



# Certificate of Analysis

OG LABORATORIES LLC  
109 W Hillsboro Blvd  
Deerfeld Beach  
FL, USA 33441

Sample: 1870C4L0062.6013

Strain: CBD Isolate

Batch Size: - 30ml

Sample Received: 03/14/2019; Report Created: 03/16/2019;

## Mango Vape Oil

Concentrates & Extracts, Cannabinoid Isolate

Dear Valued Colleague,

Thank you for selecting C4 Laboratories. Our goal at C4 is to provide reliable data that is interpreted within the appropriate physiological context, to ultimately empower patients to use cannabis medicine more effectively. The data within this report are the result of various analytical methods that have been developed by the team of scientists at C4 Laboratories. For the characterization and quantification of 21 terpene compounds and residual solvents we use Head-Space Gas Chromatography with Flame Ionization Detection (HS-GC-FID). Additionally, Ultra High Performance Liquid Chromatography (UHPLC) is used for the characterization and quantification of the 10 major phytocannabinoids found in cannabis. All data are collected in concert with proper quality assurance/quality control measures (QA/QC), including the use of intermittent analytical blanks, sample spikes, and commercial standards.

As an additional measure of quality control, we provide a historical reference (when available) to analytical results from an equivalent strain of cannabis/cannabis product to draw comparison. We understand that within an individual strain that results may vary as a result of variances in sample homogeneity, analytical methodology, crop conditions, genetic drift, and/or gene flow during hybridization. However, such a comparison can provide valuable insight into sample integrity and/or the phenotypic identity of the analyzed sample.

Additionally, we have interpreted all data within the physiological context provided to us by the growing body of peer-reviewed scientific research studies. Key factors to consider when determining how to most appropriately use a particular strain of cannabis include, but are not limited to, an evaluation of the possible cannabinoid/terpene synergies and an analysis of the various cannabinoid ratios, particular the CBD-A/THC-A, CBD/THC and CBG/CBN ratios. Using the scientific interpretations provided within this report, consult a physician prior to adopting a medical cannabis regimen for the treatment of specific medical conditions.

It is important to note that when analyzing cannabis there can exist natural variability of cannabinoid and terpene concentrations within individual plants. Cannabinoid concentrations in cannabis flower have been found to increase distally with respect to the root mass. As such, the analysis of multiple samples from any plant of interest is recommended.

Thank you again for your confidence in C4 Laboratories. We strive to be an authority on cannabis education, targeted therapies and patient protection. Also, as a research laboratory, we hope to discover novel cannabis constituents through our efforts with academic research programs in the C4 Cannabinomics Collaborative. For more information about how you can collaborate with our research team please visit our website at [www.c4lab.com](http://www.c4lab.com).



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Lic#

Aaron Hicks  
Director of Laboratory Operations



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Sample: 1870C4L0062.6013

Batch Size: - 30 ml

Sample Received: 03/14/2019; Report Created: 03/16/2019; Expires: 10/07/2019

## Mango Vape Oil

Concentrates & Extracts, Cannabinoid Isolate



**0.0%**  
Total THC

**0.52%**  
Total CBD

**0** : **308 MG**  
THC : CBD

## Cannabinoids

**Pass**  
Foreign Matter

Analyte	LOQ	Mass	Mass	Std. Dev.
	%	%	mg/g	
THCa	0.010	ND	ND	
Δ9-THC	0.010	ND	ND	
CBD	0.010	0.52	308 MG	
CBDa	0.010	ND	ND	
CBC	0.010	ND	ND	
CBG	0.010	ND	ND	
CBN	0.010	ND	ND	
THCV	0.010	ND	ND	
Δ8-THC	0.010	ND	ND	
CBDV	0.010	ND	ND	
<b>Total</b>		<b>0.52</b>	<b>308 MG</b>	

Total THC = THCa \* 0.877 + d9-THC

Total CBD = CBDa \* 0.877 + CBD

LOQ = Limit of Quantitation; NR = Not Reported; Unless otherwise stated all quality control samples performed within specifications established by the Laboratory.



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Aaron Hicks  
Director of Laboratory Operations

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