


# Certificate of Analysis

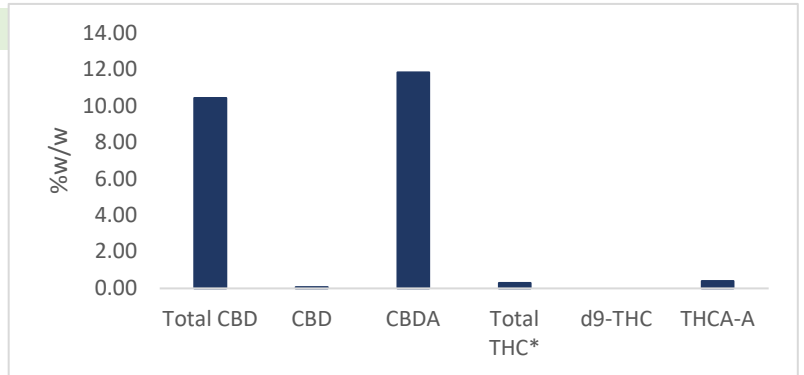
<b>Client:</b> <i>Serious Dirt Botanics, Inc.</i>	
<b>Email:</b> <a href="mailto:hello@seriousdirtbotanics.com">hello@seriousdirtbotanics.com</a>	
<b>Description:</b> Dried Flower	
<b>Cultivar:</b> Midwest	
<b>Report:</b> NEP-RPT.AKG31802.01	
<b>Report Date:</b> 19-Nov-19	

<b>Approved By:</b> Keith Griswold, M.S.	<b>Signature:</b>	<b>Date:</b>
<b>Title:</b> Analytics & Formulations Dir.		12-Dec-2019

Report Summary	Purpose	Test Method	Result Status
Cannabinoids	Potency/Compliance	C5210-HPLCUV	PASS
Water Activity	Microbiological	ASTM D8196-18	PASS
Moisture Content	Microbiological	ASTM D8196-18	PASS
Minor Cannabinoids	Quality	C6198 LCMSMS	PASS
Terpenes	Quality	C5933 HSGCMS	PASS
Mycotoxins	Microbiological/Safety	C5838 LCMSMS/AOAC 2007.01	PASS
Pesticides	Safety	C5838 LCMSMS/AOAC 2007.01	PASS
Heavy Metals	Safety	ICP-MS	PASS
Foreign Matter/Mold	Microbiological/Safety	C2013 Macroscopic	PASS

<b>Method:</b> Cannabinoids-Limited Screen by HPLC-UV	<b>Analyst:</b> KG	<b>Analysis Date:</b> 4-Nov-2019
<b>Method ID:</b> NEP-CERF-5210 (internal)		
<b>%W/W</b>		

<b>Total CBD</b>	10.43
<b>CBD</b>	0.05
<b>CBDA</b>	11.84
<b>Total THC*</b>	0.28
<b>d9-THC</b>	< 0.05
<b>THCA-A</b>	0.39



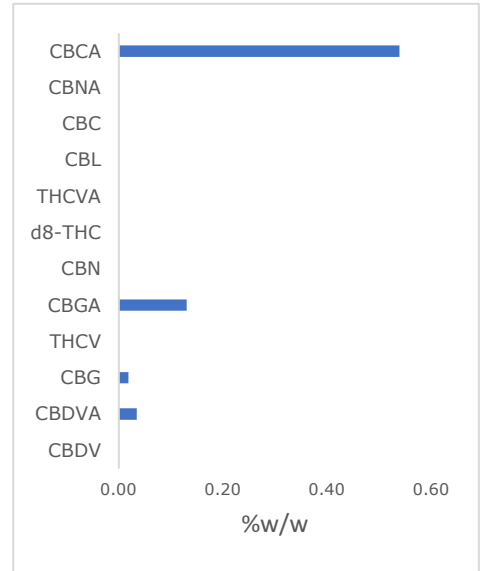
**Measurement Uncertainty (95% CI)** ± 0.04

\*Total CBD/THC calculated using the molar ratio constant 0.877; results reported on a "dry basis." Total THC is the measurement of d9-THC on decarboxylated flower (heated at 90 °C for 4 h).

