S·U·Z·U·M·E

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分析証明書

Suzume CBD Isolate + 60粒 (CBD アイソレートプラスカプセル)*

カンナビジオールアイソレート	≥50mg
パッションフラワーエキス	260mg
ビタミン C	16mg
黒胡椒抽出物	10mg

*1カプセルあたり

	分析	主張	結果	方法
カンナビジオールアイソレート 研究所 ProVerde Laboratories (page 1)	Cannabidiol（CBD）	≥50mg /capsule	53..4mg /capsule	ISO/IEC 17025 LCMS
Terpene profile, 微生物試験, 重金属試験, CBV, CBG content 研究所 ProVerde Laboratories (page 3-7)	Various		**PASS**	ISO/IEC 17025 LCMS
パッションフラワーエキス ス研究所 Alkemist (page 8)	抽出物の識別		**PASS**	HPLC
Ascorbyl Palmitate（ビタミンC） 研究所 S&N LABS (page 9-10)	クロマトグラフィーの純度	≥98%	≥ 98.9%	HPLC
黒胡椒抽出物 研究所 Colmaric Analyticals (page 11)	ピペリン	≥96%	≥96.6%	HPLC

PROVERDE LABORATORIES

Test Certificate

Certificate ID: **91402** Received: **1/8/21**

Client Sample ID: **Suzume CBD Isolate+**

Lot Number: **210106**

Matrix: **Capsules/Tablets - Capsule-Powder Based**

Scan QR Code for authenticity

S·U·Z·U·M·E

Authorization:	Signature:	Date:
Chris Hudalla, Chief Science Officer	Christopher Hudalla	2/11/2021

PJLA Testing
Accreditation
80585

The data contained within this report was collected in accordance with the requirements of ISO/IEC17025:2017. I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the test article listed in this report. Reports may not be reproduced except in their entirety.

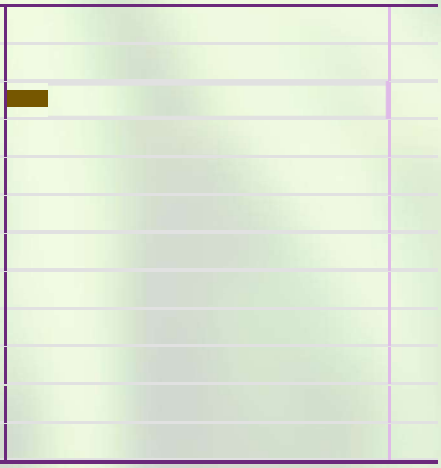
CN: Cannabinoid Profile & Potency [WI-10-17 & WI-10-17-01]

Analyst: JFD *Test Date: 1/13/2021*

The client sample was analyzed for plant-based cannabinoids by Liquid Chromatography (LC). The collected data was compared to data collected for certified reference standards at known concentrations. Additional confirmation for THC was performed by LCMS, to confirm the absence of THC down to a Limit of Quantitation of 5 ppm (0.0005%).

91402-CN

ID	Weight %	Concentration (mg/Capsule)
D9-THC	ND	ND
THCV	ND	ND
CBD	10.5	53.4
CBDV	0.0429	0.218
CBG	ND	ND
CBC	ND	ND
CBN	ND	ND
THCA	ND	ND
CBDA	ND	ND
CBGA	ND	ND
D8-THC	ND	ND
exo-THC	ND	ND
Total	10.6	53.6
Max THC	ND	ND
Max CBD	10.5	53.4



Limit of Quantitation (LOQ) = 0.0005 wt%

Limit of Detection (LOD) = 0.0002 wt%

Max THC (and Max CBD) are calculated values for total cannabinoids after heating, assuming complete decarboxylation of the acid to the neutral form. It is calculated based on the weight loss of the acid group during decarboxylation: Max THC = (0.877 x THCA) + THC. This calculation does not include other cannabinoid isomers (eg. D8-THC and exo-THC). ND = None detected above the limits of detection (LOD), which is one third of LOQ.

MA: Moisture Analysis [WI-10-16]

Analyst: JA *Test Date: 1/14/2021*

91402-MA

Weight loss on drying: **1.3%**

The moisture content of the client sample was evaluated based on weight loss observed on heating. The recorded weight loss is due to the loss of water and volatiles (terpenes) observed upon sample drying.

