



Critical Berries

Sample ID: G4K0262-04

Matrix: Industrial Hemp

Test ID: 5034330

Source ID:

Date Sampled: 11/20/24

Date Accepted: 11/20/24

Fern Valley Farms
fernvalleycbd@gmail.com

Results at a Glance

Total THC : 0.59 %

Total CBD : 17 %

Total CBG : <LOQ (0.0009% dry) %

Percent Moisture : 7.79 % PASS

Total Terpenes : 2.170 % PASS



Critical Berries

Sample ID: G4K0262-04

Matrix: Industrial Hemp

Test ID: 5034330

Source ID:

Date Sampled: 11/20/24

Date Accepted: 11/20/24

Fern Valley Farms
fernvalleycbd@gmail.com

Potency Analysis

Date/Time Extracted: 11/22/24 09:18

Analysis Method/SOP: 215

Batch Identification: 2447063

	LOQ (%)	% by Wt.	mg/g	Cannabinoids Profile												
Total THC	0.010	0.59	5.9	<table><tr><td>THCA</td><td>0.7</td></tr><tr><td>CBDA</td><td>18.8</td></tr><tr><td>CBD</td><td>0.7</td></tr><tr><td>CBC</td><td>0.1</td></tr><tr><td>CBDVA</td><td>0.0</td></tr><tr><td>Total:</td><td>20.3</td></tr></table>	THCA	0.7	CBDA	18.8	CBD	0.7	CBC	0.1	CBDVA	0.0	Total:	20.3
THCA	0.7															
CBDA	18.8															
CBD	0.7															
CBC	0.1															
CBDVA	0.0															
Total:	20.3															
Total CBD	0.009	17	170													
Total CBG	0.0009	< LOQ	< LOQ													
THCA	0.0005	0.67	6.7													
delta 9-THC	0.0005	< LOQ	< LOQ													
delta 8-THC	0.005	< LOQ	< LOQ													
THCV	0.005	< LOQ	< LOQ													
THCVA	0.002	< LOQ	< LOQ													
CBD	0.002	0.67	6.7													
CBDA	0.002	19	190													
CBDV	0.005	< LOQ	< LOQ													
CBDVA	0.002	0.038	0.38													
CBN	0.003	< LOQ	< LOQ													
CBG	0.0009	< LOQ	< LOQ													
CBGA	0.0009	< LOQ	< LOQ													
CBC	0.010	0.061	0.61													

Moisture

Date/Time Extracted: 11/22/24 13:19

Analysis Method/SOP: 103

Moisture: 7.79 %

Action Level: 90%

Potency results are reported on a dry weight basis.

Total THC = delta 9-THC + (THCA * 0.877)

Total CBD = CBD + (CBDA * 0.877)

Total CBG = CBG + (CBGA * 0.878)

LOQ=Limit of Quantification, the lowest measurable concentration of an analyte.

THCA, delta 9-THC, delta 8-THC, CBDA and CBD are accredited by TNI 2016 and ISO 17025



Critical Berries

Sample ID: G4K0262-04

Matrix: Industrial Hemp

Test ID: 5034330

Source ID:

Date Sampled: 11/20/24

Date Accepted: 11/20/24

Fern Valley Farms
fernvalleycbd@gmail.com

Terpene Analysis by GCMS

Date/Time Extracted: 11/22/24 09:18

Analysis Method/SOP: 204

Date/Time Analyzed: 11/22/24 22:46

Analyte	Result	LOD	LOQ	Units	Analyte	Result	LOD	LOQ	Units
(-)-Borneol	< LOQ	0.002	0.005	mg/g	(+)-Borneol	< LOQ	0.002	0.005	mg/g
3-Carene	< LOQ	0.002	0.005	mg/g	alpha-Bisabolol	0.23	0.002	0.005	mg/g
alpha-Cedrene	< LOQ	0.002	0.005	mg/g	alpha-Humulene	1.02	0.002	0.005	mg/g
Alpha-Phellandrene	< LOQ	0.002	0.005	mg/g	alpha-Pinene	5.82	0.002	0.005	mg/g
alpha-Terpinene	< LOQ	0.002	0.005	mg/g	alpha-Thujone	< LOQ	0.002	0.005	mg/g
A-Terpineol	0.14	0.002	0.005	mg/g	beta-Caryophyllene	2.23	0.002	0.005	mg/g
beta-Myrcene	5.38	0.002	0.005	mg/g	beta-Pinene	2.52	0.002	0.005	mg/g
Camphene	0.11	0.002	0.005	mg/g	Camphor	< LOQ	0.002	0.005	mg/g
Carvacrol	< LOQ	0.002	0.005	mg/g	Carvone	< LOQ	0.002	0.005	mg/g
Caryophyllene Oxide	0.12	0.002	0.005	mg/g	Cedrol	< LOQ	0.002	0.005	mg/g
Cis-beta-Farnesene	0.56	0.002	0.005	mg/g	Cis-beta-Ocimene	< LOQ	0.002	0.005	mg/g
cis-Nerolidol	0.63	0.002	0.005	mg/g	Citral	< LOQ	0.002	0.005	mg/g
Citronellol	< LOQ	0.002	0.005	mg/g	Endo-fenchyl alcohol	0.13	0.002	0.005	mg/g
Eucalyptol	< LOQ	0.002	0.005	mg/g	Farnesol 1	< LOQ	0.002	0.005	mg/g
Farnesol 2	< LOQ	0.002	0.005	mg/g	gamma-Terpinene	< LOQ	0.002	0.005	mg/g
Geraniol	< LOQ	0.002	0.005	mg/g	Geranyl acetate	< LOQ	0.002	0.005	mg/g
Guaiol	< LOQ	0.002	0.005	mg/g	Isoborneol	< LOQ	0.002	0.005	mg/g
Isobornyl Acetate	< LOQ	0.002	0.005	mg/g	Isopulegol	< LOQ	0.002	0.005	mg/g
Limonene	1.19	0.002	0.005	mg/g	Linalool	0.62	0.002	0.005	mg/g
Menthol	< LOQ	0.002	0.005	mg/g	Menthone	< LOQ	0.002	0.005	mg/g
Nootkatone	< LOQ	0.002	0.005	mg/g	Octyl Acetate	< LOQ	0.002	0.005	mg/g
p-Cymene	< LOQ	0.002	0.005	mg/g	Phytane	< LOQ	0.002	0.005	mg/g
Piperitone	< LOQ	0.002	0.005	mg/g	Pulegone	< LOQ	0.002	0.005	mg/g
Sabinene	< LOQ	0.002	0.005	mg/g	Sabinene hydrate	< LOQ	0.002	0.005	mg/g
Safranal	< LOQ	0.002	0.005	mg/g	Squalene	< LOQ	0.002	0.005	mg/g
Terpinen-4-ol	< LOQ	0.002	0.005	mg/g	Terpinolene	< LOQ	0.002	0.005	mg/g
Thymol	< LOQ	0.002	0.005	mg/g	trans-beta-Farnesene	0.51	0.002	0.005	mg/g
trans-beta-Ocimene	< LOQ	0.002	0.005	mg/g	trans-Nerolidol	0.33	0.002	0.005	mg/g
Valencene	0.15	0.002	0.005	mg/g	Verbenone	< LOQ	0.002	0.005	mg/g
Total Terpenes	21.7	0.002	0.005	mg/g					

ND - Compound not detected, <LOQ - Results below the Limit of Quantitation
Terpenes are not Accredited by ORELAP to TNI 2016 and ISO 17025



