



### Royal OG

Sample ID: G3K0196-03

Matrix: Industrial Hemp

Test ID: 5023472

Source ID:

Date Sampled: 11/13/23

Date Accepted: 11/13/23

**Fern Valley Farms**  
fernvalleycbd@gmail.com

### Results at a Glance

Total THC : 0.72 %

Total CBD : 19 %

Total CBG : 0.33 %

Percent Moisture : 7.46 % **PASS**

Total Terpenes : 2.245 % **PASS**



Eric Wendt  
Chief Science Officer - 11/17/2023



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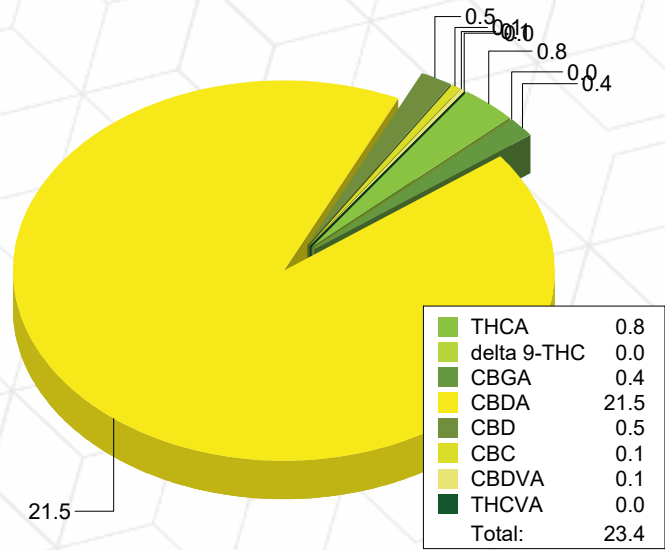
### Potency Analysis

Date/Time Extracted: 11/15/23 15:45

Analysis Method/SOP: 215

Batch Identification: 2346045

	LOQ (%)	% by Wt.	mg/g	Cannabinoids Profile	
Total THC	0.010	0.72	7.2		
Total CBD	0.009	19	190		
Total CBG	0.0009	0.33	3.3		
THCA	0.0005	0.76	7.6		
delta 9-THC	0.0005	0.048	0.48		
delta 8-THC	0.005	< LOQ	< LOQ		
THCV	0.005	< LOQ	< LOQ		
THCVA	0.002	0.027	0.27		
CBD	0.002	0.46	4.6		
CBDA	0.002	22	220		
CBDV	0.005	< LOQ	< LOQ		
CBDVA	0.002	0.061	0.61		
CBN	0.003	< LOQ	< LOQ		
CBG	0.0009	< LOQ	< LOQ		
CBGA	0.0009	0.38	3.8		
CBC	0.010	0.13	1.3		



### Moisture

Date/Time Extracted: 11/16/23 14:55

Analysis Method/SOP: 103

Moisture: 7.46 %

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



**ISO 17025**  
ACCREDITED  
LABORATORY

Eric Wendt  
Chief Science Officer - 11/17/2023

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### Terpene Analysis by GCMS

