



Marihuana Identification and THC Quantitation Test No. 17-503 Summary Report

Each sample pack consisted of three questioned samples containing plant material which participants were requested to analyze. Data were returned from 57 participants and are compiled into the following tables:

	<u>Page</u>
<u>Manufacturer's Information</u>	<u>2</u>
<u>Summary Comments</u>	<u>3</u>
<u>Table 1: Examination Results (Item 1)</u>	<u>4</u>
<u>Table 2: Examination Results (Item 2)</u>	<u>15</u>
<u>Table 3: Examination Results (Item 3)</u>	<u>24</u>
<u>Table 4: Additional Comments</u>	<u>35</u>
<u>Appendix: Data Sheet</u>	<u>36</u>

This report contains the data received from the participants in this test. Since these participants are located in many countries around the world, and it is their option how the samples are to be used (e.g., training exercise, known or blind proficiency testing, research and development of new techniques, etc.), the results compiled in the Summary Report are not intended to be an overview of the quality of work performed in the profession and cannot be interpreted as such. The Summary Comments are included for the benefit of participants to assist with maintaining or enhancing the quality of their results. These comments are not intended to reflect the general state of the art within the profession.

Participant results are reported using a randomly assigned "WebCode". This code maintains participant's anonymity, provides linking of the various report sections, and will change with every report.

Manufacturer's Information

Each sample pack consisted of three items containing 400mg of loose plant material. Item 1 consisted of Marihuana with a THC concentration of 9.4%. Item 2 contained basil. Item 3 consisted of Marihuana with a THC concentration of 12.5%. Concentration of THC determined by GC. Marihuana is a Schedule I controlled substance in the United States.

SAMPLE PREPARATION-

ITEMS 1 and 3 (PREPARATION): Approximately 400 mg of loose Marihuana plant material was weighed out and deposited into a glassine bag, which was folded and secured with a label. The folded glassine bag was placed into a small colored bag, for Item 1 it was a gold-colored bag and for Item 3 it was a silver-colored bag. The bags were heat sealed and then placed into a pre-labeled envelope.

Item 2 (Preparation): Approximately 400 mg of loose basil plant material was weighed out and deposited into a glassine bag which was folded and taped with a label. The folded glassine bag was placed into a small red-colored bag. The bag was heat sealed and then placed into a pre-labeled envelope.

SAMPLE PACK ASSEMBLY: One envelope of each Item was placed into a larger pre-labeled sample pack envelope.

VERIFICATION: Laboratories that conducted predistribution analysis reported the identification of Marihuana in Items 1 and 3. The following methods were used to examine the items: Color tests, GC/FID, GC/MS, Macroscopic and Microscopic examinations. No predistribution laboratories performed THC quantitation as it was not part of their protocol.

Summary Comments

This test was designed to allow participants to assess their proficiency in the qualitative and quantitative analysis of questioned plant material. Item 1 consisted of Marihuana plant material containing 9.4% THC concentration. Item 2 contained Basil plant material. Item 3 consisted of Marihuana plant material containing 12.5% THC concentration. Marihuana is a Schedule I controlled substance in the United States. (See the Manufacturer's Information for preparation details.)

Of the 57 participants that returned results for this test, all performed qualitative analysis. The most frequently reported methods of examination were Microscopy followed by GC/MS and Color tests.

All participants reported the identification of Marihuana (Cannabis) in Item 1 and no Marihuana (Cannabis) in Item 2. For Item 3, all but one participant identified Marihuana (Cannabis).

Forty-four participants reported the identification of individual Cannabinoids for Items 1 and 3. All but one participant reported Tetrahydrocannabinol (THC), 34 reported Cannabinol (CBN) and fewer reported Cannabidiol (CBD) and Tetrahydrocannabinolic Acid (THCA). Other Cannabinoids reported included Cannabidolic acid (CBDA), Cannabigerol (CBG) and Cannabichromene (CBC) to name a few.

Thirteen participants reported quantitative results for THC. The most frequently reported quantification method was GC-FID.

Comparative statistics are used to provide participants and accrediting bodies with the means to evaluate the quantitative data and determine the acceptability of results. The participants' raw data were used to calculate the grand mean and the standard deviation for each item. A value of ± 3 standard deviations (STD) was applied, to determine data considered extreme, which would then be marked with an "X" and excluded from these calculations. Due to the low number of participants reporting quantitative data, therefore no results were considered extreme. The most common quantitative reporting method was the mean of duplicate/several determinations

Marihuana Identification - Item 1

TABLE 1A

Webcode		Was Marihuana (Cannabis) detected/identified?			
3YW9YY	Yes	JJ47CQ	Yes	Y9BVJA	Yes
4N68XE	Yes	JKV6LH	Yes	YUT4XN	Yes
4TM8FF	Yes	K93XAY	Yes	ZDZVBA	Yes
4YNL2G	Yes	LARQHM	Yes	ZGZ2UM	Yes
72RXVN	Yes	LB4NRY	Yes	ZKZCN2	Yes
74H3PV	Yes	LDAQZN	Yes		
7U76KN	Yes	LH4RZH	Yes		
8EABK3	Yes	LUDK8N	Yes		
9PMRRZ	Yes	LV7JGF	Yes		
9RDVMT	Yes	MALY4C	Yes		
AKCWPC	Yes	NX74ND	Yes		
BLDL6P	Yes	P8AXXV	Yes		
C2QEB8	Yes	PNF3MT	Yes		
CBUCDP	Yes	QDBC GC	Yes		
CG4KL8	Yes	QP6VRB	Yes		
CTTJDA	Yes	R8GW6A	Yes		
D8P6BP	Yes	RUJNNV	Yes		
DPBJV9	Yes	TNKQCA	Yes		
EWQMFF	Yes	UX6HDR	Yes		
GBH2QU	Yes	V4D3Z4	Yes		
H7LWE2	Yes	VWPF6Y	Yes		
HML479	Yes	X7QMYN	Yes		
HY2VUH	Yes	X8Y2Z3	Yes		
J4AJ8J	Yes	XMEVWM	Yes		
J8BK9G	Yes	XT2PV6	Yes		
JHU YBJ	Yes	Y7MGXK	Yes		

Marihuana Identification Response Summary for Item 1	
Participants: 57	
Was Marihuana (Cannabis) detected/ identified in this Item?	
<u>Response</u>	<u>Total</u>
Yes	57
No	0

Cannabinoid Identification - Item 1

Which Cannabinoids were identified in Item 1?