Critical Berries

Sample ID: G4K0262-04

Matrix: Industrial Hemp

Test ID: 5034330

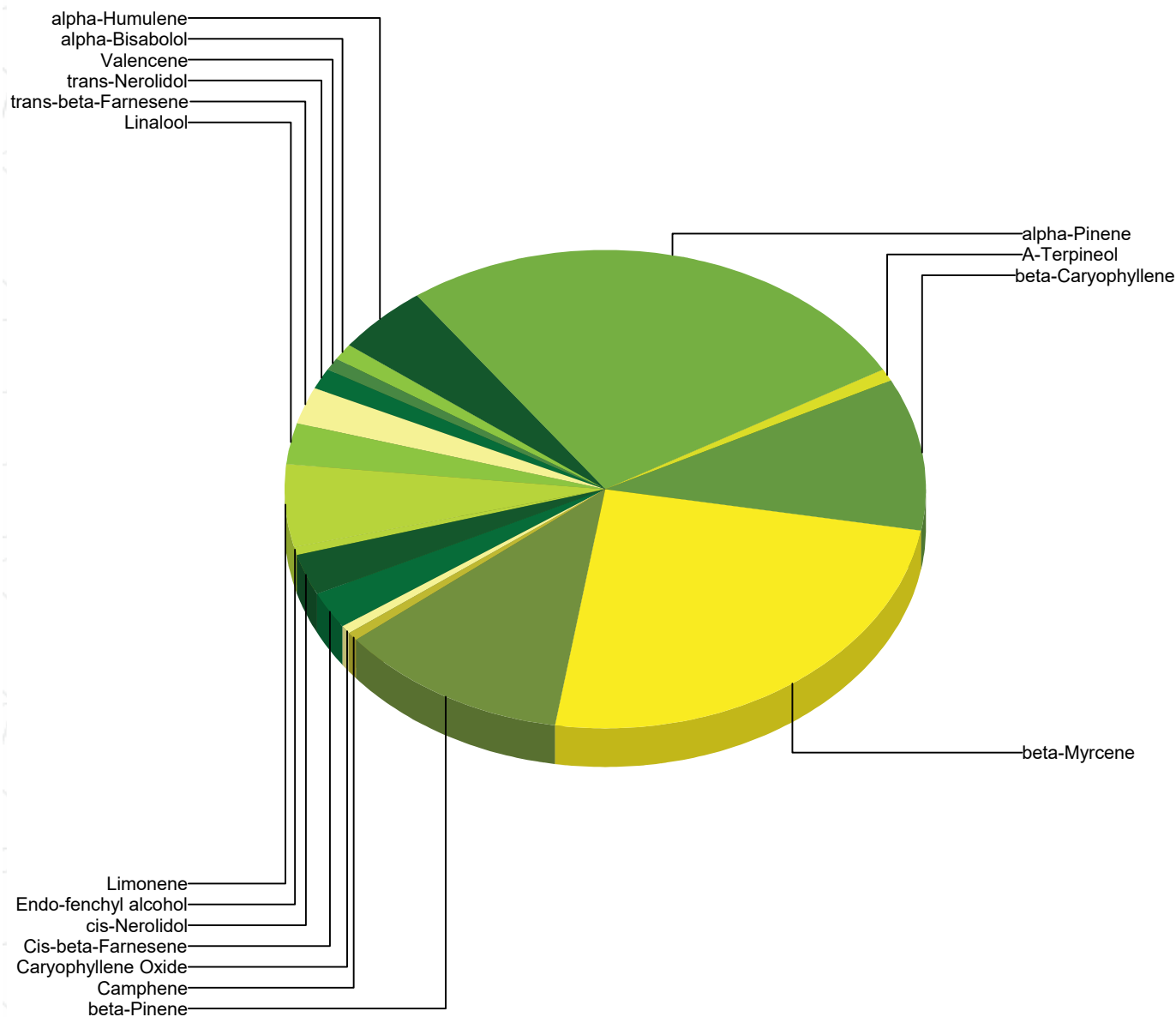
Source ID:

Date Sampled: 11/20/24

Date Accepted: 11/20/24

Fern Valley Farms
fernvalleycbd@gmail.com

Terpene Profile



Percentage of Total Terpenes Identified



Quality Control Potency

Batch: 2447063 - 215-Hemp

Blank(2447063-BLK1)							
Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
THCA	< LOQ	5.000E-4	%		11/22/24 09:18	11/23/24 01:34	
THCA	< LOQ	0.0005	%		11/22/24 09:18	11/23/24 01:34	
delta 9-THC	< LOQ	5.000E-4	%		11/22/24 09:18	11/23/24 01:34	
delta 9-THC	< LOQ	0.0005	%		11/22/24 09:18	11/23/24 01:34	
delta 8-THC	< LOQ	0.004	%		11/22/24 09:18	11/23/24 01:34	
delta 8-THC	< LOQ	0.004490	%		11/22/24 09:18	11/23/24 01:34	
THCV	< LOQ	0.005	%		11/22/24 09:18	11/23/24 01:34	
THCV	< LOQ	0.005055	%		11/22/24 09:18	11/23/24 01:34	
THCVA	< LOQ	0.002	%		11/22/24 09:18	11/23/24 01:34	
THCVA	< LOQ	0.001885	%		11/22/24 09:18	11/23/24 01:34	
CBD	< LOQ	0.0005	%		11/22/24 09:18	11/23/24 01:34	
CBD	< LOQ	5.000E-4	%		11/22/24 09:18	11/23/24 01:34	
CBDA	< LOQ	0.0005	%		11/22/24 09:18	11/23/24 01:34	
CBDA	< LOQ	5.000E-4	%		11/22/24 09:18	11/23/24 01:34	
CBDV	< LOQ	0.005	%		11/22/24 09:18	11/23/24 01:34	
CBDV	< LOQ	0.005000	%		11/22/24 09:18	11/23/24 01:34	
CBDVA	< LOQ	0.002	%		11/22/24 09:18	11/23/24 01:34	
CBDVA	< LOQ	0.001640	%		11/22/24 09:18	11/23/24 01:34	
CBN	< LOQ	0.003	%		11/22/24 09:18	11/23/24 01:34	
CBN	< LOQ	0.002990	%		11/22/24 09:18	11/23/24 01:34	
CBG	< LOQ	0.0008	%		11/22/24 09:18	11/23/24 01:34	
CBG	< LOQ	7.900E-4	%		11/22/24 09:18	11/23/24 01:34	
CBGA	< LOQ	7.900E-4	%		11/22/24 09:18	11/23/24 01:34	
CBGA	< LOQ	0.0008	%		11/22/24 09:18	11/23/24 01:34	
CBC	< LOQ	0.009	%		11/22/24 09:18	11/23/24 01:34	
CBC	< LOQ	0.008965	%		11/22/24 09:18	11/23/24 01:34	

Reference(2447063-SRM1)							
Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
THCA	110	0.0005	%	90-110	11/22/24 09:18	11/23/24 01:57	
THCA	110	5.000E-4	%	90-110	11/22/24 09:18	11/23/24 01:57	
delta 9-THC	99.6	0.0005	%	90-110	11/22/24 09:18	11/23/24 01:57	
delta 9-THC	99.6	5.000E-4	%	90-110	11/22/24 09:18	11/23/24 01:57	
delta 8-THC	94.5	0.004	%	90-110	11/22/24 09:18	11/23/24 01:57	
delta 8-THC	94.5	0.004490	%	90-110	11/22/24 09:18	11/23/24 01:57	
CBD	106	0.0005	%	90-110	11/22/24 09:18	11/23/24 01:57	
CBD	106	5.000E-4	%	90-110	11/22/24 09:18	11/23/24 01:57	
CBDA	106	0.0005	%	90-110	11/22/24 09:18	11/23/24 01:57	
CBDA	106	5.000E-4	%	90-110	11/22/24 09:18	11/23/24 01:57	



