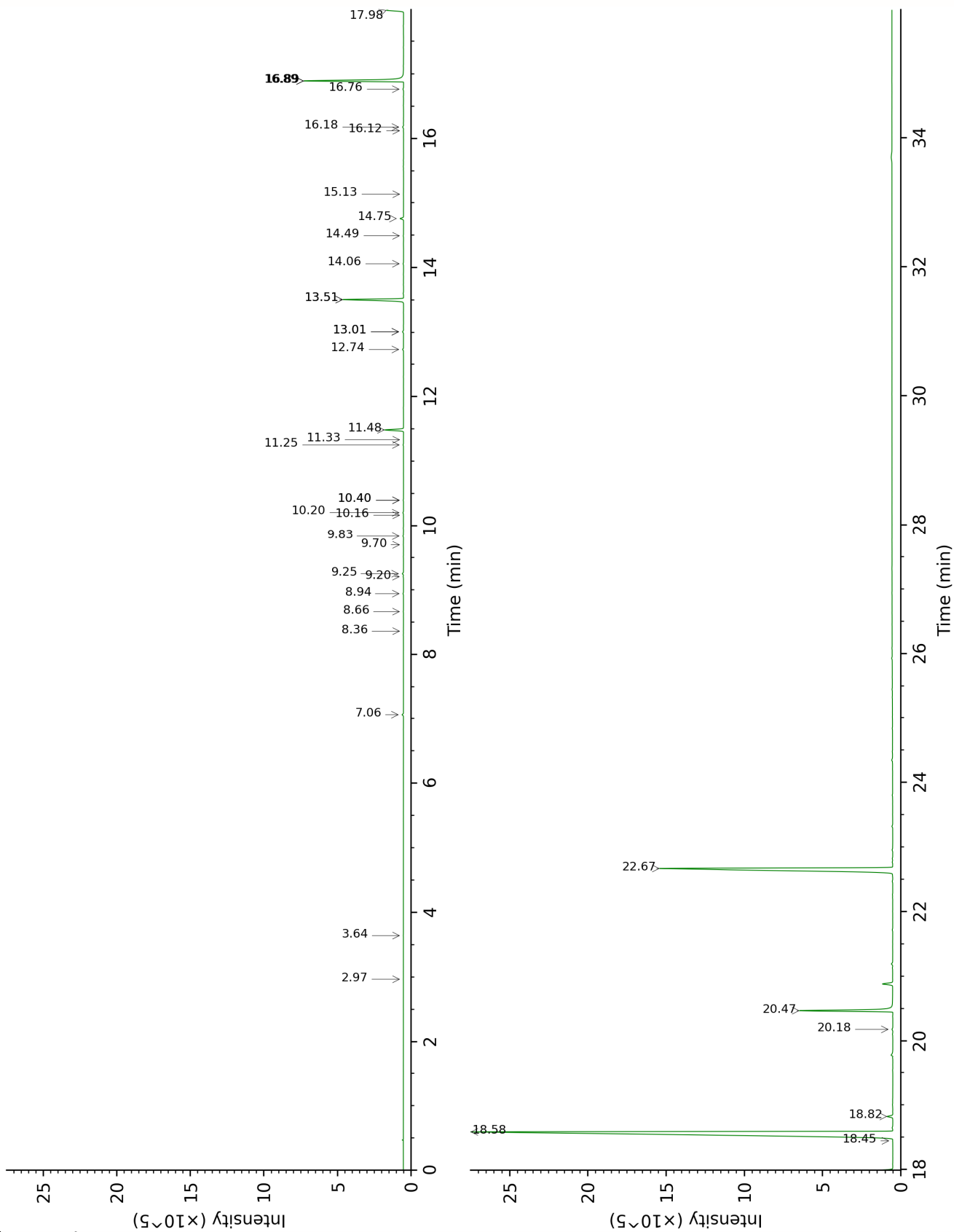
About "consolidated" data: The table above presents the breakdown of the sample volatile constituents after applying an algorithm to collapse data acquired from the multi-columns system of PhytoChemia into a single set of consolidated contents. In case of discrepancies between columns, the algorithm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