EA: Elemental Analysis [WI-10-13]

Analyst: CJS *Test Date: 1/15/2021*

This test method was performed in accordance with the requirements of ISO/IEC 17025. These results relate only to the test article listed in this report. Reports may not be reproduced except in their entirety.

91402-EA

Symbol	Metal	Conc.[1] (µg/kg)	RL (µg/kg)	Limits[2] (µg/kg)	Status
Al	Aluminum	123,000	50	-	
As	Arsenic	ND	50	1,500	PASS
Cd	Cadmium	ND	50	500	PASS
Ca	Calcium	123,000	500	-	
Cr	Chromium	442	50	1,100,000	PASS
Co	Cobalt	ND	50	5,000	PASS
Cu	Copper	1,150	50	300,000	PASS
Fe	Iron	121,000	50	-	
Pb	Lead	105	50	500	PASS
Mg	Magnesium	366,000	50	-	
Mn	Manganese	8,290	50	-	
Hg	Mercury	ND	50	3,000	PASS
Mo	Molybdenum	ND	50	300,000	PASS
Ni	Nickel	75.0	50	20,000	PASS
P	Phosphorus	ND	500	-	
K	Potassium	ND	500	-	
Se	Selenium	ND	50	-	
Ag	Silver	ND	50	15,000	PASS
S	Sulfur	1,570	500	-	
Sn	Tin	ND	500	600,000	PASS
Zn	Zinc	13,800	50	-	

1) ND = None detected to the Method Detection Limit (MDL)
2) USP recommended maximum daily limits for oral drug product.

MB1: Microbiological Contaminants [WI-10-09] *Analyst: AEG* *Test Date: 1/11/2021*

This test method was performed in accordance with the requirements of ISO/IEC 17025. These results relate only to the test article listed in this report. Reports may not be reproduced except in their entirety.

91402-MB1

Symbol	Analysis	Results	Units	Limits*	Status
AC	Total Aerobic Bacterial Count	=28,000	CFU/g	100,000 CFU/g	PASS
CC	Total Coliform Bacterial Count	<100	CFU/g	1,000 CFU/g	PASS
EB	Total Bile Tolerant Gram Negative Count	=830	CFU/g	1,000 CFU/g	PASS
YM	Total Yeast & Mold	<100	CFU/g	10,000 CFU/g	PASS

Recommended limits established by the American Herbal Pharmacopoeia (AHP) monograph for Cannabis Inflorescence [2013], for consumable botanical products, including processed and unprocessed cannabis materials, and solvent-based extracts. Note: All recorded Microbiological tests are within the established limits.

MB2: Pathogenic Bacterial Contaminants [WI-10-10] *Analyst: LabAdmin* *Test Date: 1/12/2021*

This test method was performed in accordance with the requirements of ISO/IEC 17025. These results relate only to the test article listed in this report. Reports may not be reproduced except in their entirety.

91402-MB2

Test ID	Analysis	Results	Units	Limits*	Status
91402-ECPT	E. coli (O157)	Negative	NA	Non Detected	PASS
91402-SPT	Salmonella	Negative	NA	Non Detected	PASS

Note: All recorded pathogenic bacteria tests passed.

MY: Mycotoxin Testing [WI-10-05] *Analyst: AEG* *Test Date: 1/14/2021*

This test method was performed in accordance with the requirements of ISO/IEC 17025. These results relate only to the test article listed in this report. Reports may not be reproduced except in their entirety.

91402-MY

Test ID	Date	Results	MDL	Limits	Status*
Total Aflatoxin	1/14/2021	< MDL	2 ppb	< 20 ppb	PASS
Total Ochratoxin	1/14/2021	15	3 ppb	< 20 ppb	PASS

PST: Pesticide Analysis [WI-10-11] *Analyst: CJR* *Test Date: 1/20/2021*

The client sample was analyzed for pesticides using Liquid Chromatography with Mass Spectrometric detection (LC/MS/MS). The method used for sample prep was based on the European method for pesticide analysis (EN 15662).

