



12025 NE Marx St. Portland, OR 97220  
503-253-3511 / [www.greenleaflab.org](http://www.greenleaflab.org)

Green Leaf Lab proudly follows TNI 2009  
Quality Standards

## Granddaddy Purple

*Western Oregon Botanicals*

Sample ID: G8B0224-04

Date Sampled: 02/23/18 00:00

Date Accepted: 02/23/18

Results Valid Until: 02/23/19

### Results at a Glance

Total THC : 18.55 %

Water Activity : 0.33 PASS

Percent Moisture : 5.72 % PASS

Total Terpenes : 4.110 % PASS

Eric Wendt  
Chief Science Officer - 2/28/2018



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Western Oregon Botanicals

Sample ID: G8B0224-04

Matrix: Useable Marijuana

Date Sampled: 02/23/18 00:00

Date Accepted: 02/23/18

Results Valid Until: 02/23/19

Test RFID: 1A40103000098BF000000892

Source RFID: 1A40103000098BF000000885

### Potency Analysis

Date/Time Extracted: 02/26/18 13:46

Analysis Method/SOP: 215

Date/Time Analyzed: 02/26/18 18:59

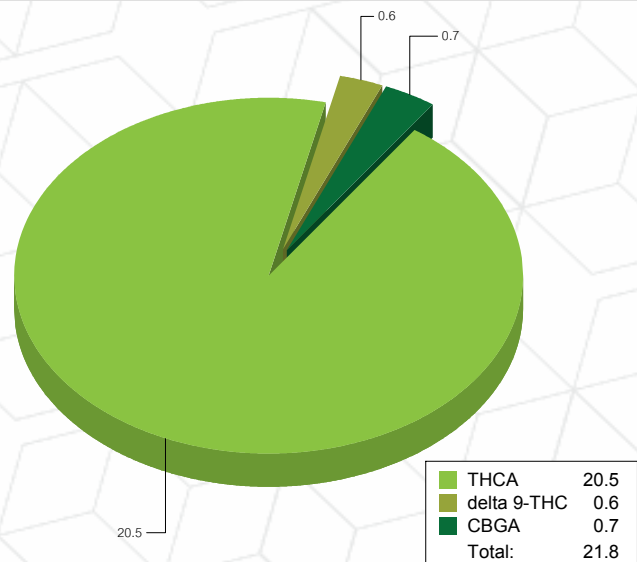
Batch Identification: 1809008

#### Cannabinoids (% weight)

#### Moisture Adjusted

#### Cannabinoids Profile

Total THC ((THCA*0.877)+Δ9)		18.55
Total CBD ((CBDA*0.877)+CBD)		< LOQ
THCA	19.28	20.45
delta 9-THC	0.5730	0.6078
delta 8-THC	< LOQ	< LOQ
THCV	< LOQ	< LOQ
CBGA	0.6956	0.7379
CBDA	< LOQ	< LOQ
CBD	< LOQ	< LOQ
CBDV	< LOQ	< LOQ
CBN	< LOQ	< LOQ
CBG	< LOQ	< LOQ
CBC	< LOQ	< LOQ
Total Cannabinoids	20.55	21.80



5.72% Moisture

### Water Activity

Date/Time Extracted: 02/26/18 12:54

Analysis Method/SOP: 102

Date/Time Analyzed: 02/26/18 12:54

Water Activity: 0.33 at 24°C

### Moisture

Date/Time Extracted: 02/27/18 00:00

Analysis Method/SOP: 103

Date/Time Analyzed: 02/27/18 00:00

Moisture: 5.72 %

<LOQ - Results below the Limit of Quantitation - Compound not detected. LOQ = 5 PPM (mg/L)

For Potency only delta 9-THC, THCA, CBD, CBDA are ORELAP accredited analytes.

Water Activity Action Level is 0.65. Results above 0.65 fail state testing requirements and will be highlighted Red.

