



### Certificate of Analysis

Name of Client:	Lumin
Sample Name:	Tropical 3000 mg
Date of Analysis	6/20/2019
Batch Number:	062019-1

Results		
	wt %	mg/g
Cannabidiolic acid - CBDA	0.03%	0.3
Cannabigerol - CBG	0.20%	2.0
Cannabidiol - CBD	11.17%	111.7
Cannabinol - CBN	ND	ND
Delta-9-Tetrahydrocannabinol - d9-THC	0.22%	2.2
Tetrahydrocannabinolic acid - THCA	0.00%	0.0

CBD and THC Equivalents		
	wt %	mg/g
CBD Equivalents	11.20%	112.0
THC Equivalents	0.22%	2.2

<b>CBD:THC Ratio</b>	<b>51:1</b>
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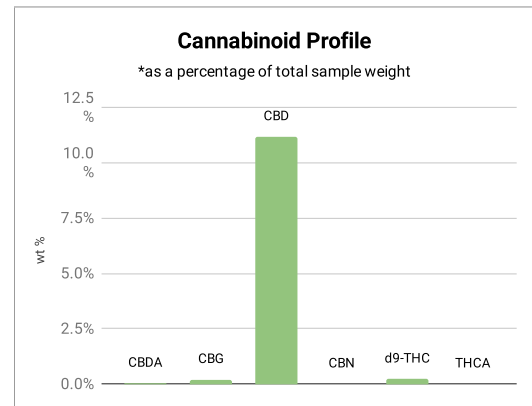
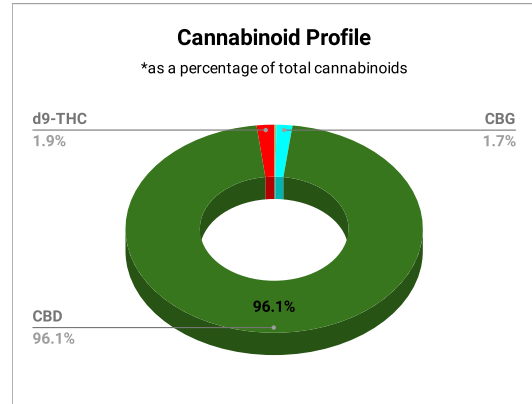
#### CBD and THC Equivalents Explained

CBD Equivalents = 0.877\*CBDA + CBD  
 THC Equivalents = 0.877\*THCA + d9-THC

Upon heating CBDA and THCA transform into CBD and d9-THC, respectively. This process is called decarboxylation because a carboxyl group is lost in the process. It is standard to calculate the actual weight percent/concentration of both CBD and THC as the weight percent/concentration assuming all of the CBDA and THCA are decarboxylated.

Lab Personnel Signature:	<i>Griffin Lynch</i>
Date:	6/20/2019

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#### Details of Testing

High performance liquid chromatography (HPLC) was used to determine concentrations of CBD, CBG, CBDA, CBN, d9-THC, and THCA. Any result reported back as ND (not detected) is below our lower limit of detection. Our lower limit of detection is 0.005%. Results are reported on a dry weight basis.

#### Disclaimer

These results are solely for the purposes of research and development. This report is only for the sample listed above and may not be reproduced except in its entirety.