91402-PST

Analyte	CAS	Result	Units	LLD	Limits (ppb)	Status
Abamectin	71751-41-2	ND	ppb	0.20	10	PASS
Spinosad	168316-95-8	ND	ppb	0.10	10	PASS
Pyrethrin	8003-34-7	ND	ppb	0.10	10	PASS
Trifloxystrobin	141517-21-7	ND	ppb	0.10	100	PASS
Spirotetramat	203313-25-1	ND	ppb	0.10	100	PASS
Spiromesifen	283594-90-1	ND	ppb	0.10	100	PASS
Piperonyl butoxide	51-03-6	ND	ppb	0.10	3000	PASS
Paclobutrazol	76738-62-0	ND	ppb	0.10	10	PASS
Myclobutanil	88671-89-0	ND	ppb	0.10	100	PASS
Imidacloprid	138261-41-3	ND	ppb	0.10	5000	PASS
Imazalil	35554-44-0	ND	ppb	0.10	10	PASS
Fenoxycarb	72490-01-8	ND	ppb	0.10	10	PASS
Etoxazole	153233-91-1	ND	ppb	0.10	100	PASS
Dichlorvos	62-73-7	ND	ppb	3.00	10	PASS
Cyfluthrin	68359-37-5	ND	ppb	0.50	2000	PASS
Bifenthrin	82657-04-3	ND	ppb	0.20	3000	PASS
Bifenazate	149877-41-8	ND	ppb	0.10	100	PASS
Azoxystrobin	131860-33-8	ND	ppb	0.10	100	PASS

* Testing limits established by the Massachusetts Department of Public Health, Protocol for Sampling and Analysis of Finished Medical Marijuana Products and Marijuana-Infused Products for Massachusetts Registered Medical Marijuana Dispensaries, Exhibit 5. ND indicates "none detected" above the lower limit of detection (LLD). Analytes marked with (*) indicate analytes for which no recovery was observed for a pre-spiked matrix sample due to matrix interference.

TP: Terpenes Profile [WI-10-27] *Analyst: AEG* *Test Date: 1/13/2021*

Client sample analysis was performed using full evaporative technique (FET) headspace sample delivery and gas chromatographic (GC) compound separation. A combination of flame ionization detection (FID) and/or mass spectrometric (MS) detection with mass spectral confirmation against the National Institute of Standards and Technology (NIST) Mass Spectral Database, Revision 2017 were used. Chromatographic and/or mass spectral data were processed by quantitatively comparing the analytical peak areas against calibration curves prepared from certified reference standards.

91402-TP

Compound	CAS	Conc. (wt%)	Conc. (ppm)	Qualitative Profile
alpha-pinene	80-56-8	ND	ND	
camphene	79-92-5	ND	ND	
sabinene*	3387-41-5	ND	ND	
beta-myrcene	123-35-3	ND	ND	
beta-pinene	127-91-3	ND	ND	
alpha-phellandrene	99-83-2	ND	ND	
delta-3-carene	13466-78-9	ND	ND	
alpha-terpinene	99-86-5	ND	ND	
alpha-ocimene	502-99-8	ND	ND	
D-limonene	138-86-3	ND	ND	
p-cymene	99-87-6	ND	ND	
cis-beta-ocimene	3338-55-4	ND	ND	
eucalyptol	470-82-6	ND	ND	
gamma-terpinene	99-85-4	ND	ND	
terpinolene	586-62-9	ND	ND	
linalool	78-70-6	ND	ND	
L-fenchone*	7787-20-4	ND	ND	
isopulegol	89-79-2	ND	ND	
menthol*	89-78-1	ND	ND	
geraniol	106-24-1	ND	ND	
beta-caryophyllene	87-44-5	ND	ND	
alpha-humulene	6753-98-6	ND	ND	
cis-nerolidol	3790-78-1	ND	ND	
trans-nerolidol	40716-66-3	ND	ND	
guaiol	489-86-1	ND	ND	
caryophyllene oxide	1139-30-6	ND	ND	
alpha-bisabolol	23089-26-1	ND	ND	

Total Terpene: <0.1 wt%

* Certified reference standard not available for this compound. Concentration is estimated using the response factor from alpha-pinene. ND = None Detected. RL = Reporting Limit of 5 ppm.

VC: Analysis of Volatile Organic Compounds [WI-10-28] *Analyst: AEG* *Test Date: 1/12/2021*

The client sample was analyzed by Head-Space Gas Chromatography (HS-GC). The collected data was compared to data collected for certified reference standards at known concentrations.

