Gas Chromatography Analysis

Dear Customer,

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

Sample Reference	1465

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

Product Name:	Spruce (Black Spruce) organic
Botanical Name:	Picea mariana
Batch No.:	1050593

The data is based on our current knowledge.
The results of analysis do not release the customer from its own controls.
This document was created electronically and is valid without signature.

Identification	%
Isovaleral	0.01
2-Methylbutyral	tr
2-Ethylfuran	tr
Toluene	0.01
Hexanal	0.01
(2*E*)-Hexenal	0.01
(3*Z*)-Hexenol	0.06
Hexanol	0.02
Santene	3.23
Unknown	0.03
Unknown	0.01
Tricyclene	1.94
α-Thujene	0.18
α-Pinene	18.02
α-Fenchene	0.08
Camphene	17.33
Thuja-2,4(10)-diene	0.02
3,7,7-Trimethylcyclohepta-1,3,5-triene	0.03
β-Pinene	4.72
Sabinene	0.20
6-Methyl-5-hepten-2-one	0.01
Dehydro-1,8-cineole	tr
Octan-3-one	0.01
2-Pentylfuran	0.01
Myrcene	3.26
2-Carene	0.02
Pseudolimonene	0.01
α-Phellandrene	0.32
Unknown	0.03
Δ3-Carene	7.70
(3*Z*)-Hexenyl acetate	0.01
α-Terpinene	0.24
meta-Cymene	0.01
para-Cymene	0.19
Limonene	3.29
β-Phellandrene	1.13
1,8-Cineole	0.34
(*Z*)-β-Ocimene	0.02
(*E*)-β-Ocimene	0.02
γ-Terpinene	0.26

Unknown	0.08
Unknown	0.01
meta-Cymenene	0.03
Fenchone	0.01
Isoterpinolene	0.04
γ-Campholenal	0.11
para-Cymenene	0.12
Terpinolene	1.07
2-Nonanone	0.02
Linalool	0.22
Unknown	0.04
Nonanal	0.01
endo-Fenchol	0.05
3-Methyl-3-butenyl isovalerate	0.01
cis-para-Menth-2-en-1-ol	0.02
α-Campholenal	0.15
trans-Pinocarveol	0.09
trans-para-Menth-2-en-1-ol	0.01
Camphor	0.08
Camphene hydrate	0.41
Isoborneol	0.12
Pinocamphone	0.01
Citronellal	0.05
Pinocarvone	0.01
Borneol	1.59
Unknown	0.04
Isopinocamphone	0.02
Terpinen-4-ol	0.29
Cryptone	0.02
para-Cymen-8-ol	0.02
α-Terpineol	0.60
Myrtenol	0.03
Verbenone	0.03
Unknown	0.10
trans-Carveol	0.03
endo-Fenchyl acetate	0.29
cis-Carveol	0.01
Citronellol	0.13
Thymol methyl ether	0.04
Carvone	0.03
Piperitone	0.04
Geraniol	0.06
Geranial	0.01
Unknown	0.04
Unknown	0.23

cis-Verbenyl acetate	0.14
Isobornyl acetate	0.49
Bornyl acetate	22.41
Unknown	0.14
trans-Pinocarvyl acetate	0.12
Myrtenyl acetate	0.02
Terpinyl acetate analog	0.08
trans-Carvyl acetate	0.04
exo-2-Hydroxycineole acetate	0.03
Unknown	0.03
α-Cubebene	0.01
α-Terpinyl acetate	0.09
Citronellyl acetate	0.09
Longicyclene	0.02
Unknown	0.04
α-Copaene	0.06
β-Bourbonene	0.02
Geranyl acetate	0.25
β-Elemene	0.16
Longifolene	0.14
β-Caryophyllene	0.27
β-Copaene	0.02
cis-Muurola-3,5-diene	0.04
trans-Muurola-3,5-diene	0.06
α-Humulene	0.08
cis-Muurola-4(15),5-diene	0.09
Unknown	0.05
trans-Cadina-1(6),4-diene	0.15
γ-Muurolene	0.21
Germacrene D	0.14
Dodecanol	0.04
β-Selinene	0.07
trans-Muurola-4(15),5-diene	0.02
γ-Amorphene	0.07
α-Selinene	0.07
(3*Z*,6*E*)-α-Farnesene	0.01
α-Muurolene	0.45
Cubebol	0.01
γ-Cadinene	0.66
trans-Calamenene	0.12
δ-Cadinene	1.93
trans-Cadina-1,4-diene	0.07
α-Cadinene	0.12
α-Calacorene	0.02
(*E*)-α-Bisabolene	0.23

Unknown	0.03
Unknown	0.03
(*E*)-Nerolidol	0.02
Spathulenol	0.01
Caryophyllene oxide	0.01
Globulol	0.01
Unknown	0.01
1,10-diepi-Cubenol	0.03
1-epi-Cubenol	0.04
τ-Cadinol	0.15
τ-Muurolol	0.15
Cubenol	0.03
α-Muurolol	0.05
α-Cadinol	0.26
trans-Calamenen-10-ol	0.03
Unknown	0.01
Unknown	0.01
(1,8*Z*,11*Z*,14*Z*)-Heptadecatetraene	0.01
Amorpha-4,9-dien-2-ol	0.02
(5*Z*)-Tetradecen-14-olide?	0.03
Unknown	0.02
Unknown	0.05
Unknown	0.01
Unknown	0.02
(*E*,*E*)-Geranyllinalool	0.01
Manool	0.02
7,13-Abietadiene	0.01
(*Z*)-Abienol	0.03
Palustral	0.02
Abietal	0.01
Consolidated total	**99.69**