TABLE 1B

Webcode	Cannabinoids Identified
3YW9YY	Tetrahydrocannabinol Cannabinol
4N68XE	Tetrahydrocannabinol
4TM8FF	Tetrahydrocannabinol Cannabinol
4YNL2G	Tetrahydrocannabinol
72RXVN	Tetrahydrocannabinol Cannabinol
74H3PV	Tetrahydrocannabinol Tetrahydrocannabinolic Acid Cannabinol Other Cannabinoids: 3 propyl delta 9 tetrahydrocannabinol, cannabichromène, cannabigerol, acide cannabidiolique, acide cannabigerolique, acide cannabiniolique
7U76KN	Tetrahydrocannabinol Cannabinol
8EABK3	Tetrahydrocannabinol Cannabinol
9PMRRZ	Tetrahydrocannabinol Cannabinol
AKCWPC	Tetrahydrocannabinol
BLDL6P	Tetrahydrocannabinol Cannabinol Cannabidiol
C2QEB8	Tetrahydrocannabinol Tetrahydrocannabinolic Acid Cannabinol
CBUCDP	Tetrahydrocannabinol Cannabinol
CTTJDA	Tetrahydrocannabinol Cannabinol
D8P6BP	Tetrahydrocannabinol Cannabinol Cannabidiol
DPBJV9	Tetrahydrocannabinol Cannabinol
EWQMFF	Tetrahydrocannabinol Cannabinol Cannabidiol
GBH2QU	Tetrahydrocannabinol Cannabinol

TABLE 1B - Cannabinoid Identification - Item 1

Webcode	Cannabinoids Identified
H7LWE2	Tetrahydrocannabinol
HY2VUH	Tetrahydrocannabinol
JHUYBJ	Tetrahydrocannabinol Cannabinol
JJ47CQ	Tetrahydrocannabinol Cannabinol
JKV6LH	Tetrahydrocannabinol Tetrahydrocannabinolic Acid Cannabinol Cannabidiol
LB4NRY	Tetrahydrocannabinol Cannabinol Other Cannabinoids: Seen in GCMS-specific cannabinoid not proven/reported
LH4RZH	Tetrahydrocannabinol Cannabinol
LV7JGF	Tetrahydrocannabinol Tetrahydrocannabinolic Acid Cannabinol Cannabidiol Other Cannabinoids: CBG, CBDA, CBGA, CBC
MALY4C	Tetrahydrocannabinol Cannabinol
NX74ND	Tetrahydrocannabinol Cannabinol Cannabidiol
P8AXXV	Tetrahydrocannabinol
PNF3MT	Tetrahydrocannabinol Cannabinol
QDBC GC	Tetrahydrocannabinol Cannabinol Other Cannabinoids: cannabichromene
QP6VRB	Tetrahydrocannabinol Cannabinol
R8GW6A	Tetrahydrocannabinol Cannabinol
RUJNNV	Tetrahydrocannabinol Cannabinol
TNKQCA	Tetrahydrocannabinol Tetrahydrocannabinolic Acid Cannabinol Other Cannabinoids: CBG and CBGA
UX6HDR	Tetrahydrocannabinol Cannabinol

TABLE 1B - Cannabinoid Identification - Item 1

Webcode	Cannabinoids Identified
VWPF6Y	Tetrahydrocannabinol Cannabinol
X7QMYN	Tetrahydrocannabinol
X8Y2Z3	Tetrahydrocannabinol Tetrahydrocannabinolic Acid Cannabinol Other Cannabinoids: cannabidolic acid (CBDA)
Y9BVJA	Tetrahydrocannabinol Cannabinol Cannabidiol Other Cannabinoids: cannabigerol
YUT4XN	Tetrahydrocannabinol
ZDZVBA	Other Cannabinoids: Cannabinoids
ZGZ2UM	Tetrahydrocannabinol
ZKZCN2	Tetrahydrocannabinol Cannabinol

Response Summary for Item 1	Participants: 44
Tetrahydrocannabinol (THC):	43
Tetrahydrocannabinolic Acid (THCA)	6
Cannabinol (CBN):	34
Cannabidiol (CBD):	7
*Other:	8
The total may be more than the total number of participants because participants can report multiple Cannabinoids.	

*The value in the "Other" field represents the number of participants that reported additional Cannabinoids.

Examination Method of Analysis - Item 1

TABLE 1C

Webcode	Color	Crystal	FTIR	GC	GC-FID	GC-IR	GC/MS	LC	LC/MS	Macro	Micro	TLC	UV	Other
3YW9YY	✓						✓							
4N68XE							✓				✓			
4TM8FF	✓						✓				✓			
4YNL2G	✓									✓	✓			
72RXVN	✓						✓							
74H3PV							✓							
7U76KN							✓				✓			
8EABK3	✓						✓			✓	✓			
9PMRRZ					✓		✓							
9RDVMT	✓									✓	✓			
AKCWPC							✓				✓			Balance
BLDL6P							✓				✓			
C2QEB8							✓	✓						
CBUCDP							✓				✓			
CG4KL8										✓	✓			
CTTJDA							✓				✓			Balance
D8P6BP							✓							
DPBJV9							✓				✓			
EWQMFF	✓						✓				✓			
GBH2QU	✓						✓			✓	✓			
H7LWE2							✓				✓			
HML479										✓	✓			
HY2VUH					✓					✓	✓			
J4AJ8J	✓									✓	✓			
J8BK9G	✓									✓	✓			Color test is duquenois levine (mod)
JHUYBJ	✓						✓			✓	✓			
JJ47CQ							✓					✓		
JKV6LH							✓				✓			
K93XAY											✓			
LARQHM	✓									✓	✓			
LB4NRY							✓				✓			
LDAQZN	✓						✓			✓	✓			
LH4RZH	✓						✓				✓			