91402-VC

Compound	CAS	Amount [1]	Limit [2]	RL	Status
Propane	74-98-6	ND	1,000 ppm	100	PASS
Isobutane	75-28-5	ND	1,000 ppm	100	PASS
Butane	106-97-8	ND	1,000 ppm	100	PASS
Methanol	67-56-1	ND	3,000 ppm	100	PASS
Pentane	109-66-0	ND	5,000 ppm	100	PASS
Ethanol	64-17-5	ND	5,000 ppm	100	PASS
Acetone	67-64-1	ND	5,000 ppm	100	PASS
Isopropanol	67-63-0	ND	5,000 ppm	100	PASS
Acetonitrile	75-05-8	ND	410 ppm	100	PASS
Hexane	110-54-3	ND	290 ppm	100	PASS
Heptane	142-82-5	ND	5,000 ppm	100	PASS

1) ND = Not detected at a level greater than the Reporting Limit (RL).
2) In ppm, based on USP recommended limits for residual solvents, adopted by the Massachusetts Department of Public Health for cannabis concentrates and extracts on 3/31/16. Butane/Propane limits are based on limits established for state of Colorado.
(*) For ethanol, as many formulations contain flavorings based on ethanol extracts of natural products, no status has been assigned.

END OF REPORT

Work performed at:
Alkemist Labs
12661 Hoover Street
Garden Grove, CA 92841
714-754-HERB (4372)
714-668-9972 (FAX)
Sales@Alkemist.com
www.Alkemist.com

分析証明書 4

商品名	Passion Flower extract	物質在庫番号	20200901
レポート日	2020/09/03	研究番号	20247UGH_1

結論

このテストサンプル「Passion Flower Extract (20200901)」は、Passiflora sp.の参照サンプルのクロマトグラフィープロファイルと一致しています。この試験サンプル「**Passion Flower Extract (20200901)**」は、**Passiflora sp.[**パッションフラワー**]**の空中部分の特徴を持っています。

Examined, Reviewed & Authorized by: Khanh N Tran, HPTLC, R&D Supervisor, Alkemist Labs

Report Date: 09/04/20

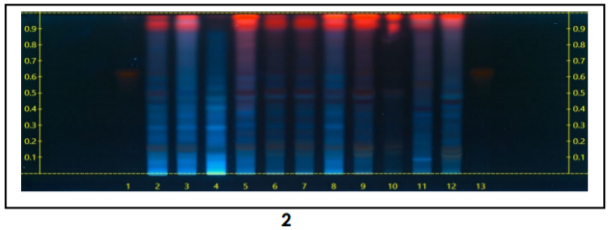
ISO/IEC 17025 ACCREDITED CERTIFICATE #3851.01

Work performed at:
Alkemist Labs
12661 Hoover Street
Garden Grove, CA 92841
714-754-HERB (4372)
714-668-9972 (FAX)
Sales@Alkemist.com
www.Alkemist.com

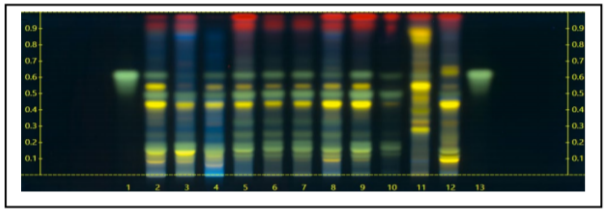
Certificate of Analysis: Passion Flower Extract (20200901)

High Performance Thin-Layer Chromatography with Photo-Documentation

1



2



Company Name:	u u	**Sample Received:**	09/03/20
Title:	Passion Flower Extract	**Form of Botanical:**	powdered extract
Plant Part:	aerial part	**Lot Number:**	(20200901) →Lane 9(3µl)
Appearance:	Fine Powder	**Sample:**	20247UGH_1
Sample Packaging:	Foil Pouch		

Latin Name: *Passiflora sp.*

Reference Sample: Lane 2(3µl) (Z30413MRH1), Lane 4(3µl) (Z30413MRH1) Passiflora incarnata (aerial part); Lane 3(3µl) (Z22509BH) Passiflora incarnata (herb); Lane 11(3µl) (EAJ19411UN1) Passiflora foetida (aerial part); Lane 12(3µl) (KMI12313FLOH1) Passiflora edulis (herb (leaf, stem)); held at Alkemist Labs, Garden Grove, CA.

Analyst: A. Davis, N. Afendikova, M. Edwards, S. Kabbaj, N. Hoang, K. Tran, J. Lopez, J. Mares 142016

Sample Preparation: 0.3g+3mL Methanol, sonicate/heat at 50°C for 30 min.

