

## CERTIFICATE OF ANALYSIS

**Order Type:** CBD  
**Order ID:** OR2019-910

**Customer ID:** 32  
**Customer Name:** CBD Plus USA

**Harvest/Extract Lot:** None  
**Harvest/Extract Batch:** None

**Cultivar (Strain):** Banana Kush + CRD 5018

**Lab ID:** SA2019-3127

**Sample Matrix:** Concentrate

**Sample Date:** 04/02/2019

**Date Received:** 04/02/2019

**Date Completed:** 04/05/2019

**Remarks:**

### CANNABINOID (POTENCY) PROFILE

**Analysis Date/Time:** 04/02/2019 2300

**Method:** HPLC/DAD (Internal Method-001)

**Moisture Content (%):** -

**Analyst:** OL

**Instrument:** Agilent 1100

**Water Activity (aw):** -

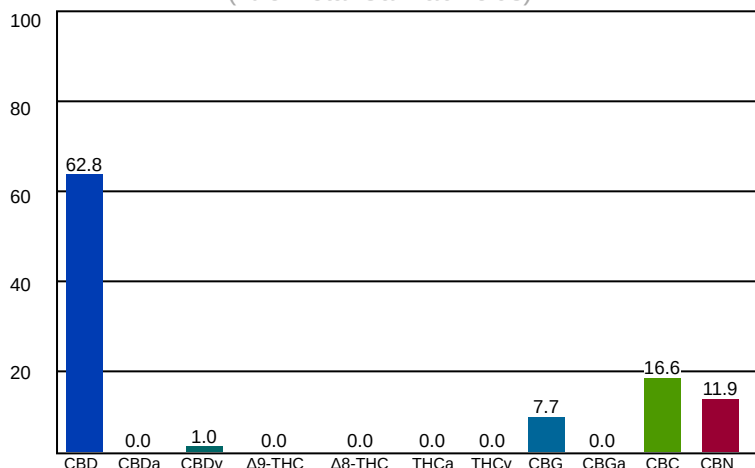
Cannabinoid	Result (%)	Result (mg/g)	Reporting Limit (mg/g)	Per Unit (mg)
CBD	37.7	377	0.23	377
CBDa	-	-	0.23	-
CBDv	0.624	6.24	0.23	6.24
Δ9-THC	-	-	0.23	-
Δ8-THC	-	-	0.23	-
THCa	-	-	0.23	-
THCv	-	-	0.23	-
CBC	9.96	99.6	0.23	99.6
CBG	4.64	46.4	0.23	46.4
CBGa	-	-	0.23	-
CBN	7.13	71.3	0.23	71.3
<b>TOTAL</b>	<b>60.1</b>	<b>601</b>		<b>601</b>
<b>TOTAL THC</b>	-	-		-
<b>TOTAL CBD</b>	<b>37.7</b>	<b>377</b>		<b>377</b>



**UNIT MASS (g):** 1

"-" Not detected above RL.

### Cannabinoid Distribution (% of Total Cannabinoids)



*Deviations from standard operating procedure:* None

*Recoveries for all analyte standards:* 90-110%  
*Replicate Uncertainties:* <5% RSD, <20% RPD  
*Sample/Reagent Blanks:* <RL for all analytes

Values for plant matter are adjusted for moisture content.

Total THC = (THCa x 0.877) + Δ9-THC  
 Total CBD = (CBDa x 0.877) + CBD

Percentage results are reported by mass.  
 mg/g results are reported as mass component per mass material.

**Abbreviations:** UV - Ultraviolet, HPLC - High Pressure Liquid Chromatography, RL - Reporting Limit, RPD - Relative Percent Difference, RSD - Relative Standard Deviation

This information is provided as a service and makes no claims of efficacy and/or safety of this product. Results are applicable only for the sample(s) analyzed and for the specific analysis conducted. This report is for informational purposes only and should not be used to diagnose, treat, or prevent any medical-related symptoms.

The statements and results herein have not been approved and/or endorsed by the FDA.

