

CERTIFICATE OF ANALYSIS

Product Code: 75407 **Manufacturing Date:** 22-MAR-2019
Name of Product: Cannabidiol **Retest Date:** 22-MAR-2020
Batch Number: 19124053

Test	Limit	Result
Appearance	White to slightly beige (or slightly yellowish brown / slightly yellow / slightly brown) crystalline powder	pass
Identification		
IR	Corresponds to reference	pass
HPLC	Corresponds to reference	pass
Assay (HPLC)	97.0 % to 102.0 %	100.3 %
Chromatographic purity (HPLC)		
Olivetol	NMT 0.15 %	0.00 %
4-Monobromo-CBD	NMT 0.15 %	0.00 %
Delta-9-THC	NMT 0.10 %	0.00 %
Each unspecified impurity	NMT 0.10 %	0.00 %
Total impurities	NMT 1.0 %	0.0 %
Water content	NMT 0.5 %	<0.1 %
Residue on ignition	NMT 0.2 %	0.0 %
Specific optical rotation	-140 degree to -122 degree	-131 degree
Residual solvents		
Methanol	NMT 3000 ppm	0 ppm
Isooctane	NMT 5000 ppm	<498 ppm
Isopropanol	NMT 5000 ppm	0 ppm
n-Heptane	NMT 5000 ppm	0 ppm
Dichloromethane	NMT 600 ppm	0 ppm
Triethylamine	NMT 5000 ppm	0 ppm
D9-THC level on ppm basis	For information	N.D.

Conclusion: all limits are met

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The manufacturing of this batch, including packaging and quality control, is in accordance with the GMP requirements.

Product Code: 11514

Residual solvent statement:

Based on knowledge of the manufacturing process and controlled handling, shipping, and storage of the above mentioned compound, there is no potential that the specific toxic solvents exceed the limits listed in the current USP <467> RESIDUAL SOLVENTS. The material, if tested, will comply with established standards.

Batch approved and released on: 08-MAY-2019