Stationary Phase: Silica gel 60, HPTLC plates

Mobile Phase: ethyl acetate: Methyl Ethyl Ketone: Formic Acid: Water [5/3/1/1]

Detection: (1) UV 366 nm
(2) Natural Product + Polyethylene Glycol, 366nm (Reich, E., 2007)

Reference Standard: Lanes 1(3µl) and 13(3µl) Vitexin (00022850-102, CHR), Methanol (0000253754, VWR)

Reference Source: Method Developed by Alkemist Labs
IDT-SOP-72-01

Comments & Conclusions: Lane 9 is the test sample Passion Flower Extract (20200901). Lanes 2, 3, 4, 11, 12, are the reference samples used for comparison. This test sample, Passion Flower Extract (20200901) is consistent with the chromatographic profile of the reference samples of *Passiflora sp.*, used above. **This test sample Passion Flower Extract (20200901) has characteristics of *Passiflora sp.* aerial part.**

NOTE: The above conclusion may be a function of the natural variance found in botanicals &/or the extraction process used to create specific extracts. The growing and drying conditions, age, seasonal variations, geographic location, extraction solvents, etc. all play a role in the phytochemical fingerprint of botanicals as well as their extracts; hence, chromatographic variations are expected.

Examined, Reviewed & Authorized by: Khanh N Tran, HPTLC, R&D Supervisor, Alkemist Labs

Report Date: 09/04/20

ISO/IEC 17025 ACCREDITED CERTIFICATE #3851.01

Note: Any unidentified lanes in the above chromatograms are confidential and may represent internal studies or other test samples not related to 20200901. **This report applies to the sample investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. This report is for the exclusive use of the party who requested the report and not for public dissemination or use by third parties, including for promotional purposes, without the prior written permission of Alkemist Labs, Inc. This report provides technical results for a specific sample and the report shall not be altered, modified, supplemented or abstracted in any manner. Any violation of these conditions renders the report and its results void. © 2020Alkemist Labs, Inc. All Rights Reserved**

S & N LABS

2021 E. Fourth Street Santa Ana, California 92705 (714) 543-2211

16 July 2021

Job Number:	25149b
PO Number:	verbal

REPORT OF ANALYSIS

One blue container labeled "Ascorbyl Palmitate 181117374" was received on 17 June 2021. The material was analyzed for purity using high pressure liquid chromatography (HPLC). The detector was monitored at 242 nm. The results are summarized in the table below.

Sample	Chromatographic Purity (% area)
Ascorbyl Palmitate 181117374	98.9

The chromatogram is enclosed for your reference.