Date/Time Extracted: 11/15/23 15:45

Analysis Method/SOP: 204

Date/Time Analyzed: 11/16/23 04:42

Analyte	Result	LOD	LOQ	Units	Analyte	Result	LOD	LOQ	Units
(-)-Borneol	0.08	0.001	0.003	mg/g	(+)-Borneol	0.07	0.001	0.003	mg/g
3-Carene	< LOQ	0.001	0.003	mg/g	alpha-Bisabolol	1.46	0.001	0.003	mg/g
alpha-Cedrene	< LOQ	0.001	0.003	mg/g	alpha-Humulene	1.64	0.001	0.003	mg/g
Alpha-Phellandrene	< LOQ	0.001	0.003	mg/g	alpha-Pinene	1.57	0.001	0.003	mg/g
alpha-Terpinene	< LOQ	0.001	0.003	mg/g	alpha-Thujone	< LOQ	0.001	0.003	mg/g
A-Terpineol	0.31	0.001	0.003	mg/g	beta-Caryophyllene	4.68	0.001	0.003	mg/g
beta-Myrcene	6.45	0.001	0.003	mg/g	beta-Pinene	0.94	0.001	0.003	mg/g
Camphene	0.09	0.001	0.003	mg/g	Camphor	< LOQ	0.001	0.003	mg/g
Carvacrol	< LOQ	0.001	0.003	mg/g	Carvone	< LOQ	0.001	0.003	mg/g
Caryophyllene Oxide	0.36	0.001	0.003	mg/g	Cedrol	< LOQ	0.001	0.003	mg/g
Cis-beta-Farnesene	0.42	0.001	0.003	mg/g	Cis-beta-Ocimene	< LOQ	0.001	0.003	mg/g
cis-Nerolidol	< LOQ	0.001	0.003	mg/g	Citral	< LOQ	0.001	0.003	mg/g
Citronellol	< LOQ	0.001	0.003	mg/g	Endo-fenchyl alcohol	< LOQ	0.001	0.003	mg/g
Eucalyptol	< LOQ	0.001	0.003	mg/g	Farnesol 1	< LOQ	0.001	0.003	mg/g
Farnesol 2	0.41	0.001	0.003	mg/g	gamma-Terpinene	< LOQ	0.001	0.003	mg/g
Geraniol	< LOQ	0.001	0.003	mg/g	Geranyl acetate	< LOQ	0.001	0.003	mg/g
Guaiol	0.51	0.001	0.003	mg/g	Isoborneol	< LOQ	0.001	0.003	mg/g
Isobornyl Acetate	< LOQ	0.001	0.003	mg/g	Isopulegol	< LOQ	0.001	0.003	mg/g
Limonene	3.06	0.001	0.003	mg/g	Linalool	< LOQ	0.001	0.003	mg/g
Menthol	< LOQ	0.001	0.003	mg/g	Menthone	< LOQ	0.001	0.003	mg/g
Nootkatone	< LOQ	0.001	0.003	mg/g	Octyl Acetate	< LOQ	0.001	0.003	mg/g
p-Cymene	< LOQ	0.001	0.003	mg/g	Phytane	< LOQ	0.001	0.003	mg/g
Piperitone	< LOQ	0.001	0.003	mg/g	Pulegone	< LOQ	0.001	0.003	mg/g
Sabinene	< LOQ	0.001	0.003	mg/g	Sabinene hydrate	< LOQ	0.001	0.003	mg/g
Safranal	< LOQ	0.001	0.003	mg/g	Squalene	< LOQ	0.001	0.003	mg/g
Terpinen-4-ol	< LOQ	0.001	0.003	mg/g	Terpinolene	< LOQ	0.001	0.003	mg/g
Thymol	< LOQ	0.001	0.003	mg/g	trans-beta-Farnesene	0.4	0.001	0.003	mg/g
trans-beta-Ocimene	< LOQ	0.001	0.003	mg/g	trans-Nerolidol	< LOQ	0.001	0.003	mg/g
Valencene	< LOQ	0.001	0.003	mg/g	Verbenone	< LOQ	0.001	0.003	mg/g
<b>Total Terpenes</b>	<b>22.45</b>	<b>0.001</b>	<b>0.003</b>	<b>mg/g</b>					

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



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Chief Science Officer - 11/17/2023