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Felling Analytical Services and Technology (F.A.S.T.), LLC

*Kyle W. Felling*  
 Kyle W. Felling, Ph.D.  
 Laboratory Director

## CERTIFICATE OF ANALYSIS

**Order Type:** CBD

**Order ID:** OR2019-910

**Customer ID:** 32

**Customer Name:** CBD Plus USA

**Harvest/Extract Lot:** None

**Harvest/Extract Batch:** None

**Cultivar (Strain):** Banana Kush + CRD 5018

**Sample Date:** 04/02/2019

**Lab ID:** SA2019-3127

**Date Received:** 04/02/2019

**Sample Matrix:** Concentrate

**Date Completed:** 04/05/2019

**Remarks:**

### TERPENOID PROFILE

**Analysis Date/Time:** 04/02/2019 2300

**Analyst:** OL

**Method:** HS/GC/FID (Internal Method-002)

**Instrument:** Agilent 6890

**Deviations from SOP:**

None

<u>Terpene</u>	<u>Result</u> ( $\mu\text{g/g}$ )	<u>Distribution</u> (%, total terpenes)
$\alpha$ -Bisabolol	11	0.0516
Camphene	47	0.221
$\delta$ -3-Carene	218	1.03
$\beta$ -Caryophyllene	667	3.14
Caryophyllene oxide	-	-
p-Cymene	-	-
Eucalyptol	-	-
Geraniol	-	-
Guaiol	-	-
$\alpha$ -Humulene	20	0.0928
Isopulegol	26	0.123
d-Limonene	8443	39.7
Linalool	14	0.0646
$\beta$ -Mycene	4223	19.9
cis-Nerolidol	-	-
trans-Nerolidol	-	-
$\alpha$ -Ocimene	1123	5.29
$\beta$ -Ocimene	33	0.156
$\alpha$ -Pinene	3454	16.3
$\beta$ -Pinene	2796	13.2
$\alpha$ -Terpinene	-	-
$\gamma$ -Terpinene	-	-
Terpinolene	168	0.793
<b>TOTAL</b>	<b>21243</b>	<b>100</b>



*Abbreviations:* HS - Headspace, GC - Gas Chromatography, MS - Mass Spectrometry, RL - Reporting Limit

This information is provided as a service and makes no claims of efficacy and/or safety of this product.

Results are applicable only for the sample(s) analyzed and for the specific analysis conducted.

This report is for informational purposes only and should not be used to diagnose, treat, or prevent any medical-related symptoms.

The statements and results herein have not been approved and/or endorsed by the FDA.

"-" Not detected above RL.

**Reporting Limit ( $\mu\text{g/g}$ ): 10.3**

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Felling Analytical Services and Technology (F.A.S.T.), LLC

*Kyle W. Felling*  
 Kyle W. Felling, Ph.D.  
 Laboratory Director

### CERTIFICATE OF ANALYSIS

**Order Type:** CBD  
**Order ID:** OR2019-910

**Customer ID:** 32  
**Customer Name:** CBD Plus USA

**Harvest/Extract Lot:** None  
**Harvest/Extract Batch:** None

**Cultivar (Strain):** Banana Kush + CRD 5018

**Lab ID:** SA2019-3127

**Sample Matrix:** Concentrate

**Sample Date:** 04/02/2019

**Date Received:** 04/02/2019

**Date Completed:** 04/05/2019

**Remarks:**

### RESIDUAL SOLVENT PROFILE

**Analysis Date/Time:** 04/02/2019 2300

**Method:** USP <467>

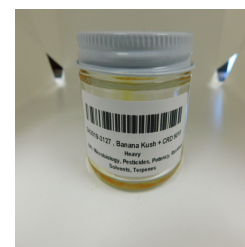
**Deviations from SOP:**

**Analyst:** OL

**Instrument:** Agilent 6890

None

Solvent	Result (µg/g)	Action Level (µg/g)	Solvent	Result (µg/g)	Action Level (µg/g)
Acetone (67-64-1)	-	5000	n-Heptane (142-82-5)	-	5000
Acetonitrile (75-5-8)	-	410	n-Hexane (110-54-3)	-	290
Benzene (71-43-2)	-	2	Isobutane (75-28-5)	-	5000
n-Butane (106-97-2)	-	5000	Isopropanol (67-63-0)	-	5000
1-Butanol (71-36-3)	-	5000	Isopropyl acetate (108-21-4)	-	5000
2-Butanol (78-92-2)	-	5000	Isopropyl benzene (98-82-8)	-	70
2-Butanone (78-93-3)	-	5000	Methanol (67-56-1)	-	3000
Cyclohexane (110-82-7)	-	3880	2-Methylbutane (78-78-4)	-	5000
1,2-Dimethoxyethane (110-71-4)	-	100	Methylene chloride (75-9-2)	-	600
N,N-Dimethylacetamide (127-19-5)	-	1090	2-Methylpentane (107-83-5)	-	290
2,2-Dimethylbutane (75-83-2)	-	290	3-Methylpentane (96-10-0)	-	290
2,3-Dimethylbutane (79-29-8)	-	290	n-Pentane (109-66-0)	-	5000
N,N-Dimethylformamide (68-12-2)	-	880	1-Pentanol (71-41-0)	-	5000
Dimethylsulfoxide (67-68-5)	-	5000	n-Propane (74-98-6)	-	5000
1,4-Dioxane (123-91-1)	-	380	1-Propanol (71-23-8)	-	5000
Ethanol (64-17-5)	-	5000	Pyridine (110-86-1)	-	200
2-Ethoxyethanol (110-80-5)	-	160	Tetrahydrofuran (109-99-9)	-	720
Ethyl ether (60-29-7)	-	5000	Tetramethylene sulfone (126-33-0)	-	160
Ethyl acetate (141-78-6)	-	5000	Toluene (108-88-3)	-	890
Ethyl benzene (100-41-4)	-	217	o-Xylene (95-47-6)	-	2170
Ethylene glycol (107-21-1)	-	620	m,p-Xylene (108-38-3 or 106-42-3)	-	2170
Ethylene oxide (75-21-8)	-	50	Xylenes* (1330-20-7)	-	2170