<b>Method:</b> Water Activity/Moisture Content	<b>Analyst:</b> KT	<b>Analysis Date:</b> 4-Nov-2019
<b>Method ID:</b> ASTM D8196-18		
<b>Water Activity</b>	<b>0.607</b>	<b>Aw</b>
<b>Moisture Content</b>	<b>13.2</b>	<b>%</b>

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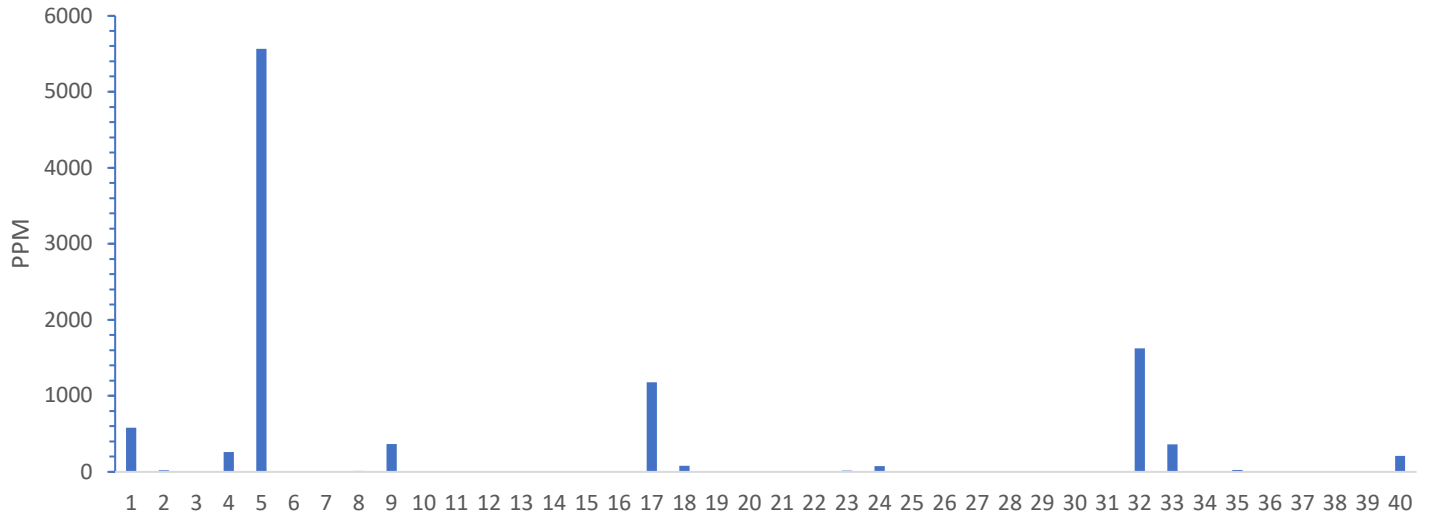
Method:	Cannabinoids-Full Screen by LCMSMS		Analyst:	KG	Analysis Date:	4-Nov-2019
Method ID:	C6198 (internal)					
Cannabinoid	%W/W	MG/G				
CBDV	<0.01	-				
CBDVA	0.04	0.35				
CBG	0.02	0.19				
THCV	<0.01	-				
CBGA	0.13	1.31				
CBN	<0.01	-				
d8-THC	<0.01	-				
THCVA	<0.01	-				
CBL	<0.01	-				
CBC	<0.01	-				
CBNA	<0.01	-				
CBCA	0.54	5.39				
<b>Total Minor Cannbinoids</b>	<b>0.72</b>	<b>%w/w</b>				



# Certificate of Analysis

<b>Method:</b>	Terpen Profile by HS-GCMS	<b>Analyst:</b>	ML	<b>Analysis Date:</b>	30-Oct-2019
<b>Method ID:</b>	NEP-CERF-5933 (internal)				