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### Terpene Analysis

Date/Time Extracted: 02/26/18 13:46

Analysis Method/SOP: 204

Date/Time Analyzed: 02/28/18 08:06

Monoterpenes	Results in %	Monoterpenes	Results in %
Camphene	< LOQ	Camphor	< LOQ
3-Carene	< LOQ	alpha-Cedrene	< LOQ
Cedrol	< LOQ	Endo-fenchyl alcohol	< LOQ
Eucalyptol	< LOQ	Fenchone	< LOQ
Geraniol	< LOQ	Geranyl acetate	< LOQ
Hexahydrothymol	< LOQ	Isoborneol	< LOQ
Isopulegol	< LOQ	Limonene	0.09415
Linalool	0.09450	p-Mentha-1,5-diene	< LOQ
beta-Myrcene	2.762	Ocimene	0.2307
alpha-Pinene	0.4436	beta-Pinene	< LOQ
Pulegone	< LOQ	Sabinene	< LOQ
Sabinene hydrate	< LOQ	gamma-Terpinene	< LOQ
alpha-Terpinene	< LOQ	Terpineol	0.006208
Terpinolene	< LOQ	Nerol	< LOQ
Borneol	< LOQ		
Sesquiterpenes	Results in %	Sesquiterpenes	Results in %
alpha-Bisabolol	0.06129	beta-Caryophyllene	0.3094
Caryophyllene Oxide	< LOQ	Guaiol	< LOQ
alpha-Humulene	0.09129	Nerolidol	0.01628
Valencene	< LOQ		
<b>Total Terpenes</b>	<b>4.110 %</b>		

#### About your terpene profile

Terpenes are aromatic molecules found in plant resins. They are not only responsible for the many unique smells of Cannabis, but they accentuate the holistic effect of cannabinoids as well. Terpene profiles can be utilized to quantify strong flavor, identify different strains and achieve therapeutic benefits.

Green Leaf Lab's terpene analysis quantifies the 36 most common terpenes found in Cannabis sativa.

#### Monoterpenes:

All of the monoterpenes are very similar in chemical structure, containing 10 carbons and 6 hydrogens. Although, they are similar, the varying arrangements produce distinct aromas. Changes such as oxidation and rearrangement produce monoterpenoids which will have a different chemical formula.

Monoterpenes are more volatile than sesquiterpenes; the aromas tend to be stronger and they are more prone to being lost by heating and oxidation. Myrcene and Limonene are examples of an acyclic and cyclic monoterpene, respectively. They both share a basic structure containing a backbone of 10 carbon atoms, however arranged uniquely.

#### Sesquiterpenes:

The sesquiterpenes are a more complex class of terpenes. They are also generally aromatic, but are also heavier and less volatile. Thus, they often remain after some of the more volatile monoterpenes have broken down under heat or oxidation.

<LOQ - Results below the Limit of Quantitation - Compound not detected Terpene Analysis is not ORELAP Accredited.