#### Color Key

RESULT < 1/2 AL
1/2 AL < RESULT < AL
RESULT > AL

**Reporting Limit (µg/g)**  
1/2 of AL

"-" not detected above reporting limit

"\*" - o,m,p-Xylene and Ethylbenzene

Solvent	Synonym(s)	Solvent	Synonym(s)	Solvent	Synonym(s)
Acetonitrile	Methyl Cyanide, ACN	2-Ethoxyethanol	Cellosolve, Ethyl glycol	Methanol	Methyl alcohol
1-Butanol	n-Butanol, Butyl Alcohol	Ethyl ether	Diethyl ether, Ether	2-Methylbutane	Isopentane
2-Butanol	sec-Butyl alcohol	Ethyl acetate	EtOAc	Methylene chloride	Dichloromethane
2-Butanone	Methyl ethyl ketone, MEK	Ethyl benzene	Phenylethane	2-Methylpentane	Isohexane
1,2-Dimethoxyethane	Monoglyme	Ethylene glycol	1,2-Ethanediol	1-Pentanol	n-Amyl alcohol
2,3-Dimethylbutane	Neohexane	Ethylene oxide	Oxirane	1-Propanol	Propyl alcohol
2,3-Dimethylbutane	Diisopropyl	Isobutane	2-Methylpropane	Tetrahydrofuran	THF
N,N-Dimethylformamide	DMF	Isopropanol	2-Propanol, IPA	Tetramethylene sulfone	Sulfolane
Dimethylsulfoxide	DMSO	Isopropyl Acetate	Acetic acid isopropyl ester	Xylene	Dimethylbenzene

**Abbreviations:** HS-Headspace, GC-Gas Chromatography, MS-Mass Spectrometry, RL-Reporting Limit, AL-Action Level  
 CAS-Chemical Abstract Services

**Disclaimer:** This information is provided as a service and makes no claims of efficacy and/or safety of this product. Results are applicable only for the sample(s) analyzed and for the specific analysis conducted. This report is for informational purposes only and should not be used to diagnose, treat, or prevent any medical-related symptoms. The statements and results herein have not been approved and/or endorsed by the FDA.

#### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Felling Analytical Services and Technology (F.A.S.T.), LLC