TABLE 1C - Examination Method(s) - Item 1

Webcode	Color	Crystal	FTIR	GC	GC-FID	GC-IR	GC/MS	LC	LC/MS	Macro	Micro	TLC	UV	Other
LUDK8N										✓	✓			Duquenois-Levine
LV7JGF								✓						
MALY4C	✓						✓				✓	✓		
NX74ND							✓			✓	✓			
P8AXV	✓										✓	✓		
PNF3MT							✓			✓				
QDBC GC	✓						✓				✓			
QP6VRB							✓			✓	✓			
R8GW6A	✓						✓				✓			
RUJNNV							✓				✓			
TNKQCA	✓						✓			✓	✓	✓		
UX6HDR							✓				✓			Electronic Balance
V4D3Z4	✓									✓	✓			
VWPF6Y							✓				✓			
X7QMYN							✓				✓			electronic balance
X8Y2Z3							✓							
XMEVWM										✓	✓			
XT2PV6	✓									✓	✓			
Y7MGXK											✓			
Y9BVJA							✓							
YUT4XN							✓				✓			Electronic Balance
ZDZVBA	✓									✓	✓			
ZGZ2UM							✓				✓			Balance
ZKZCN2	✓						✓							

Response Summary for Item 1														Participants: 57
Total	23	0	0	0	2	0	40	2	0	21	45	4	0	
Percent	40%	0%	0%	0%	4%	0%	70%	4%	0%	37%	79%	7%	0%	

Quantitative Method of Analysis - Item 1

TABLE 1D

Webcode	Color	Crystal	FTIR	GC	GC-FID	GC-IR	GC/MS	LC	LC/MS	Macro	Micro	TLC	UV	Other
4TM8FF							✓							
74H3PV					✓									
CBUCDP					✓									
D8P6BP					✓									
GBH2QU					✓									
JJ47CQ					✓									
K93XAY														no established method
LV7JGF								✓						
NX74ND					✓									
PNF3MT					✓									
QP6VRB					✓									
X8Y2Z3														HPLC-UV
Y9BVJA							✓							

Response Summary for Item 1														Participants: 13
Total	0	0	0	0	8	0	2	1	0	0	0	0	0	
Percent	0%	0%	0%	0%	62%	0%	15%	8%	0%	0%	0%	0%	0%	

Quantitative Results - Item 1

What is the Total THC concentration in Item 1?

TABLE 1E

Item Contents and Preparation Concentration: Marihuana, 9.4% THC

Webcode	Reported Concentration	Uncertainty	K Value	Units
4TM8FF	5.1	0.51	10%	%
74H3PV	135.2	11.5	2	mg/L
9PMRRZ	6.7	0.7		%
CBUCDP	8	4.5	2	%
D8P6BP	9.2			%
GBH2QU	8.84	4.5	2	Percent
JJ47CQ	9	2	2	% THC
LV7JGF	9.3	0.5		%, w/w
NX74ND	5	11.55	2	%
PNF3MT	6.9	0.3	2	%
QP6VRB	8.65	4.5	2	%
X8Y2Z3	9.4	3.3	4.53	%w/w
Y9BVJA	58.4			µg/mg

Raw Data - Item 1

List of raw data determinations in %.

TABLE 1F

Preparation concentration: (9.4% THC)

Webcode	Raw Data (%)				Participant Mean
4TM8FF	5.370	4.930			5.150
74H3PV	14.400	12.800			13.60
9PMRRZ	6.180	7.210			6.695
CBUCDP	9.735	9.826	8.046	8.069	8.919
D8P6BP	9.600	8.800			9.200
GBH2QU	9.119	9.132	8.572	8.554	8.844
JJ47CQ	8.617	8.354	9.922		8.964
LV7JGF	9.300				9.300
NX74ND	4.960	5.660			5.310
PNF3MT	6.600	7.100			6.850
QP6VRB	7.660	7.630	9.710	9.610	8.653
X8Y2Z3	9.120	8.220	10.700		9.347
Y9BVJA	6.600	5.100			5.850

Statistical Analysis for Item 1

Grand Mean 8.206	Number of Participants Included 13	Participants without Raw Data or Data that was not reported in % 0
Standard Deviation 2.267	Number of Participants Excluded 0	

Reporting Procedures - Item 1

If quantitative analysis was performed, the reported concentrations are:

TABLE 1G

Webcode	Quantitative Reporting Procedures
4TM8FF	The mean of duplicate/several determinations.
74H3PV	The mean of duplicate/several determinations.
9PMRRZ	The mean of duplicate/several determinations.
CBUCDP	The mean of duplicate/several determinations.
D8P6BP	The mean of duplicate/several determinations.
GBH2QU	The mean of duplicate/several determinations.
JJ47CQ	The mean of duplicate/several determinations.
LV7JGF	A single determination
NX74ND	The mean of duplicate/several determinations.
PNF3MT	The mean of duplicate/several determinations.
QP6VRB	The mean of duplicate/several determinations.
X8Y2Z3	The mean of duplicate/several determinations.
Y9BVJA	The mean of duplicate/several determinations.

Response Summary for Item 1	Participants: 13
A single determination:	1 (7.7%)
The mean of duplicate/several determinations:	12 (92.3%)

Additional Comments for Item 1

TABLE 1H

Webcode	Item 1 - Comments
4TM8FF	Sample was quantified using GCMS and only THC percentage is reported.
9RDVMT	This laboratory does not perform quantitative analysis for THC.
BLDL6P	The Laboratory does not quantify THC.
CBUCDP	THC standard used: Cerilliant Lot FE04231406 Expires April 2019. Standard range starts from 0.04mg/ml to 0.4mg/ml.
D8P6BP	Cannabidiol < 0.1 %. Cannabinol = 1.0 %. THCA is not determined (only the concentration of THC)
EQMFF	There is not method of quantitative analysis in the laboratory.
GBH2QU	When reported on a statement THC content would be reported as 8%
J4AJ8J	This laboratory does not perform quantitative analysis for THC.
J8BK9G	[From Tables 1B & 3B - Cannabinoids Identified, Items 1 & 3: "Not applicable /no GCMS."]
K93XAY	Quantitative analysis of THC isn't an accredited service provided by our organisation at this point in time.
LDAQZN	The [State] Crime Laboratory do not offer quantitation services.
TNKQCA	Quantitation of THC is not required for the reporting of cannabis.
VWPF6Y	Quantitative analysis not done.
X8Y2Z3	analyzed as received; no further chopping, grinding or homogenizing
XT2PV6	This laboratory does not perform quantitative analysis for THC.