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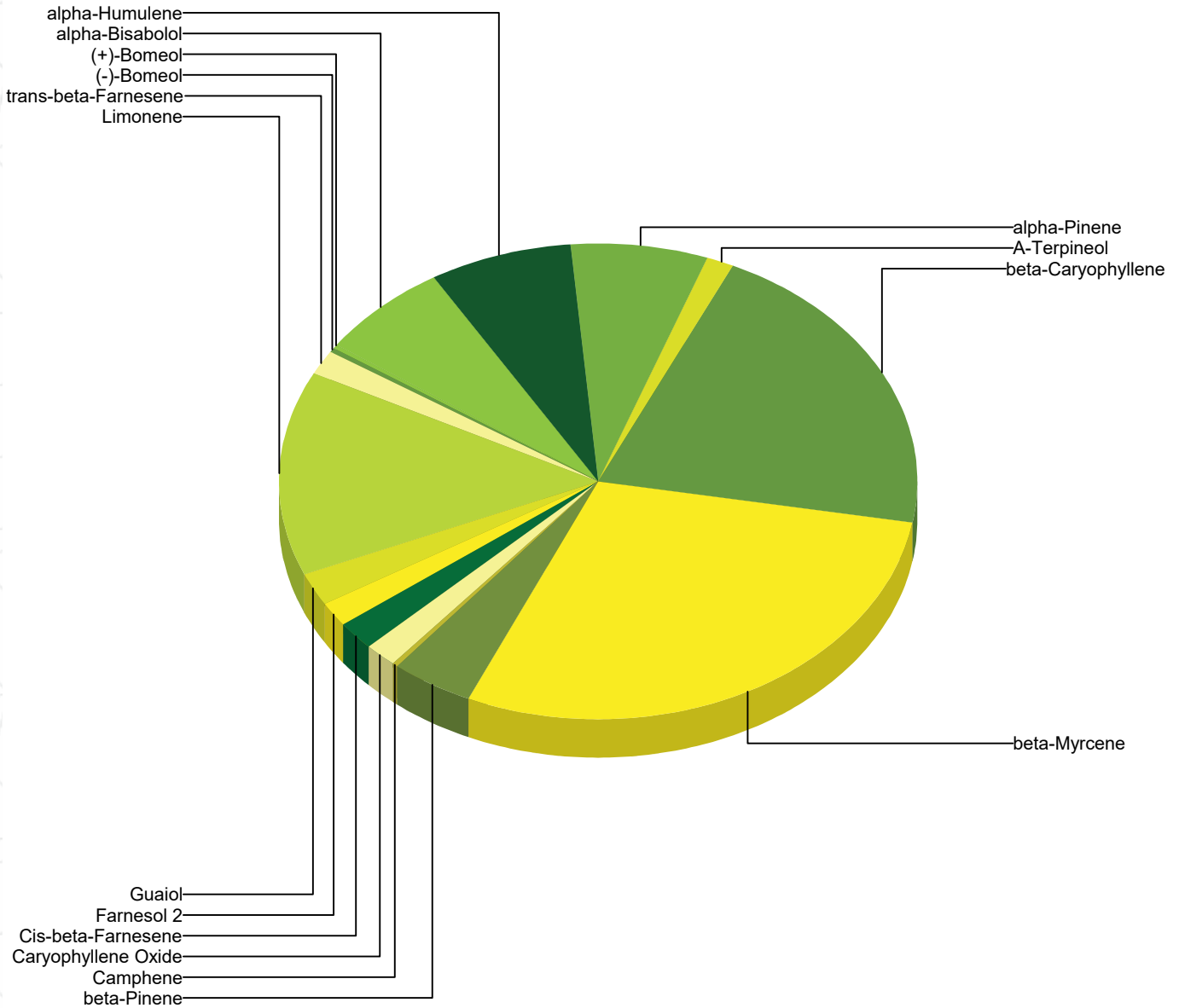
Source ID:

Date Sampled: 11/13/23

Date Accepted: 11/13/23

**Fern Valley Farms**  
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### Terpene Profile



### Percentage of Total Terpenes Identified



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Chief Science Officer - 11/17/2023



### Quality Control Potency

Batch: 2346045 - 215-Hemp

Blank(2346045-BLK1)							
Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
THCA	< LOQ	0.0005	%		11/15/23 15:45	11/16/23 05:19	
delta 9-THC	< LOQ	0.0005	%		11/15/23 15:45	11/16/23 05:19	
delta 8-THC	< LOQ	0.004	%		11/15/23 15:45	11/16/23 05:19	
THCV	< LOQ	0.005	%		11/15/23 15:45	11/16/23 05:19	
THCVA	< LOQ	0.002	%		11/15/23 15:45	11/16/23 05:19	
CBD	< LOQ	0.0005	%		11/15/23 15:45	11/16/23 05:19	
CBDA	< LOQ	0.0005	%		11/15/23 15:45	11/16/23 05:19	
CBDV	< LOQ	0.005	%		11/15/23 15:45	11/16/23 05:19	
CBDVA	< LOQ	0.002	%		11/15/23 15:45	11/16/23 05:19	
CBN	< LOQ	0.003	%		11/15/23 15:45	11/16/23 05:19	
CBG	< LOQ	0.0008	%		11/15/23 15:45	11/16/23 05:19	
CBGA	< LOQ	0.0008	%		11/15/23 15:45	11/16/23 05:19	
CBC	< LOQ	0.009	%		11/15/23 15:45	11/16/23 05:19	