*Kyle W. Felling*  
 Kyle W. Felling, Ph.D.  
 Laboratory Director

## CERTIFICATE OF ANALYSIS

**Order Type:** CBD  
**Order ID:** OR2019-910

**Customer ID:** 32  
**Customer Name:** CBD Plus USA

**Harvest/Extract Lot:** None  
**Harvest/Extract Batch:** None

**Cultivar (Strain):** Banana Kush + CRD 5018

**Lab ID:** SA2019-3127

**Sample Matrix:** Concentrate

**Sample Date:** 04/02/2019

**Date Received:** 04/02/2019

**Date Completed:** 04/05/2019

**Remarks:**

### PESTICIDES PROFILE

**Analysis Date/Time:** 04/02/2019 2300  
**Analyst:** OL

**Method:** LC/MS/MS and GC/MS  
**Instrument:** Waters Acquity/TQD

**Deviations from SOP:**  
 None

Pesticide	Result (µg/g)	Action Level (µg/g)	Pesticide	Result (µg/g)	Action Level (µg/g)
Abamectin (71751-41-2)	-	0.5	Imazalil (35554-44-0)	-	0.2
Acephate (30560-19-1)	-	0.4	Imidacloprid (138261-41-3)	-	0.4
Acequinocyl (57960-19-7)	-	2	Kresoxim-methyl* (143390-89-0)	-	0.4
Acetamiprid (135410-20-7)	-	0.2	Malathion (121-75-5)	-	0.2
Aldicarb (116-06-3)	-	0.4	Metalaxyl* (57837-19-1)	-	0.2
Azoxystrobin (131860-33-8)	-	0.2	Methiocarb (2032-65-7)	-	0.2
Bifenazate* (149877-41-8)	-	0.2	Methomyl (16752-77-5)	-	0.4
Bifenthrin* (82657-04-3)	-	0.2	Methyl parathion* (298-0-0)	-	0.2
Boscalid* (188425-85-6)	-	0.4	MGK 264* (113-48-4)	-	0.2
Carbaryl (63-25-2)	-	0.2	Myclobutanil (88671-89-0)	-	0.2
Carbofuran (1563-66-2)	-	0.2	Naled (300-76-5)	-	0.5
Chlorantraniliprole (800008-45-7)	-	0.2	Oxamyl (23135-22-0)	-	1
Chlorfenapyr* (122453-73-0)	-	1	Paclobutrazol* (76738-62-0)	-	0.4
Chlorpyrifos* (2921-88-2)	-	0.2	Permethrins* (52645-53-1)	-	0.2
Clofentezine (74115-24-5)	-	0.2	Phosmet* (732-11-6)	-	0.2
Cyfluthrin* (68359-37-5)	-	1	Piperonyl butoxide* (51-03-6)	-	2
Cypermethrin* (52315-07-8)	-	1	Prallethrin* (2331-36-9)	-	0.2
Daminozide (1596-84-5)	-	1	Propiconazole (60207-90-1)	-	0.4
DDVP (62-73-7)	-	0.1	Propoxur* (114-26-1)	-	0.2
Diazinon* (333-41-5)	-	0.2	Pyrethrins* (8003-34-7)	-	1
Dimethoate (60-51-5)	-	0.2	Pyridaben* (96489-71-3)	-	0.2
Ethoprophos* (13194-48-4)	-	0.2	Spinosad A (168316-95-8)	-	0.2
Etofenprox (80844-07-1)	-	0.4	Spinosad D (168316-95-8)	-	0.2
Etoxazole (153233-91-1)	-	0.2	Spiromesifen (283594-90-1)	-	0.2
Fenoxycarb (72490-01-8)	-	0.2	Spirotetramat (203313-25-1)	-	0.2
(E)-Fenpyroximate (134098-61-6)	-	0.4	Spiroxamine (118134-30-8)	-	0.4
Fipronil* (120068-37-3)	-	0.4	Tebuconazole (80443-41-0)	-	0.4
Fonicamid (158062-67-0)	-	1	Thiacloprid (111988-49-9)	-	0.2
Fludioxinil (131341-86-1)	-	0.4	Thiamethoxam (153719-23-4)	-	0.2
Hexythiazox (78587-05-0)	-	1	Trifloxystrobin* (141517-21-7)	-	0.2



#### Color Key

RESULT < 1/2 AL
1/2 AL < RESULT < AL
RESULT > AL

#### Reporting Limit (µg/g)

1/2 of AL

"-" not detected above reporting limit

"\*\*" analyzed by GC/MS (all others analyzed by LC/MS/MS)

Permethrins measured as the cumulative residue of the *cis*- and *trans*-permethrin isomers.

Pyrethrin measures as the cumulative residue of pyrethrin I, cinerin I, and jasmolin I.

**Abbreviations:** LC - Liquid Chromatography, GC - Gas Chromatography, MS - Mass Spectrometry, RK - Reporting Limit, AL - Action Level, CAS - Chemical Abstract Services

Pesticide	Synonym(s)	Pesticide	Synonym(s)	Pesticide	Synonym(s)
Cyfluthrin	Baythroid	Myclobutanil	Systhane	Propiconazole	Tilt
DDVP	Dichlorvos	Naled	Dibrom	Propoxur	Baygon
Ethoprophos	Prophos	Phosmet	Imidan		

**Disclaimer:** This information is provided as a service and makes no claims of efficacy and/or safety of this product. Results are applicable only for the sample(s) analyzed and for the specific analysis conducted. This report is for informational purposes only and should not be used to diagnose, treat, or prevent any medical-related symptoms. The statements and results herein have not been approved and/or endorsed by the FDA.