Marihuana Identification - Item 2

TABLE 2A

Webcode		Was Marihuana (Cannabis) detected/identified?			
3YW9YY	No	JHUYBJ	No	XT2PV6	No
4N68XE	No	JJ47CQ	No	Y7MGXK	No
4TM8FF	No	JKV6LH	No	Y9BVJA	No
4YNL2G	No	K93XAY	No	YUT4XN	No
72RXVN	No	LARQHM	No	ZDZVBA	No
74H3PV	No	LB4NRY	No	ZGZ2UM	No
7U76KN	No	LDAQZN	No	ZKZCN2	No
8EABK3	No	LH4RZH	No		
9PMRRZ	No	LUDK8N	No		
9RDVMT	No	LV7JGF	No		
AKCWPC	No	MALY4C	No		
BLDL6P	No	NX74ND	No		
C2QEB8	No	P8AXXV	No		
CBUCDP	No	PNF3MT	No		
CG4KL8	No	QDBC GC	No		
CTTJDA	No	QP6VRB	No		
D8P6BP	No	R8GW6A	No		
DPBJV9	No	RUJNNV	No		
EWQMFF	No	TNKQCA	No		
GBH2QU	No	UX6HDR	No		
H7LWE2	No	V4D3Z4	No		
HML479	No	VWPF6Y	No		
HY2VUH	No	X7QMYN	No		
J4AJ8J	No	X8Y2Z3	No		
J8BK9G	No	XMEVWM	No		

Marihuana Identification Response Summary for Item 2	
Participants: 57	
Was Marihuana (Cannabis) detected/ identified in this Item?	
Response	Total
Yes	0
No	57

Cannabinoid Identification - Item 2

Which Cannabinoids were identified in Item 2?

TABLE 2B

Webcode	Cannabinoids Identified
---------	-------------------------

No participants reported identifying Cannabinoids in this Item.

Examination Method of Analysis - Item 2

TABLE 2C

Webcode	Color	Crystal	FTIR	GC	GC-FID	GC-IR	GC/MS	LC	LC/MS	Macro	Micro	TLC	UV	Other
3YW9YY	✓						✓							
4N68XE							✓	✓			✓			
4TM8FF	✓						✓				✓			
4YNL2G							✓			✓			✓	
72RXVN	✓						✓							
74H3PV							✓							
7U76KN							✓				✓			
8EABK3	✓						✓			✓	✓			
9PMRRZ					✓		✓							
9RDVMT	✓						✓			✓	✓			
AKCWPC							✓	✓						Balance
BLDL6P							✓				✓			
C2QEB8							✓							
CBUCDP							✓				✓			
CG4KL8										✓	✓			
CTTJDA							✓				✓	✓		Balance
D8P6BP							✓							
DPBJV9							✓	✓			✓			
EWQMFF	✓						✓				✓			
GBH2QU							✓			✓				
H7LWE2							✓				✓		✓	
HML479										✓	✓			
HY2VUH					✓		✓			✓	✓			
J4AJ8J	✓						✓			✓	✓			
J8BK9G	✓						✓			✓	✓			Color test mod was duq levine
JHUYBJ	✓						✓			✓	✓			
JJ47CQ							✓					✓		
JKV6LH							✓				✓			
K93XAY							✓				✓			
LARQHM	✓									✓	✓			
LB4NRY							✓	✓			✓			
LDAQZN	✓						✓			✓	✓			
LH4RZH	✓						✓				✓			
LUDK8N							✓			✓	✓			Duquenois-Levine

TABLE 2C - Examination Method(s) - Item 2

Webcode	Color	Crystal	FTIR	GC	GC-FID	GC-IR	GC/MS	LC	LC/MS	Macro	Micro	TLC	UV	Other
LV7JGF								✓						
MALY4C	✓						✓				✓	✓		
NX74ND							✓			✓	✓			
P8AXV	✓										✓	✓		
PNF3MT							✓			✓				
QDBC GC	✓						✓				✓			
QP6VRB							✓			✓	✓			
R8GW6A	✓						✓				✓			
RUJNNV							✓	✓			✓			
TNKQCA	✓						✓			✓	✓			
UX6HDR							✓	✓			✓			Electronic Balance
V4D3Z4	✓			✓			✓			✓	✓			
VWPF6Y							✓				✓			
X7QMYN							✓	✓			✓			electronic balance
X8Y2Z3							✓							
XMEVWM										✓	✓			
XT2PV6	✓						✓			✓	✓			
Y7MGXK											✓			
Y9BVJA							✓							
YUT4XN							✓	✓			✓	✓		Electronic Balance
ZDZVBA	✓						✓			✓	✓			
ZGZ2UM							✓	✓			✓			Balance
ZKZCN2	✓						✓							

Response Summary for Item 2													Participants: 57	
Total	21	0	0	1	2	0	50	10	0	21	42	5	2	
Percent	37%	0%	0%	2%	4%	0%	88%	18%	0%	37%	74%	9%	4%	

Quantitative Method of Analysis - Item 2

TABLE 2D

Webcode	Color	Crystal	FTIR	GC	GC-FID	GC-IR	GC/MS	LC	LC/MS	Macro	Micro	TLC	UV	Other
D8P6BP					✓									
K93XAY														no established method
LV7JGF								✓						
Y9BVJA							✓							
Response Summary for Item 2														Participants: 4
Total	0	0	0	0	1	0	1	1	0	0	0	0	0	
Percent	0%	0%	0%	0%	25%	0%	25%	25%	0%	0%	0%	0%	0%	

Quantitative Results - Item 2

What is the Total THC concentration in Item 2?