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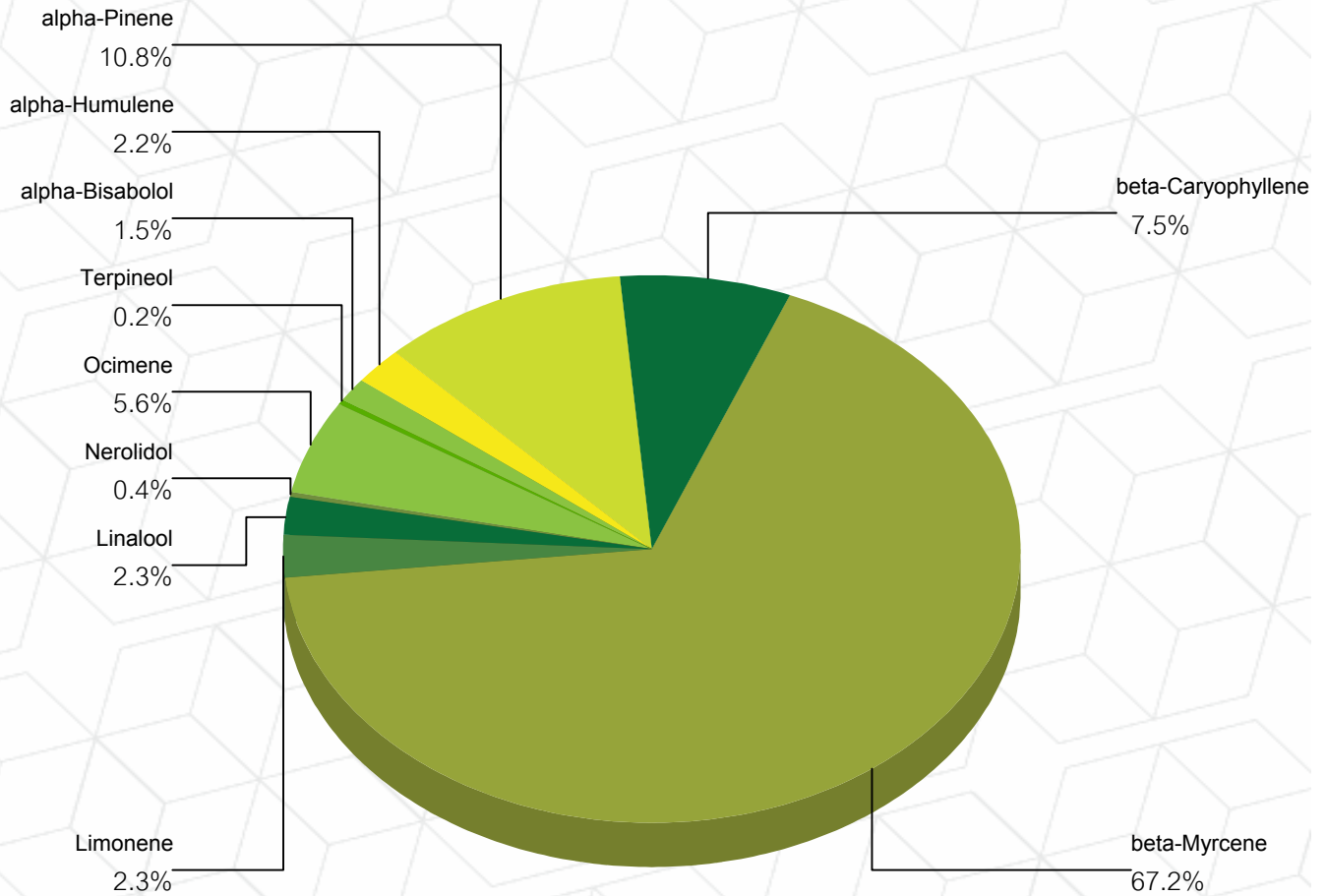
Sample ID: G8B0224-04

Matrix: Useable Marijuana

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### Terpene Profile



Percentage of Total Terpenes Identified

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# Quality Control Potency

Batch: 1809008 - 215-Useable

Blank(1809008-BLK1)						
Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed
THCA	< LOQ	0.1340	%		02/26/18 13:46	02/26/18 17:38
delta 9-THC	< LOQ	0.1340	%		02/26/18 13:46	02/26/18 17:38
delta 8-THC	< LOQ	0.1340	%		02/26/18 13:46	02/26/18 17:38
CBGA	< LOQ	0.1340	%		02/26/18 13:46	02/26/18 17:38
THCV	< LOQ	0.1340	%		02/26/18 13:46	02/26/18 17:38
CBDA	< LOQ	0.1340	%		02/26/18 13:46	02/26/18 17:38
CBD	< LOQ	0.1340	%		02/26/18 13:46	02/26/18 17:38
CBDV	< LOQ	0.1340	%		02/26/18 13:46	02/26/18 17:38
CBN	< LOQ	0.1340	%		02/26/18 13:46	02/26/18 17:38
CBG	< LOQ	0.1340	%		02/26/18 13:46	02/26/18 17:38
CBC	< LOQ	0.1340	%		02/26/18 13:46	02/26/18 17:38

LCS(1809008-BS1)						
Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed
THCA	118	0.0034	%	80-120	02/26/18 13:46	02/26/18 17:50
delta 9-THC	110	0.0034	%	80-120	02/26/18 13:46	02/26/18 17:50
CBDA	114	0.0034	%	80-120	02/26/18 13:46	02/26/18 17:50
CBD	110	0.0034	%	80-120	02/26/18 13:46	02/26/18 17:50

LCS(1809008-BS2)						
Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed
THCA	115	0.0034	%	80-120	02/26/18 13:46	02/26/18 18:01
delta 9-THC	110	0.0034	%	80-120	02/26/18 13:46	02/26/18 18:01
CBDA	114	0.0034	%	80-120	02/26/18 13:46	02/26/18 18:01
CBD	110	0.0034	%	80-120	02/26/18 13:46	02/26/18 18:01

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