PATHOGENIA
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Sample information

		Sample Receiving Date	**18-Jul-2023**
Sample ID	**LOT#004ACF**	Receiving Temperature	**21°C**
Laboratory ID	**PAT55910**	Analysis Date	**21-Jul-2023**
Method Ref.	**PAT-AM-019**		

Cannabinoids Profile

Compounds	Results (%w/w)	Results (mg/g)	LOQ(%)
CBC	<0.010	<0.100	0.010
CBD	<0.010	<0.100	0.010
CBDA	0.110	1.100	0.010
CBDV	<0.010	<0.100	0.010
CBG	0.092	0.920	0.010
CBGA	0.760	7.600	0.010
CBN	0.027	0.270	0.010
D8-THC	<0.010	<0.100	0.010
D9-THC	0.828	8.280	0.010
THCA-A	34.336	343.360	0.010
THCV	0.054	0.540	0.010
Total THC	**30.941**	**309.407**	
Total CBD	**0.096**	**0.965**	

30.941%
Total THC

0.096%
Total CBD

Total THC = THC + (THCA*0.877), Total CBD = CBD + (CBDA*0.877)
Total THC/CBD is calculated using the formulas to take into account the loss of carboxyl group during decarboxylation step.

Authorized by: Laboratory Manager

Signature:

Details of testing

1. *LOQ- Limit of quantification*
2. *% w/w: percent (weight of analyte/ weight of product)*
3. *Results only apply to the items tested and to the sample(s) as received.*
4. *This report may not be distributed or reproduced except in full*

This COA can be verified by scanning the QR code

********** This is end of the Certificate of Analysis **********

Physicochemical data

Method : PC-MAT-024 - Vegetal material moisture content determination
Moisture content : 15.76 % m/m
Analyst : Kassandra Baker
Date : 2023-07-21

Gas Chromatographic Analysis

Method : PC-MAT-004 - Terpenes and volatiles profiling by response factor
Results : See analysis summary (table)
Analyst : Amélie Simard, Analyste
Date : 2023-07-21

Reference

(1) Cachet, T.; Brevard, H.; Chaintreau, A.; Demyttenaere, J.; French, L.; Gassenmeier, K.; Joulain, D.; Koenig, T.; Leijs, H.; Liddle, P.; et al. IOFI Recommended Practice for the Use of Predicted Relative-Response Factors for the Rapid Quantification of Volatile Flavouring Compounds by GC-FID. Flavour Fragr. J. 2016, 31 (3), 191–194.

Analysis Summary - Consolidated Contents

Identification	Anhydrous (mg/g)	As is (mg/g)	Class
Hexanol	0.05	0.04	Aliphatic alcohol
Hashishene	0.01	0.01	Monoterpene
α-Thujene	0.02	0.01	Monoterpene
α-Pinene	0.88	0.74	Monoterpene
Camphene	0.26	0.22	Monoterpene
α-Fenchene	0.01	0.01	Monoterpene
Sabinene	0.01	0.01	Monoterpene
β-Pinene	1.69	1.42	Monoterpene
Myrcene	15.35	12.93	Monoterpene
α-Phellandrene	0.01	0.01	Monoterpene
Δ3-Carene	tr	tr	Monoterpene
α-Terpinene	0.01	0.01	Monoterpene
para-Cymene	0.01	0.01	Monoterpene
β-Phellandrene	0.08	0.07	Monoterpene
Limonene	12.24	10.31	Monoterpene
(*Z*)-β-Ocimene	0.05	0.05	Monoterpene
(*E*)-β-Ocimene	1.34	1.13	Monoterpene
γ-Terpinene	0.02	0.02	Monoterpene