TABLE 2E

Item Contents and Preparation Concentration: Basil, N/A

Webcode	Reported Concentration	Uncertainty	K Value	Units
9PMRRZ	0			%
LV7JGF	0.0	0.02		%, w/w

Raw Data - Item 2

List of raw data determinations in %.

TABLE 2F

Webcode	Raw Data (%)	
9PMRRZ	0.000	0.000
LV7JGF	0.000	

Statistical Analysis for Item 2

Please note Statistical Analysis for this Item has not been provided due to the zero value of most responses. This did not allow for the generation of accurate statistics.

Reporting Procedures - Item 2

If quantitative analysis was performed, the reported concentrations are:

TABLE 2G

Webcode	Quantitative Reporting Procedures
9PMRRZ	The mean of duplicate/several determinations.
LV7JGF	A single determination

Response Summary for Item 2	Participants: 2
A single determination: 1 (50.0%)	
The mean of duplicate/several determinations: 1 (50.0%)	

Additional Comments for Item 2

TABLE 2H

Webcode	Item 2 - Comments
8EABK3	[From Table 2B - Cannabinoid Identification, Other Cannabinoids: "There are no Cannabinoids"]
BLDL6P	The Laboratory does not quantify THC.
CTTJDA	[From Table 2B - Cannabinoid Identification, Other Cannabinoids: "None"]
EWQMFF	There is not method of quantitative analysis in the laboratory.
GBH2QU	[From Table 2B - Cannabinoid Identification, Other Cannabinoids: "None were detected"]
K93XAY	Quantitative analysis of THC isn't an accredited service provided by our organisation at this point in time. Organisational protocol states that unidentified plant material must be screened by gas chromatography mass spectrometry to ensure no other controlled substances are present. [From Table 2B - Cannabinoid Identification, Other Cannabinoids: "No controlled substances identified in Item 2 by GC/MS analysis"]
LUDK8N	[From Table 2B - Cannabinoid Identification, Other Cannabinoids: "None"]
NX74ND	[From Table 2B - Cannabinoid Identification, Other Cannabinoids: "No cannabinoids detected"]
QP6VRB	No controlled drugs detected, indicative of tarragon type herbal substance. [Table 2B - Cannabinoid Identification, Other Cannabinoids: "None Identified"]
TNKQCA	[From Table 2B - Cannabinoid Identification, Other Cannabinoids: "None"]
UX6HDR	[From Table 2B - Cannabinoid Identification, Other Cannabinoids: "None"]
VWPF6Y	Quantitative analysis not done.
X8Y2Z3	[From Table 2B - Cannabinoid Identification, Other Cannabinoids: "No cannabinoids identified"]
ZGZ2UM	[From Table 2B - Cannabinoid Identification, Other Cannabinoids: "Negative"]

Marihuana Identification - Item 3

TABLE 3A

Webcode		Was Marihuana (Cannabis) detected/identified?			
3YW9YY	Yes	J4AJ8J	Yes	VWPF6Y	Yes
4N68XE	Yes	J8BK9G	Yes	X7QMYN	Yes
4TM8FF	Yes	JHUYBJ	Yes	X8Y2Z3	Yes
4YNL2G	Yes	JJ47CQ	Yes	XMEVWM	Yes
72RXVN	Yes	JKV6LH	Yes	XT2PV6	Yes
74H3PV	Yes	K93XAY	Yes	Y7MGXK	Yes
7U76KN	Yes	LARQHM	Yes	Y9BVJA	Yes
8EABK3	Yes	LB4NRY	Yes	YUT4XN	Yes
9PMRRZ	Yes	LDAQZN	Yes	ZDZVBA	Yes
9RDVMT	Yes	LH4RZH	Yes	ZGZ2UM	Yes
AKCWPC	Yes	LUDK8N	Yes	ZKZCN2	Yes
BLDL6P	Yes	LV7JGF	Yes		
C2QEB8	Yes	MALY4C	Yes		
CBUCDP	Yes	NX74ND	Yes		
CG4KL8	Yes	P8AXXV	Yes		
CTTJDA	Yes	PNF3MT	Yes		
D8P6BP	Yes	QDBC GC	Yes		
DPBJV9	Yes	QP6VRB	Yes		
EWQMFF	Yes	R8GW6A	Yes		
GBH2QU	Yes	RUJNNV			
H7LWE2	Yes	TNKQCA	Yes		
HML479	Yes	UX6HDR	Yes		
HY2VUH	Yes	V4D3Z4	Yes		

Marihuana Identification Response Summary for Item 3	
Participants: 57	
Was Marihuana (Cannabis) detected/ identified in this Item?	
<u>Response</u>	<u>Total</u>
Yes	56
No	0

Cannabinoid Identification - Item 3

Which Cannabinoids were identified in Item 3?

TABLE 3B

Webcode	Cannabinoids Identified
3YW9YY	Tetrahydrocannabinol Cannabinol
4N68XE	Tetrahydrocannabinol
4TM8FF	Tetrahydrocannabinol Cannabinol
4YNL2G	Tetrahydrocannabinol
72RXVN	Tetrahydrocannabinol Cannabinol
74H3PV	Tetrahydrocannabinol Tetrahydrocannabinolic Acid Cannabinol Other Cannabinoids: 3 propyl delta 9 tetrahydrocannabinol, cannabichromène, cannabigerol, acide cannabidiolique, acide cannabigerolique, acide cannabiniolique
7U76KN	Tetrahydrocannabinol Cannabinol
8EABK3	Tetrahydrocannabinol Cannabinol
9PMRRZ	Tetrahydrocannabinol Cannabinol
AKCWPC	Tetrahydrocannabinol
BLDL6P	Tetrahydrocannabinol Cannabinol Cannabidiol
C2QEB8	Tetrahydrocannabinol Tetrahydrocannabinolic Acid Cannabinol
CBUCDP	Tetrahydrocannabinol Cannabinol
CTTJDA	Tetrahydrocannabinol Cannabinol
D8P6BP	Tetrahydrocannabinol Cannabinol Cannabidiol
DPBJV9	Tetrahydrocannabinol Cannabinol