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Felling Analytical Services and Technology (F.A.S.T.), LLC

*Kyle W. Felling*  
 Kyle W. Felling, Ph.D.  
 Laboratory Director

**CERTIFICATE OF ANALYSIS**

**Order Type:** CBD  
**Order ID:** OR2019-910

**Customer ID:** 32  
**Customer Name:** CBD Plus USA

**Harvest/Extract Lot:** None  
**Harvest/Extract Batch:** None

**Cultivar (Strain):** Banana Kush + CRD 5018

**Lab ID:** SA2019-3127

**Sample Matrix:** Concentrate

**Sample Date:** 04/02/2019

**Date Received:** 04/02/2019

**Date Completed:** 04/05/2019

**Remarks:**

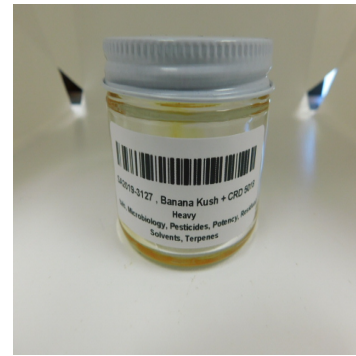
**HEAVY METAL PROFILE**

**Analysis Date/Time:** 04/02/2019 2300  
**Analyst:** OL

**Method:** ICP/MS  
**Instrument:** PerkinElmer Elan 9000

**Deviations from SOP:**  
None

<b>Heavy Metal</b>	<b>Result (µg/kg)</b>	<b>Action Level (µg/kg)</b>
Arsenic (As)	-	200
Cadmium (Cd)	-	200
Lead (Pb)	-	100
Mercury (Hg)	-	500



Abbreviations: ICP - Inductively-Coupled Plasma, OES - Optical Emission Spectroscopy, RL - Reporting Limit, AL - Action Level

**Color Key**

RESULT < 1/2 AL
1/2 AL < RESULT < AL
RESULT > AL

**Reporting Limit (µg/kg)**  
50

"-" not detected above reporting limit

*Disclaimer:* This information is provided as a service and makes no claims of efficacy and/or safety of this product. Results are applicable only for the sample(s) analyzed and for the specific analysis conducted. This report is for informational purposes only and should not be used to diagnose, treat, or prevent any medical-related symptoms. The statements and results herein have not been approved and/or endorsed by the FDA.

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full, without the written consent of Felling Analytical Services and Technology (F.A.S.T.), LLC

## CERTIFICATE OF ANALYSIS

<b>Order Type:</b> CBD	<b>Customer ID:</b> 32	<b>Harvest/Extract Lot:</b> None
<b>Order ID:</b> OR2019-910	<b>Customer Name:</b> CBD Plus USA	<b>Harvest/Extract Batch:</b> None
<b>Cultivar (Strain):</b> Banana Kush + CRD 5018	<b>Lab ID:</b> SA2019-3127	<b>Sample Matrix:</b> Concentrate
<b>Sample Date:</b> 04/02/2019	<b>Date Received:</b> 04/02/2019	<b>Date Completed:</b> 04/05/2019

**Remarks:**

### MICROBIOLOGICAL PROFILE

<b>Analysis Date/Time:</b> 04/02/2019 2300	<b>Method:</b> Hardy Diagnostics CompactDry	<b>Deviations from SOP:</b>
<b>Analyst:</b> OL	<b>Instrument:</b>	None

<u>Bacteria/Microbe</u>	<u>Result (CFU/g)</u>	<u>Action Level (CFU/g)</u>
Aerobic Plate Count, Total	NT	100
Coliforms, Total	Absent	100
Escherichia Coli (E. Coli)	Absent	1
Mold	Absent	10000
Yeast	Absent	10000
Salmonella spp.	Absent	1



Abbreviations: EC - Escherichia Coli, CFU - Colony-Forming Unit, RL - Reporting Limit, AL - Action Level, NT - Not Tested

### Color Key

RESULT < 1/2 AL
1/2 AL < RESULT < AL
RESULT > AL

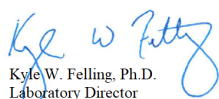
**Reporting Limit (CFU/g)**  
1

"-" not detected above reporting limit

*Disclaimer:* This information is provided as a service and makes no claims of efficacy and/or safety of this product. Results are applicable only for the sample(s) analyzed and for the specific analysis conducted. This report is for informational purposes only and should not be used to diagnose, treat, or prevent any medical-related symptoms. The statements and results herein have not been approved and/or endorsed by the FDA.

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Felling Analytical Services and Technology (F.A.S.T.), LLC

  
 Kyle W. Felling, Ph.D.  
 Laboratory Director