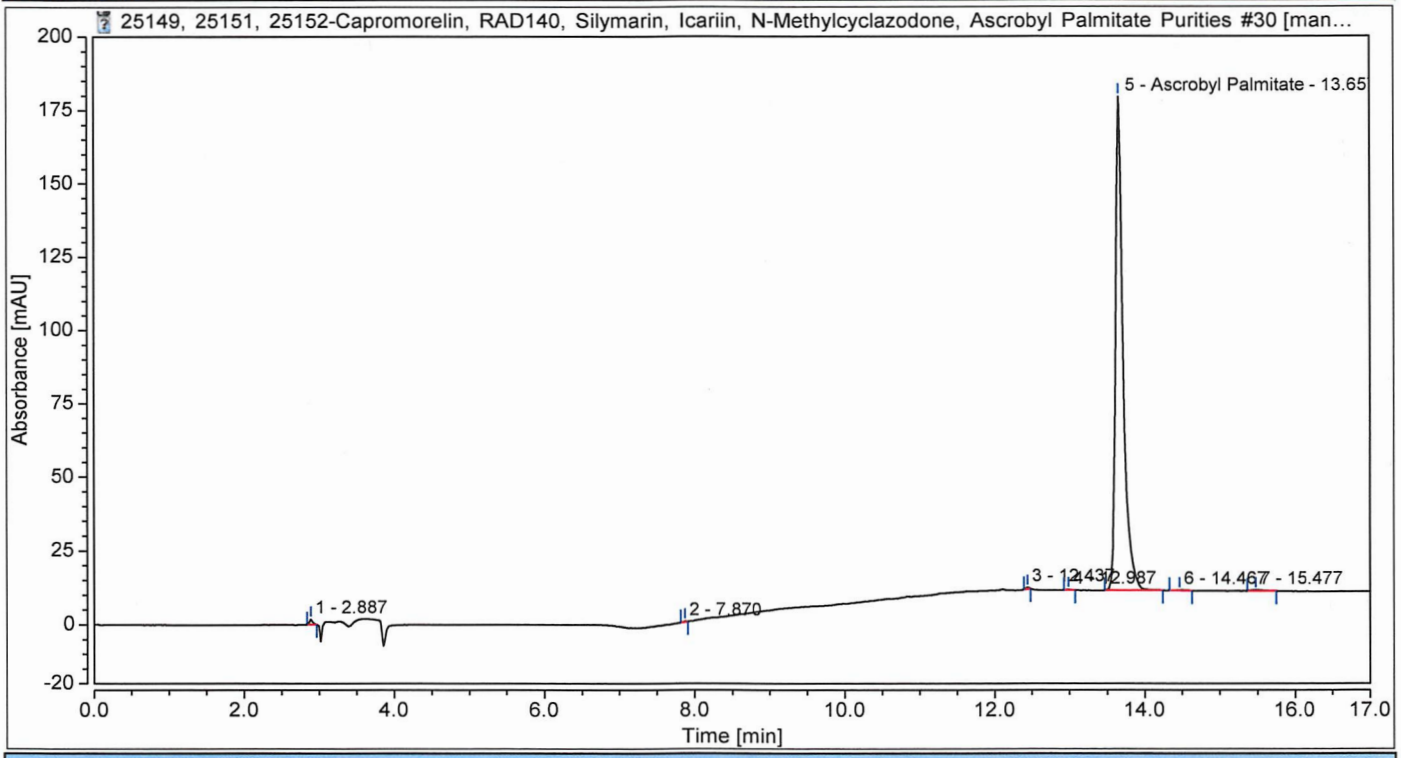
Neil E. Spingarn, Ph.D.
President

Chromatogram and Results

Injection Details

Injection Name:	**Ascrobyl Palmitate 181117374**	*Run Time (min):*	**20.00**
Vial Number:	**RD5**	*Injection Volume:*	**10.00**
Injection Type:	**Unknown**	*Channel:*	**EXT242NM**
Calibration Level:		*Wavelength:*	**n.a.**
Instrument Method:	**AD 250mm MaxRP 20min**	*Bandwidth:*	**n.a.**
Processing Method:	**Processing Method**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Jul/21 18:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount
1		2.887	0.094	1.866	0.47	1.09	n.a.
2		7.870	0.011	0.240	0.06	0.14	n.a.
3		12.437	0.032	0.591	0.16	0.35	n.a.
4		12.987	0.011	0.131	0.06	0.08	n.a.
5	Ascrobyl Palmitate	13.657	19.590	167.851	98.93	98.08	n.a.
6		14.467	0.022	0.162	0.11	0.09	n.a.
7		15.477	0.043	0.294	0.22	0.17	n.a.
Total:			**19.803**	**171.136**	**100.00**	**100.00**	