TABLE 3B - Cannabinoid Identification - Item 3

Webcode	Cannabinoids Identified
EWQMFF	Tetrahydrocannabinol Cannabinol Cannabidiol
GBH2QU	Tetrahydrocannabinol Cannabinol
H7LWE2	Tetrahydrocannabinol
HY2VUH	Tetrahydrocannabinol
JHU YBJ	Tetrahydrocannabinol Cannabinol
JJ47CQ	Tetrahydrocannabinol Cannabinol
JKV6LH	Tetrahydrocannabinol Tetrahydrocannabinolic Acid Cannabinol Cannabidiol
LB4NRY	Tetrahydrocannabinol Cannabinol Other Cannabinoids: Seen in GCMS-specific cannabinoid not proven/reported
LH4RZH	Tetrahydrocannabinol Cannabinol
LV7JGF	Tetrahydrocannabinol Tetrahydrocannabinolic Acid Cannabinol Other Cannabinoids: CBDA, CBC, CBGA
MALY4C	Tetrahydrocannabinol Cannabinol
NX74ND	Tetrahydrocannabinol Cannabinol Cannabidiol
P8AXXV	Tetrahydrocannabinol
PNF3MT	Tetrahydrocannabinol Cannabinol
QDBC GC	Tetrahydrocannabinol Cannabinol Other Cannabinoids: cannabichromene
QP6VRB	Tetrahydrocannabinol Cannabinol
R8GW6A	Tetrahydrocannabinol Cannabinol

TABLE 3B - Cannabinoid Identification - Item 3

Webcode	Cannabinoids Identified
RUJNNV	Tetrahydrocannabinol Cannabinol
TNKQCA	Tetrahydrocannabinol Tetrahydrocannabinolic Acid Cannabinol Other Cannabinoids: CBG and CBGA
UX6HDR	Tetrahydrocannabinol Cannabinol
VWPF6Y	Tetrahydrocannabinol Cannabinol
X7QMYN	Tetrahydrocannabinol
X8Y2Z3	Tetrahydrocannabinol Tetrahydrocannabinolic Acid Cannabinol Other Cannabinoids: cannabidolic acid (CBDA)
Y9BVJA	Tetrahydrocannabinol Cannabinol Cannabidiol Other Cannabinoids: cannabigerol
YUT4XN	Tetrahydrocannabinol
ZDZVBA	Other Cannabinoids: Cannabinoids
ZGZ2UM	Tetrahydrocannabinol
ZKZCN2	Tetrahydrocannabinol Cannabinol

Response Summary for Item 3		Participants: 44
Tetrahydrocannabinol (THC):	43	
Tetrahydrocannabinolic Acid (THCA)	6	
Cannabinol (CBN):	34	
Cannabidiol (CBD):	6	
*Other:	1	
<p>The total may be more than the total number of participants because participants can report multiple Cannabinoids.</p>		

*The value in the "Other" field represents the number of participants that reported additional Cannabinoids.

Examination Method of Analysis - Item 3

TABLE 3C

Webcode	Color	Crystal	FTIR	GC	GC-FID	GC-IR	GC/MS	LC	LC/MS	Macro	Micro	TLC	UV	Other
3YW9YY	✓						✓							
4N68XE							✓				✓			
4TM8FF	✓						✓				✓			
4YNL2G	✓									✓	✓			
72RXVN	✓						✓							
74H3PV							✓							
7U76KN							✓				✓			
8EABK3	✓						✓			✓	✓			
9PMRRZ					✓		✓							
9RDVMT	✓									✓	✓			
AKCWPC							✓				✓			Balance
BLDL6P							✓				✓			
C2QEB8							✓	✓						
CBUCDP							✓				✓			
CG4KL8										✓	✓			
CTTJDA							✓				✓			Balance
D8P6BP							✓							
DPBJV9							✓				✓			
EWQMFF	✓						✓				✓			
GBH2QU	✓						✓			✓	✓			
H7LWE2							✓				✓			
HML479										✓	✓			
HY2VUH					✓					✓	✓			
J4AJ8J	✓									✓	✓			
J8BK9G	✓									✓	✓			Color test was mod duq levine
JHUYBJ	✓						✓			✓	✓			
JJ47CQ							✓					✓		
JKV6LH							✓				✓			
K93XAY											✓			
LARQHM	✓									✓	✓			
LB4NRY							✓				✓			

TABLE 3C - Examination Method(s) - Item 3

Webcode	Color	Crystal	FTIR	GC	GC-FID	GC-IR	GC/MS	LC	LC/MS	Macro	Micro	TLC	UV	Other
LDAQZN	✓						✓			✓	✓			
LH4RZH	✓						✓				✓			
LUDK8N										✓	✓			Duquenois-Levine
LV7JGF								✓						
MALY4C	✓						✓				✓	✓		
NX74ND							✓			✓	✓			
P8AXV	✓										✓	✓		
PNF3MT							✓			✓				
QDBC GC	✓						✓				✓			
QP6VRB							✓			✓	✓			
R8GW6A	✓						✓				✓			
RUJNNV							✓				✓			
TNKQCA	✓						✓			✓	✓	✓		
UX6HDR							✓				✓			Electronic Balance
V4D3Z4	✓									✓	✓			
VWPF6Y							✓				✓			
X7QMYN							✓				✓			electronic balance
X8Y2Z3							✓							
XMEVWM										✓	✓			
XT2PV6	✓									✓	✓			
Y7MGXK											✓			
Y9BVJA							✓							
YUT4XN							✓				✓			Electronic Balance
ZDZVBA	✓									✓	✓			
ZGZ2UM							✓				✓			Balance
ZKZCN2	✓						✓							

Response Summary for Item 3														Participants: 57
Total	23	0	0	0	2	0	40	2	0	21	45	4	0	
Percent	40%	0%	0%	0%	4%	0%	70%	4%	0%	37%	79%	7%	0%	

Quantitative Method of Analysis - Item 3

TABLE 3D

Webcode	Color	Crystal	FTIR	GC	GC-FID	GC-IR	GC/MS	LC	LC/MS	Macro	Micro	TLC	UV	Other
4TM8FF							✓							
74H3PV					✓									
CBUCDP					✓									
D8P6BP					✓									
GBH2QU					✓									
JJ47CQ					✓									
K93XAY														no established method
LV7JGF								✓						
NX74ND					✓									
PNF3MT					✓									
QP6VRB					✓									
X8Y2Z3														HPLC-UV
Y9BVJA							✓							

Response Summary for Item 3														Participants: 13
Total	0	0	0	0	8	0	2	1	0	0	0	0	0	
Percent	0%	0%	0%	0%	62%	0%	15%	8%	0%	0%	0%	0%	0%	

Quantitative Results - Item 3

What is the Total THC concentration in Item 3?