Quality Control Terpene Analysis

Batch: 2447063 - 215-Hemp

Blank(2447063-BLK2)							
Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
alpha-Bisabolol	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Camphene	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Camphor	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
3-Carene	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
beta-Caryophyllene	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Caryophyllene Oxide	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
alpha-Cedrene	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Cedrol	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Endo-fenchyl alcohol	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Eucalyptol	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Geraniol	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Geranyl acetate	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Guaiol	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
alpha-Humulene	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Isoborneol	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Isopulegol	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Limonene	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Linalool	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
beta-Myrcene	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
trans-Nerolidol	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
alpha-Pinene	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
beta-Pinene	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Pulegone	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Sabinene	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Sabinene hydrate	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
gamma-Terpinene	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
alpha-Terpinene	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Terpinolene	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Valencene	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Verbenone	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
trans-beta-Farnesene	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
A-Terpineol	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
cis-Nerolidol	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Thymol	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Terpinen-4-ol	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Squalene	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Safranal	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Piperitone	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	



Quality Control Terpene Analysis (Continued)

Batch: 2447063 - 215-Hemp (Continued)

Blank(2447063-BLK2)							
Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
Phytane	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
p-Cymene	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Octyl Acetate	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Nootkatone	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Menthone	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Menthol	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Isobornyl Acetate	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Farnesol 1	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Carvone	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
alpha-Thujone	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Alpha-Phellandrene	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
(+)-Borneol	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
(-)-Borneol	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Carvacrol	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
trans-beta-Ocimene	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Cis-beta-Ocimene	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Citral	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Citronellol	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Farnesol 2	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	
Cis-beta-Farnesene	< LOQ	0.000500	%		11/22/24 09:18	11/22/24 21:13	

Reference(2447063-SRM2)							
Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
alpha-Bisabolol	106	0.00025	%	70-130	11/22/24 09:18	11/22/24 21:32	
beta-Caryophyllene	103	0.00025	%	70-130	11/22/24 09:18	11/22/24 21:32	
alpha-Humulene	107	0.00025	%	70-130	11/22/24 09:18	11/22/24 21:32	
Limonene	77.5	0.00025	%	70-130	11/22/24 09:18	11/22/24 21:32	

Batch: 2447073 - 103

Blank(2447073-BLK1)							
Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
Percent Moisture	0.200		%		11/22/24 13:19	11/22/24 13:19	

Blank(2447073-BLK2)							
Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
Percent Moisture	0.240		%		11/22/24 13:19	11/22/24 13:19	

Reference(2447073-SRM1)							
Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
Percent Moisture	94.3		%	80-120	11/22/24 13:19	11/22/24 13:19	

Reference(2447073-SRM2)							
Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes



Quality Control Moisture Content (Continued)

Batch: 2447073 - 103 (Continued)

Reference(2447073-SRM2)							
Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
Percent Moisture	95.1		%	80-120	11/22/24 13:19	11/22/24 13:19	



Notes and Definitions

Regulatory Compliance samples were collected onsite at facility according to SOP-402 and SOP-403 and following Sampling Plan FN117. Quality Control samples were tested as received.
Results do not include uncertainty of measurements. Available upon request.

ATM	Non-cannabis matrix related interference or suppression of Internal standard
BLI	Baseline Interference - Cannabinoid peak interference in chromatographic baseline affecting QC recovery .
BLK	Analyte detected in method blank, but not associated samples.
BSH	Blank Spike High - Blank Spike recovery above method limit. no detections in samples.
BSL	Blank Spike Low - Blank Spike recovery below lower method limit, analyte chromatography reviewed
C	manually for all samples.
CBD	Interference due to co-elution
CV1	CBD matrix interference on GC Pest chromatography
CV2	CCV was above acceptance criteria, Non-detect samples are considered acceptable.
INF	CCV was below acceptance criteria, sample still exceeds regulatory limit.
ISH	One or more QC falls outside acceptance criteria. Data entered into LIMS for informational purposes only.
ISL	Internal Standard concentration is above acceptance criteria.
MSH	Internal Standard concentration is below acceptance criteria.
MSI	Matrix Spike High - Matrix Spike recovery above method limits.
MSL	Matrix Spike Interference - Matrix spike source sample contains analyte hit above calibration affecting
TPP	recovery accuracy in Matrix Spike.
U	Matrix Spike Low - Matrix Spike recovery below lower method limit, analyte chromatography reviewed
	manually for all samples.
	Internal Standard concentration outside control limit due to matrix interference