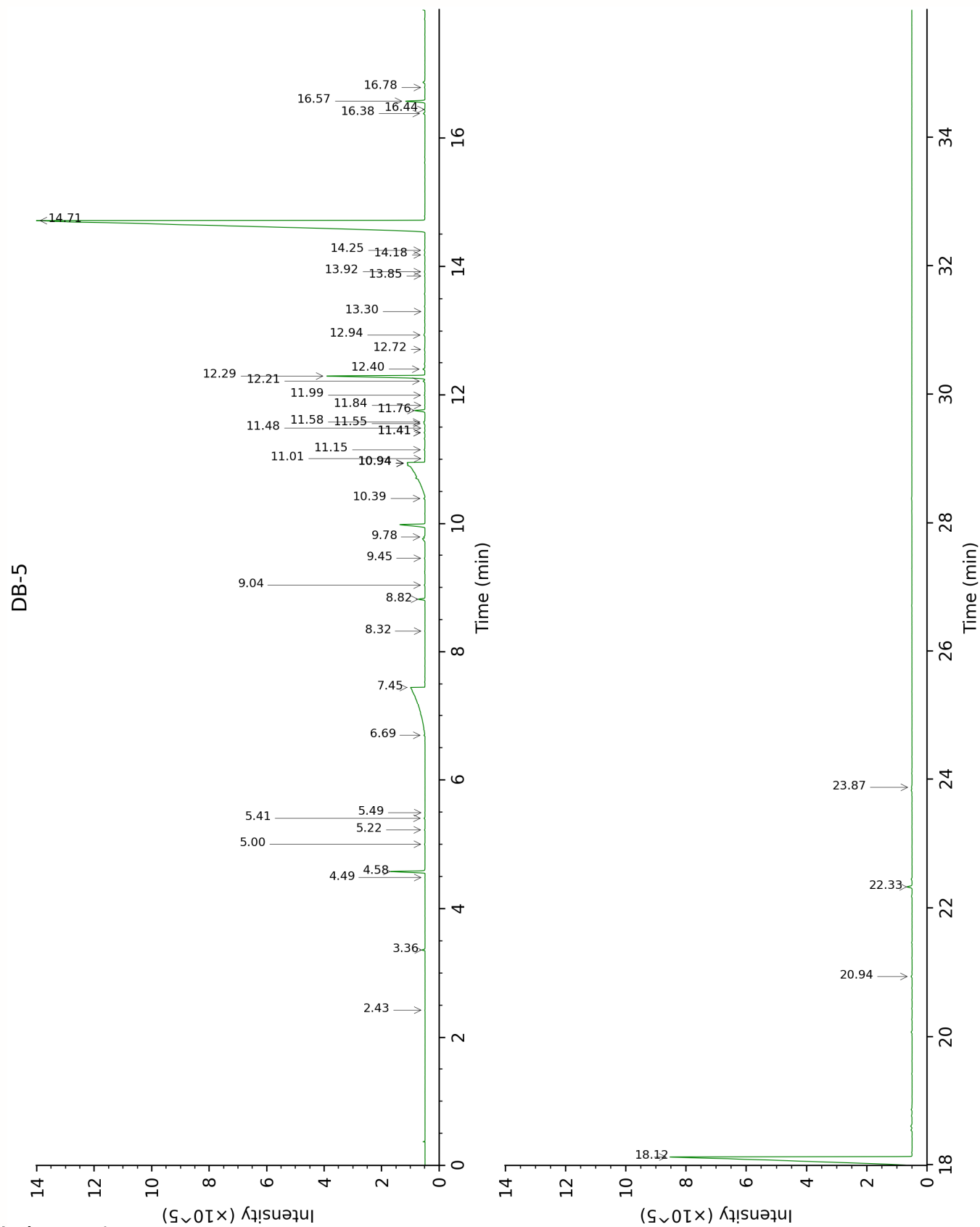
This page was intentionally left blank. The following pages present the complete data of the analysis.