cis-Sabinene hydrate	0.03	0.03	Monoterpenic alcohol
Octanol	0.02	0.02	Aliphatic alcohol
Fenchone	0.11	0.09	Monoterpenic ketone
Terpinolene	0.16	0.14	Monoterpene
trans-Sabinene hydrate	0.02	0.01	Monoterpenic alcohol
Linalool	2.74	2.31	Monoterpenic alcohol
endo-Fenchol	0.94	0.79	Monoterpenic alcohol
trans-Pinene hydrate	0.65	0.54	Monoterpenic alcohol
cis-Pinene hydrate	0.12	0.10	Monoterpenic alcohol
Camphene hydrate	0.04	0.04	Monoterpenic alcohol
Ipsdienol	0.10	0.09	Monoterpenic alcohol
Borneol	0.23	0.20	Monoterpenic alcohol
Terpinen-4-ol	0.03	0.02	Monoterpenic alcohol
α-Terpineol	0.89	0.75	Monoterpenic alcohol
Hexyl butyrate	0.10	0.08	Aliphatic ester
Citronellol	0.01	0.01	Monoterpenic alcohol
Geraniol	0.01	0.01	Monoterpenic alcohol
Decanol	0.01	0.01	Aliphatic alcohol
α-Cubebene	0.02	0.02	Sesquiterpene
α-Ylangene	0.03	0.02	Sesquiterpene
Unknown	0.11	0.10	Sesquiterpene
Hexyl hexanoate	0.70	0.59	Aliphatic ester
β-Caryophyllene	10.23	8.62	Sesquiterpene
α-Santalene	0.09	0.07	Sesquiterpene
γ-Elemene	1.00	0.84	Sesquiterpene
trans-α-Bergamotene	[0.92]	[0.77]	Sesquiterpene
α-Guaiene	[0.92]	[0.77]	Sesquiterpene
α-Humulene	2.69	2.27	Sesquiterpene
allo-Aromadendrene	0.13	0.11	Sesquiterpene
(*E*)-β-Farnesene	1.55	1.30	Sesquiterpene
Unknown	0.27	0.23	Sesquiterpene
β-Selinene	0.86	0.73	Sesquiterpene
Valencene	0.03	0.02	Sesquiterpene
α-Selinene	0.91	0.77	Sesquiterpene
δ-Guaiene	0.05	0.04	Sesquiterpene
β-Bisabolene	0.21	0.18	Sesquiterpene
(3*E*,6*E*)-α-Farnesene	0.09	0.07	Sesquiterpene
Spirovetiva-1(10),7(11)-diene	0.14	0.12	Sesquiterpene
Eremophila-1(10),7(11)-diene	0.38	0.32	Sesquiterpene
Selina-4(15),7(11)-diene	1.93	1.63	Sesquiterpene
Selina-4,7(11)-diene?	0.39	0.33	Sesquiterpene
Selina-3,7(11)-diene	2.76	2.32	Sesquiterpene
(*E*)-α-Bisabolene	0.52	0.44	Sesquiterpene
Germacrene B	2.97	2.50	Sesquiterpene
Eudesma-5,7(11)-diene	0.09	0.07	Sesquiterpene

(*E*)-Nerolidol	0.31	0.26	Sesquiterpenic alcohol
Caryophyllene oxide	0.11	0.09	Sesquiterpenic ether
Guaiol	0.01	0.01	Sesquiterpenic alcohol
Humulene epoxide II	0.03	0.03	Sesquiterpenic ether
10-epi-γ-Eudesmol	tr	tr	Sesquiterpenic alcohol
Selin-6-en-4α-ol isomer	0.04	0.03	Sesquiterpenic alcohol
Selin-6-en-4α-ol	0.04	0.03	Sesquiterpenic alcohol
γ-Eudesmol	0.03	0.03	Sesquiterpenic alcohol
β-Eudesmol	0.02	0.02	Sesquiterpenic alcohol
α-Eudesmol	0.12	0.10	Sesquiterpenic alcohol
Bulnesol	tr	tr	Sesquiterpenic alcohol
(3*Z*)-Caryophylla-3,8(13)-dien-5β-ol	0.08	0.06	Sesquiterpenic alcohol
α-Bisabolol	0.81	0.69	Sesquiterpenic alcohol
Juniper camphor	0.20	0.17	Sesquiterpenic alcohol
Aromadendrane-4,10-diol	0.05	0.04	Sesquiterpenic alcohol
(2*E*,6*E*)-Farnesol	0.04	0.03	Sesquiterpenic alcohol
Cryptomeridiol	0.01	0.01	Sesquiterpenic alcohol
meta-Camphorene	tr	tr	Diterpene
Phytol	0.16	0.14	Diterpenic alcohol
Consolidated total	**69.42**	**58.44**	

tr: The compound has been detected below 0.01 mg/g.

[xx]: Duplicate concentration due to coelutions, taken only once into account in the consolidated total

Note: Individual compounds contents were corrected following the method of Cachet et al., 2016 (Flavour and Fragrance Journal guidelines). Unknown compounds are expressed in equivalents of internal standard without correction factor.

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.

Unknowns: The occurrence of unknown compounds is to be expected in many samples, and does not denote particular problems unless noted otherwise in the conclusion. Some recurring, characteristic unknowns are listed for cannabis samples as they are representative of the actual composition of the material.