Reference(2346045-SRM1)							
Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
THCA	95.2	0.0005	%	90-110	11/15/23 15:45	11/16/23 05:42	
delta 9-THC	98.2	0.0005	%	90-110	11/15/23 15:45	11/16/23 05:42	
delta 8-THC	106	0.004	%	90-110	11/15/23 15:45	11/16/23 05:42	
CBD	106	0.0005	%	90-110	11/15/23 15:45	11/16/23 05:42	
CBDA	98.4	0.0005	%	90-110	11/15/23 15:45	11/16/23 05:42	

### Terpene Analysis

Batch: 2346045 - 215-Hemp

Blank(2346045-BLK2)							
Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
alpha-Bisabolol	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Camphene	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Camphor	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
3-Carene	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
beta-Caryophyllene	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Caryophyllene Oxide	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
alpha-Cedrene	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Cedrol	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Endo-fenchyl alcohol	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Eucalyptol	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Geraniol	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Geranyl acetate	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Guaiol	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	



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### Quality Control Terpene Analysis (Continued)

Batch: 2346045 - 215-Hemp (Continued)

Blank(2346045-BLK2)							
Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
alpha-Humulene	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Isoborneol	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Isopulegol	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Limonene	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Linalool	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
beta-Myrcene	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
trans-Nerolidol	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
alpha-Pinene	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
beta-Pinene	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Pulegone	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Sabinene	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Sabinene hydrate	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
gamma-Terpinene	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
alpha-Terpinene	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Terpinolene	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Valencene	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Verbenone	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
trans-beta-Farnesene	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
A-Terpineol	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
cis-Nerolidol	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Thymol	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Terpinen-4-ol	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Squalene	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Safranal	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Piperitone	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Phytane	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
p-Cymene	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Octyl Acetate	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Nootkatone	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Menthone	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Menthol	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Isobornyl Acetate	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Farnesol 1	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Carvone	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
alpha-Thujone	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Alpha-Phellandrene	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
(+)-Borneol	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
(-)-Borneol	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	



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Chief Science Officer - 11/17/2023

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### Quality Control Terpene Analysis (Continued)

#### Batch: 2346045 - 215-Hemp (Continued)

Blank(2346045-BLK2)							
Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
Carvacrol	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
trans-beta-Ocimene	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Cis-beta-Ocimene	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Citral	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Citronellol	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Farnesol 2	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	
Cis-beta-Farnesene	< LOQ	0.00025	%		11/15/23 15:45	11/16/23 03:28	

Reference(2346045-SRM2)							
Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
alpha-Bisabolol	129	0.00025	%	70-130	11/15/23 15:45	11/16/23 03:46	
beta-Caryophyllene	99.7	0.00025	%	70-130	11/15/23 15:45	11/16/23 03:46	
alpha-Humulene	99.3	0.00025	%	70-130	11/15/23 15:45	11/16/23 03:46	
Limonene	103	0.00025	%	70-130	11/15/23 15:45	11/16/23 03:46	

#### Batch: 2346056 - 103

Blank(2346056-BLK1)							
Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
Percent Moisture	0.440		%		11/16/23 14:55	11/16/23 14:55	

Blank(2346056-BLK2)							
Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
Percent Moisture	0.320		%		11/16/23 14:55	11/16/23 14:55	

Reference(2346056-SRM1)							
Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
Percent Moisture	105		%	80-120	11/16/23 14:55	11/16/23 14:55	

Reference(2346056-SRM2)							
Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
Percent Moisture	102		%	80-120	11/16/23 14:55	11/16/23 14:55	



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### 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 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 recovery accuracy in Matrix Spike.
  - TPP
  - 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



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