DB-WAX



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FULL ANALYSIS DATA

Styrene	Column DB-WAX			Column DB-5		
	3.64	1210.5	0.01	2.43	885.7	tr
Benzaldehyde	7.06	1460.9	0.08	3.36	952.0	0.08
Limonene	2.97	1156.7	0.01	4.48	1026.2	0.01
Benzyl alcohol	11.48	1820.1	1.13	4.58	1032.2	1.12
Acetophenone	8.66	1584.5	0.02	5.00	1059.1	0.03
Benzyl formate	9.20	1627.8	0.02	5.22	1073.2	0.02
<i>ortho</i> -Guaiaicol	11.25	1799.3	0.03	5.40	1084.7	0.03
Methyl benzoate	8.36	1560.9	0.01	5.49	1090.2	0.01
Ethyl benzoate	8.94	1606.4	0.03	6.69	1168.1	0.04
Benzoic acid	16.89*	2349.8	[6.83]	7.45	1217.7	6.81
4-Ethylguaiaicol	13.01*	1958.8	[0.07]	8.32	1277.6	0.01
4-Vinylguaiaicol	14.75	2127.2	0.22	8.82	1307.8	0.21
Unknown MYBA I [m/z 105, 77 (59), 122 (29), 51 (18), 106 (8), 50 (8)...]				9.04	1323.3	0.03
Eugenol	14.49	2100.4	0.02	9.45	1353.1	0.02
Methyl (<i>E</i>)- cinnamate	13.51*	2005.1	[3.99]	9.78	1376.7	0.05
Coumarin	16.76	2335.9	0.05	10.39	1420.8	0.04
Geranylacetone	11.33	1806.5	0.01	10.94*	1461.9	[6.44]
(<i>E</i>)-Isoeugenol	16.18	2273.4	0.07	10.94*	1461.9	[6.44]
(<i>E</i>)- β -Farnesene	9.25	1631.6	0.07	10.94*	1461.9	[6.44]
(<i>E</i>)-Cinnamic acid	20.47	2768.2	6.87	10.94*	1461.9	[6.44]
Ethyl (<i>E</i>)- cinnamate	14.06	2058.7	0.04	11.01	1467.2	0.01
α -Curcumene	10.40*	1726.3	[0.02]	11.15	1477.6	0.02
Unknown MYBA II [m/z 151, 166 (47), 77 (35), 147 (35), 105 (25), 148 (24)...]				11.41*	1497.4	[0.02]
α -Muurolene	9.70	1668.1	0.01	11.41*	1497.4	[0.02]
Unknown MYBA III [m/z 93, 105 (98), 147 (85), 77 (75), 148 (58), 122 (55)...]				11.48	1502.7	0.01
β -Bisabolene	9.83	1679.2	0.04	11.56	1508.2	0.03
(3 <i>E</i> ,6 <i>E</i>)- α - Farnesene	10.20	1709.9	0.04	11.58	1510.1	0.04

Guaiacylacetone	18.82	2568.0	0.35	11.76	1524.2	0.35
(E)- γ -Bisabolene	10.16	1706.5	0.01	11.84	1530.5	0.01
(E)- α -Bisabolene	10.40*	1726.3	[0.02]	12.00	1543.0	0.02
Unknown MYBA IV [m/z 109, 69 (74), 43 (55), 41 (30), 93 (28), 55 (23)...]	12.74	1933.4	0.06	12.21	1560.2	0.07
(E)-Nerolidol	13.51*	2005.1	[3.99]	12.29	1566.5	4.04
Unknown MYBA V [m/z 109, 69 (75), 43 (55), 41 (29), 93 (28), 55 (26), 71 (22)...]	13.01*	1958.8	[0.07]	12.40	1575.0	0.08
Methoxyeugenol	17.98	2471.1	1.15	12.72	1600.0	0.03
Unknown MISC CXXXVI [m/z 131, 103 (51), 77 (32), 148 (23), 51 (12)...]				12.94	1618.2	0.06
α -Cadinol	15.13	2165.1	0.01	13.30	1648.4	0.01
(E)-Stilbene?	16.89*	2349.8	[6.83]	13.85	1694.2	0.01
(2E,6Z)-Farnesol	16.12	2267.5	0.01	13.92	1699.6	0.02
Unknown MYBA VI [m/z 194, 115 (73), 193 (59), 179 (42), 116 (41), 91 (38)...]	16.89*	2349.8	[6.83]	14.18	1722.0	0.03
(E)-Coniferyl alcohol				14.25	1728.1	0.03
Benzyl benzoate	18.58	2540.1	52.95	14.71	1768.1	52.81
Benzyl hydrocinnamate	20.18	2732.2	0.06	16.38	1919.4	0.06
Unknown MYBA VII [m/z 91, 107 (51), 180 (40), 105 (32), 77 (29), 57 (26)...]				16.44	1925.4	0.02
Benzyl (Z)- cinnamate				16.57	1937.7	0.67
Geranyl benzoate	18.44	2524.0	0.01	16.78	1958.0	0.02
Benzyl (E)- cinnamate	22.67	3057.5	23.79	18.12	2089.0	23.69
(E)-Cinnamyl (E)-				20.94	2389.9	0.04

cinnamate						
Benzyl (E)-ferulate			22.33	2552.5	0.18	
Benzyl α -linolenate			23.87	2744.5	0.03	
Total reported		98.07%		97.37%		

*: 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