## Terpene Profile



Analyte	PPM	Analyte	PPM		
1	a-Pinene	578	21	Isoborneol	< 2
2	Camphene	21	22	Menthol	< 2
3	Sabinene-	< 2	23	endo-Borneol	15
4	b-Pinene	258	24	a-Terpineol	75
5	b-Myrcene	5564	25	g Terpeneol	< 2
6	.a-Phellandrene	< 2	26	Nerol	< 2
7	Carene	< 2	27	Pulegone	< 2
8	a-Terpinene	12	28	Geraniol	< 2
9	D-Limonene	363	29	Geranyl acetate	< 2
10	o-Cymene	< 2	30	a-Cedrene	< 2
11	Eucalyptol	2	31	(E)-b-Famesene	< 2
12	b-Ocimene	< 2	32	Caryophyllene	1622
13	gTerpinene	< 2	33	a-Humulene	360
14	Terpinolene	8	34	trans-Neradiol	< 2
15	Sabinene Hydrate	< 2	35	cis-Neradiol	24
16	Fenchone	7	36	Valencene	< 2
17	Linalool	1178	37	Guaiol	< 2
18	Fenchol	80	38	Caryophyllene Oxide	< 2
19	Isopulegol	< 2	39	Cedrol	< 2
20	Camphor	< 2	40	a-Bisabolol	210

\*Reporting limit is 2 parts per million; results reported on a dry basis.

Total 10377  
Total (%w/w) 1.04

# Certificate of Analysis

Method:	Pesticides & Mycotoxins by LCMSMS		Analyst:	KG		Analysis Date:	4-Nov-2019	
Method ID:	C5838/AOAC 2007.01		MRL			Status		
Mycotoxins	Units	Detection Limit	MRL	Results	Status			
Ochratoxin A	ppb	2	20	< 20	PASS			
Aflatoxin B1	ppb	2						
Aflatoxin B2	ppb	2						
Aflatoxin G1	ppb	2						
Aflatoxin G2	ppb	2						
Sum of Aflatoxins	ppb			< 20	PASS			
Pesticide	Units	Limit of Detection	MRL	Results	Status			
Bifenazate	ppm	0.1		0.2	Non Detect	PASS		
Bifenthrin	ppm	0.05		0.05	Non Detect	PASS		
Baythroid (Cyfluthrin)	ppm	0.05		1.0	Non Detect	PASS		
Etoxale	ppm	0.05		0.2	Non Detect	PASS		
Imazalil	ppm	0.05		0.2	Non Detect	PASS		
Imidacloprid	ppm	0.05		0.4	Non Detect	PASS		
Systhane (Myclobutanil)	ppm	0.05		0.2	Non Detect	PASS		
Spiromesifen	ppm	0.05		0.2	Non Detect	PASS		
Trifloxystrobin	ppm	0.05		0.2	Non Detect	PASS		

*Reporting limit for all mycotoxins screened is 2 parts per billion (ppb); MRL - maximum residual limit allowed by EPA/Orgeon Regulations*

Method:	Heavy Metals by ICP-MS		Analyst:	CB		Analysis Date:	8-Nov-2019	
Report ID:	C-191022AY		MRL			Status		
Heavy Metal	Symbol	Units	Action Limit	Result	Status			
Arsenic	As	ppb	200	11	PASS			
Cadmium	Cd	ppb	200	160	PASS			
Mercury	Hg	ppb	100	< 0.1	PASS			
Lead	Pb	ppb	500	31	PASS			

*Reporting limit is 0.1 ppb; results reported on a dry basis; MRL - maximum residual limit allowed by Oregon State Regulations*

# Certificate of Analysis

Method:	Foreign Matter/Mold		Analyst:		Analysis Date:	
Method ID:	NEP-CERF-2013 (internal)		KG	6-Nov-2019		
Foreign Matter	Sample	Action Limit	Result			
Organic	As Received	Detection of Fungal Growth	PASS			
	Milled/10 Mesh Sieve	AHPA 2014	PASS			
Non-Organic	As Received	AHPA 2014	PASS			
	Milled/10 Mesh Sieve	AHPA 2014	PASS			



Fungal growth detected by macroscopic inspection of sample as received; additional foreign organic matter determined by milling the sample and sieving through a 10 mesh screen. AHPA defines foreign matter as no more than 5.0% of stems 3 mm or more in diameter and not more than 2.0% of other foreign matter.

**Comments:**

**Testing Info:** All testing is performed by either industry accepted methodology or internal methodology developed, validated and controlled under AOAC and ICH guidelines. Northeast Analytics is a participant in second party sponsored proficiency testing and is currently in the process of receiving ISO/IEC 17025/2017 accreditation. Please direct any inquiries regarding results in this report for additional testing capabilities to [analytics@northeastprocessing.com](mailto:analytics@northeastprocessing.com).