TABLE 3E

Item Contents and Preparation Concentration: Marihuana, 12.5% THC

Webcode	Reported Concentration	Uncertainty	K Value	Units
4TM8FF	6.4	0.64	10%	%
74H3PV	155.4	13.2	2	mg/L
9PMRRZ	9.6	1.0		%
CBUCDP	11	4.5	2	%
D8P6BP	11.4			%
GBH2QU	12.15	4.5	2	Percent
JJ47CQ	11	2	2	% THC
LV7JGF	11.8	0.6		%, w/w
NX74ND	7.20	11.55	2	
PNF3MT	8.7	0.4	2	%
QP6VRB	12.61	4.5	2	%
X8Y2Z3	11	4	4.53	%w/w
Y9BVJA	71.9			µg/mg

Raw Data - Item 3

List of raw data determinations in %.

TABLE 3F

Preparation concentration: (12.5% THC)

Webcode	Raw Data (%)				Participant Mean
4TM8FF	6.370	6.470			6.420
74H3PV	15.600	15.100			15.35
9PMRRZ	9.520	9.730			9.625
CBUCDP	12.240	12.436	11.248	11.228	11.79
D8P6BP	12.100	10.700			11.40
GBH2QU	11.993	12.029	12.364	12.216	12.15
JJ47CQ	10.681	11.109	11.862		11.22
LV7JGF	11.800				11.80
NX74ND	7.770	6.620			7.195
PNF3MT	8.700	8.800			8.750
QP6VRB	11.810	11.780	13.530	13.310	12.61
X8Y2Z3	9.870	11.400	12.700		11.32
Y9BVJA	7.000	7.400			7.200

Statistical Analysis for Item 3

Grand Mean 10.53	Number of Participants Included 13	Participants without Raw Data or Data that was not reported in % 0
Standard Deviation 2.555	Number of Participants Excluded 0	

Reporting Procedures - Item 3

If quantitative analysis was performed, the reported concentrations are:

TABLE 3G

Webcode	Quantitative Reporting Procedures
4TM8FF	The mean of duplicate/several determinations.
74H3PV	The mean of duplicate/several determinations.
9PMRRZ	The mean of duplicate/several determinations.
CBUCDP	The mean of duplicate/several determinations.
D8P6BP	The mean of duplicate/several determinations.
GBH2QU	The mean of duplicate/several determinations.
JJ47CQ	The mean of duplicate/several determinations.
LV7JGF	A single determination
NX74ND	The mean of duplicate/several determinations.
PNF3MT	The mean of duplicate/several determinations.
QP6VRB	The mean of duplicate/several determinations.
X8Y2Z3	The mean of duplicate/several determinations.
Y9BVJA	The mean of duplicate/several determinations.

Response Summary for Item 3	Participants: 13
A single determination: 1 (7.7%)	
The mean of duplicate/several determinations: 12 (92.3%)	

Additional Comments for Item 3

TABLE 3H

WebCode	Item 3 - Comments
4TM8FF	Sample was quantified using GCMS and only THC percentage is reported.
9RDVMT	This laboratory does not perform quantitative analysis for THC.
BLDL6P	The Laboratory does not quantify THC.
CBUCDP	THC standard used: Cerilliant Lot FE04231406 Expires April 2019. Standard range starts from 0.04mg/ml to 0.4mg/ml.
D8P6BP	Cannabidiol < 0.1 %. Cannabinol = 1,1 %. THCA is not determined (only the concentration of THC)
EWQMFF	There is not method of quantitative analysis in the laboratory.
GBH2QU	When reported on a statement THC content would be reported as 12%
J4AJ8J	This laboratory does not perform quantitative analysis for THC.
K93XAY	Quantitative analysis of THC isn't an accredited service provided by our organisation at this point in time.
TNKQCA	Quantitation of THC is not required for the reporting of cannabis.
VWPF6Y	Quantitative analysis not done.
X8Y2Z3	analyzed as received; no further chopping, grinding or homogenizing
XT2PV6	This laboratory does not perform quantitative analysis for THC.

Additional Comments

TABLE 4

WebCode	Additional Comments
4N68XE	lab does not quant leafy material
4TM8FF	More sample is generally required for quantitative analysis of THC in plant material in case samples.
8EABK3	On this occasion, it was not possible to quantify THC and others due to specific custions of our laboratory at the time of the arrival of the test.
9PMRRZ	Ad question b: For item 1 and 3 we identified THC, but since GC is used, this result could be either THC, THCA, or both.
9RDVMT	[From Tables 1B, 2B & 3B - Cannabinoid Identification, Items 1-3, "This laboratory does not routinely determine the types of cannbinoids present in plant material."]
BLDL6P	The Laboratory does not quantify THC.
C2QEB8	Botanical examination is not performed by this laboratory, and as such we would normally report only the detected/indicated chemicals THC, THC-A and CBN. We would not report Marihuana or Cannabis as detected or identified, however for the purposes of this collaborative test we have reported yes for "Marihuana (Cannabis)" if THC was detected in the plant material. Quantitation of THC is routinely performed only on hashish (blocks, resin or oil) and industrial hemp crop surveillance samples, which when quantitated require a substantially greater sample size than was supplied.
HML479	Botanical identification and weighing only performed; no quantitative analysis of cannabinoids performed by Botany Unit.
J4AJ8J	[From Tables 1B, 2B & 3B - Cannabinoid Identification, Items 1-3, "This laboratory does not routinely determine the types of cannabinoids present in plant material."]
LARQHM	Botanical identification only for this chemist's section; no quantitation is performed at this lab for any illicit drugs. If a controlled substance was suspected but not identified with the combination of Duquenois-Levine, Macroscopic exam, and Microscopic Exam; a true case item would be forwarded to the other chemistry section for further chemical analysis.
LH4RZH	Our laboratory does not perform quantification, identification only.
LUDK8N	Quantitation is not performed at this laboratory.
QDBC GC	Indication of cannabigerol in items 1 and 3, but no standard with which to compare on GC\MS in order to identify its presence.
TNKQCA	CBNA was detected for Item 1 and Item 3 but was not confirmed due to the lack of reference standard. Quantitation of THC is not required for the reporting of cannabis.
XMEVWM	This laboratory does not perform THC Quantitation
XT2PV6	[From Tables 1B, 2B & 3B - Cannabinoid Identification, Items 1-3, "This laboratory does not routinely determine the types of cannabinoids present in plant material."]
Y7MGXK	Botanical ID only

