



Gas Chromatography Analysis

Dear Customer,

Attached you will find the results of gas chromatography analysis based on the information provided by our Producer/Laboratory for:

Sample Reference: 2770

We testify that the Chromatographic Analysis (GC) for the mentioned sample is identical with:

Product No.: 2770
Product Name: Fir (Hemlock Fir) organic
Botanical Name: Tsuga canadensis
Batch No : 1015043

Bühl, 2019-04-11

Ayus GmbH
Am Dreschschoopf 1 D-77815 Bühl/Moos
Tel.: +49-(0)7227-60099-0 Fax: +49-(0)7227-60099-99
E-Mail: info@oshadhi.eu Web: www.oshadhi.eu

Dr. David Nayan

Identification	Column: BPS		
	R.T.	R.I.	%
Toluene	1.30	757	0.01
<i>cis</i> -Hex-3-en-1-ol	2.47	864	0.02
Santene	2.61	875	0.26
Tricyclene	3.23	917	6.33
α -Thujene	3.31	922	0.16
α -Pinene	3.45	930	20.21
Camphene	3.72*	947	15.95
α -Fenchene	3.72*	947	[15.95]
Thuja-2,4(10)-diene	3.78	951	0.05
Sabinene	4.12	970	0.03
β -Pinene	4.18	974	2.02
Myrcene	4.46	991	2.61
α -Phellandrene	4.73*	1006	1.23
Δ^3 -Carene	4.73*	1006	[1.23]
α -Terpinene	4.91	1016	0.35
<i>para</i> -Cymene	5.09	1026	0.48
Limonene	5.15	1029	3.81
β -Phellandrene	5.18	1031	1.56
1,8-Cineole	5.21	1033	0.27
<i>trans</i> - β -Ocimene	5.50	1048	tr
γ -Terpinene	5.68	1058	0.42
<i>P. mariana</i> biomarker†	5.98	1075	0.04
Terpinolene	6.16	1084	0.72
<i>para</i> -Cymenene	6.34	1094	0.09
γ -Campholenal	6.41	1098	0.10
Linalool	6.58	1105	0.07
endo-Fenchol	6.99	1120	0.05
α -Campholenal	7.18	1127	0.04
<i>trans</i> -Pinocarveol	7.47	1138	0.06
Camphor	7.68	1145	0.21
Camphene hydrate	7.88	1152	0.10
Borneol	8.43	1173	0.53
Terpinen-4-ol	8.64	1180	0.52
Cryptone	9.10	1197	0.06
α -Terpineol	9.25	1202	0.78
Verbenone	9.72	1212	0.06
Piperitone	11.61	1254	1.95
Isobornyl acetate	13.04	1286	33.85
<i>P. mariana</i> biomarker†	13.41	1294	0.28
<i>trans</i> -Pinocarvyl acetate	13.47	1295	0.07
Myrtenyl acetate	15.03	1320	0.14

para-Mentha-1(7),8(10)-dien-7-yl acetate	15.32	1325	1.23
β -Elemene	18.93	1380	0.04
Geranyl acetate	19.14	1383	0.05
β -Caryophyllene	20.36	1401	0.78
α -Humulene	23.11	1434	1.04
Germacrene D	25.13	1458	0.10
α -Selinene	26.51	1475	0.05
α -Muurolene	27.27	1484	0.03
γ -Cadinene	28.28	1496	0.11
δ -Cadinene	28.96	1505	0.23
(E)-Nerolidol	33.47	1568	0.06
Manool	49.09	2036	0.06
Total Identified			98.95%

*: Two or more compounds are coeluting on this column

[xx]: Duplicate percentage due to coelutions, not taken account in the identified total