

Certificate of Analysis

Final Product: Cannabidiol Isolate
Date of Manufacture: January 2020

Lot Number: IL1912I-056



Test	Methodology		Specification	Test Results (Average)*	Pass/Fail
Visual	Color and Appearance	TM-004 (Visual)	White, crystalline powder free of particulates	Conforms	Pass
Cannabidiol Identification		TM-001 (DAD Retention Time)	Retention time of the primary peak in sample chromatogram matches that in the analytical reference standard.	Conforms	Pass
		TM-001 (DAD UV Spectrum)	UV Spectrum of the primary peak in sample chromatogram matches that in the analytical reference standard.	Conforms	Pass
CBD Potency	CBD(%w/w)	TM-001 (HPLC - DAD)	>=98 %w/w	98.0	Pass
THC Content	THC(%w/w)	TM-001 (HPLC - DAD)	≤0.05 %w/w ¹	ND	Pass
	THCA(%w/w)	TM-001 (HPLC - DAD)	≤0.05 %w/w ¹	ND	Pass
Related Cannabinoid Content	CBDA(%w/w)	TM-001 (HPLC - DAD)	Report	ND	NA
	CBN(%w/w)	TM-001 (HPLC - DAD)	Report	ND	NA
	CBDV(%w/w)	TM-001 (HPLC - DAD)	Report	0.343	NA
	CBG(%w/w)	TM-001 (HPLC - DAD)	Report	ND	NA
	Other (Highest RC)(%w/w)	TM-001 (HPLC - DAD)	Report	0.205	NA
	Total (RC)(%w/w)	TM-001 (HPLC - DAD)	Report	0.548	NA
Total Cannabinoids	(CBD plus total RCs)(%w/w)	TM-001 (HPLC - DAD)	Report	98.598	NA
Residual Solvents	Pentane(ppm)	TM-005 (HS-GC - FID)	≤500 ppm	132	Pass
	Acetone(ppm)	TM-005 (HS-GC - FID)	≤500 ppm	ND	Pass
	Isopropyl Alcohol(ppm)	TM-005 (HS-GC - FID)	≤500 ppm	ND	Pass
	Hexane(ppm)	TM-005 (HS-GC - FID)	≤25 ppm	ND	Pass

*Number of replicates: 18

¹TM-001 LOQ of 0.05% w/w for related cannabinoids.

²Full list of individual pesticide residues on file, Eurofins LOQ of 0.1 ppm for individual residues.

³Contract Testing performed by Eurofins BioDiagnostics.

Data Reviewed and Approved by: Beth Grant
1/23/2020 2:26:17 PM

Global Markets Can. / Int'l Brand Mgt.

UC821 Isolate

Notes:

Report Date: 8/20/2019

Sample Type: Isolate

Sample #: 12304

Cannabinoid Profile

Compound	mg/gram	% by weight	Cannabinoid % Distribution	
CBDV	4.63	0.46	0.45%	
CBDA	ND	ND	0.00%	
CBG	ND	ND	0.00%	
CBD	1026.43	102.64	99.55%	
CBN	ND	ND	0.00%	
THC	ND	ND	0.00%	
CBC	ND	ND	0.00%	
THCA	ND	ND	0.00%	

THC Maximum ND **ND** Any THC present fell below the lower limit of quantitation.
 CBD Maximum 1026.43 **100 %** A 1 gram package contains 1026.43 mg CBD

* All cannabinoids in their acid forms (ending in "A") are convertible to their non-acid forms via a decarboxylation process (heating). The THC and CBD maximum values reported above are the maximum theoretical amounts of THC and CBD the tested product would have if it were fully decarboxylated.

** Maximum % THC values exceeding three-tenths of one percent (0.3%) on a dry weight basis do not qualify as industrial hemp.

*** ND Indicates that the amount present was below the lower limit of quantitation.

Total Potential THC/CBD is calculated using the following formulas to take into account the loss of a carboxyl group during decarboxylation step.

Total THC = THC + (THCa *(0.877)) and Total CBD = CBD + (CBDa *(0.877))

% = % (w/w) = Percent (Weight of Analyte / Weight of Product).

MacKenzie Keller
VP of Laboratory Operations