Colmaric Analyticals, LLC

812 Meadow Lark Lane, Goodlettsville, TN 37072
Telephone: 615-239-8604

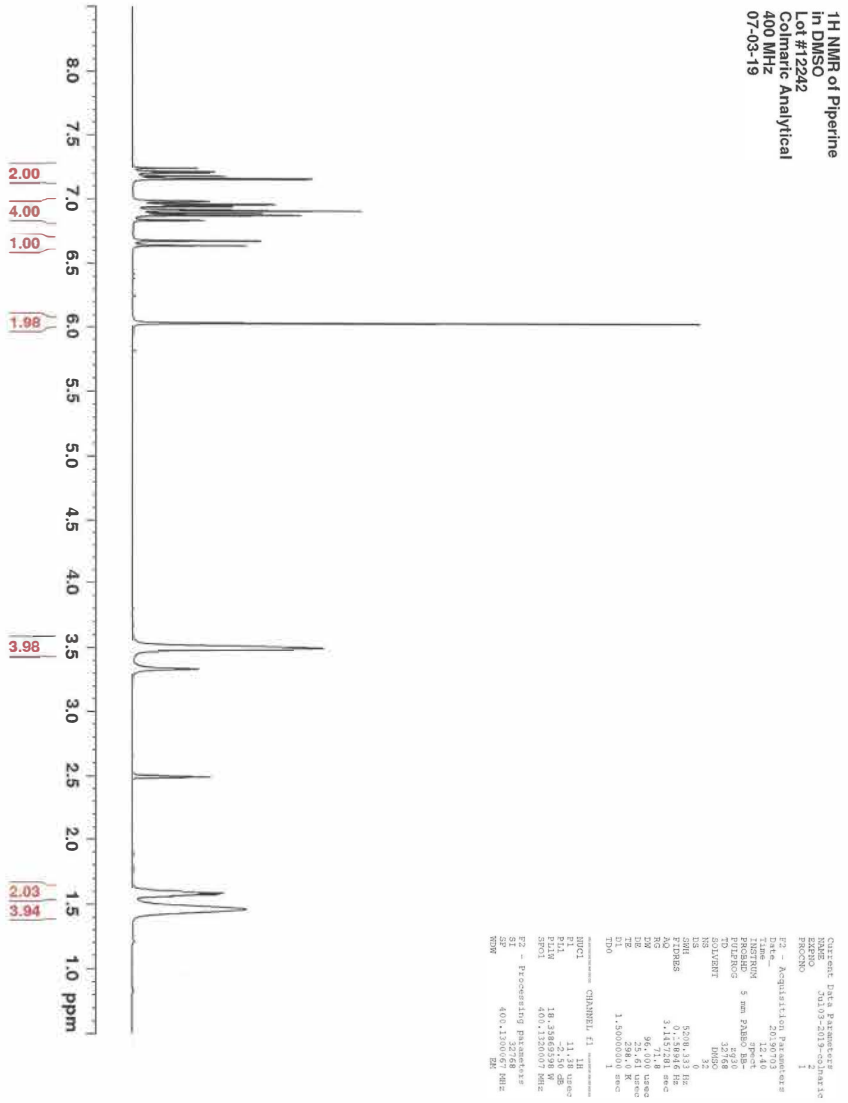
Certificate of Analysis

Product Name	Piperine	Product Lot Number	1245
Report Date	07/09/2019	Laboratory Number	12242

Description	Method	Result
Identification	Proton NMR	Conforms to structure
Assay	HPLC	96.6%
Lead	ICP-MS USP <730>	0.032 ppm
Arsenic	ICP-MS USP <730>	<0.0001 ppm
Cadmium	ICP-MS USP <730>	0.0004 ppm
Mercury	ICP-MS USP <730>	0.002 ppm
Total Aerobic Count	Biolumix	<100 cfu/g
Yeast & Mold	Biolumix	<100 cfu/g
E. Coli	Biolumix	Negative
Coliform	Biolumix	<10 cfu/g
Salmonella	Biolumix	Negative

Collin Thomas
Laboratory Manager

07/09/2019 7/9/19
Date



第 21064497002-0201 号
2021年06月29日

JFRL

分析試験成績書

依　頼　者　株式会社　Ｓｕｚｕｍｅ

検　体　名　Suzume CBD Isolate + capsules

一般財団法人
日本食品分析センター
東京都渋谷区元代々木町52番1号

2021年06月14日　当センターに提出された上記検体について分析試験した結果は次のとおりです。

分析試験結果

分　析　試　験　項　目	結　　果	定量下限	注	方　　法
水分	0.0315 g/粒	.....		ｶｰﾙﾌｨｯｼｬｰ法
たんぱく質	0.030 g/粒	.....	1	燃焼法
脂質	0.099 g/粒	.....		酸分解法
灰分	0.018 g/粒	.....		直接灰化法
炭水化物	0.294 g/粒	.....	2	.....
ｴﾈﾙｷﾞｰ	2.19 kcal/粒	.....	3	.....
ﾅﾄﾘｳﾑ	0.108 mg/粒	.....		原子吸光光度法
食塩相当量	0.000274 g/粒	.....	4	.....
一粒の重さ	0.472 g	.....		.....

依頼者指定の単位当たりに換算した。

注1.　窒素・たんぱく質換算係数:6.25

注2.　食品表示基準(平成27年内閣府令第10号)による計算式:0.472-(水分+たんぱく質+脂質+灰分)

注3.　食品表示基準(平成27年内閣府令第10号)によるｴﾈﾙｷﾞｰ換算係数:たんぱく質,4;脂質,9;炭水化物,4

注4.　計算式:ﾅﾄﾘｳﾑ×2.54

以　上