Appendix: Data Sheet

Collaborative Testing Services ~ Forensic Testing Program

Test No. 17-503: Marihuana Identification and THC Quantitation

DATA MUST BE RECEIVED BY December 11, 2017 TO BE INCLUDED IN THE REPORT

Participant Code:

WebCode:

Accreditation Release Statement

CTS submits external proficiency test data directly to ASCLD/LAB, ANAB and A2LA. Please select one of the following statements to ensure your data is handled appropriately.

- This participant's data is intended for submission to ASCLD/LAB, ANAB, and/or A2LA. (Accreditation Release section on the last page must be completed and submitted.)
- This participant's data is NOT intended for submission to ASCLD/LAB, ANAB or A2LA.

Scenario:

An investigator has submitted three separate questioned samples containing what appears to be plant material for analysis. Please examine these samples and determine if Marihuana (Cannabis) is present. If Marihuana (Cannabis) is identified, using your laboratory's procedures, determine the quantitative value of THC.

Items Submitted (Sample Pack MID):

- Item 1: Plant Material (gold-colored bag)
- Item 2: Plant Material (red-colored bag)
- Item 3: Plant Material (silver-colored bag)

Data Sheet Completion Instructions:

Complete the following sections that are applicable to your laboratory.

Please return all pages of this data sheet.

Page 1 of 9

Participant Code:

WebCode:

Examination Results for Item 1

Select the box(es) associated with the methods used and Cannabinoids found.

a) What method(s) were used to examine and/or quantitate Item 1?

	<u>Examination</u>	<u>Quantitation</u>
Color Tests	<input type="checkbox"/>	<input type="checkbox"/>
Crystal Tests	<input type="checkbox"/>	<input type="checkbox"/>
FTIR	<input type="checkbox"/>	<input type="checkbox"/>
GC	<input type="checkbox"/>	<input type="checkbox"/>
GC-FID	<input type="checkbox"/>	<input type="checkbox"/>
GC-IR	<input type="checkbox"/>	<input type="checkbox"/>
GC/MS	<input type="checkbox"/>	<input type="checkbox"/>
LC	<input type="checkbox"/>	<input type="checkbox"/>
LC/MS	<input type="checkbox"/>	<input type="checkbox"/>
Macroscopic	<input type="checkbox"/>	<input type="checkbox"/>
Microscopic	<input type="checkbox"/>	<input type="checkbox"/>
TLC	<input type="checkbox"/>	<input type="checkbox"/>
UV	<input type="checkbox"/>	<input type="checkbox"/>
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>

b) Which Cannabinoids were identified in Item 1?

Tetrahydrocannabinol (THC) Tetrahydrocannabinolic Acid (THCA)
 Cannabinol (CBN) Cannabidiol (CBD)
 Other(s): _____

c) Is Marihuana (Cannabis) detected/identified in Item 1?

- Yes, Marihuana (Cannabis) is detected/identified
- No, Marihuana (Cannabis) is not detected/identified

Please return all pages of this data sheet.

Participant Code:
WebCode:

Quantitative Results for Item 1

a) Please record the concentration of Total THC (combination of THC and THCA) that was obtained. (Results should be reported using your laboratory reporting criteria for decimal places, uncertainty, and units.)

<u>Reported Concentration</u>	<u>Uncertainty (k=)</u>	<u>Units</u>
_____ +/- _____	_____	_____

b) Please list your raw data determinations below in percent of Total THC. (Results not reported in % will be excluded from statistical calculations.)

Raw Data (%):

c) For quantitative analysis of THC, are reported concentrations:

- A single determination? The mean of duplicate / several determinations?
- Other? (Specify): _____

d) Additional quantitative information for Item 1

Participant Code:

WebCode:

Examination Results for Item 2

Select the box(es) associated with the methods used and Cannabinoids found.

a) What method(s) were used to examine and/or quantitate Item 2?

	<u>Examination</u>	<u>Quantitation</u>
Color Tests	<input type="checkbox"/>	<input type="checkbox"/>
Crystal Tests	<input type="checkbox"/>	<input type="checkbox"/>
FTIR	<input type="checkbox"/>	<input type="checkbox"/>
GC	<input type="checkbox"/>	<input type="checkbox"/>
GC-FID	<input type="checkbox"/>	<input type="checkbox"/>
GC-IR	<input type="checkbox"/>	<input type="checkbox"/>
GC/MS	<input type="checkbox"/>	<input type="checkbox"/>
LC	<input type="checkbox"/>	<input type="checkbox"/>
LC/MS	<input type="checkbox"/>	<input type="checkbox"/>
Macroscopic	<input type="checkbox"/>	<input type="checkbox"/>
Microscopic	<input type="checkbox"/>	<input type="checkbox"/>
TLC	<input type="checkbox"/>	<input type="checkbox"/>
UV	<input type="checkbox"/>	<input type="checkbox"/>
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>

b) Which Cannabinoids were identified in Item 2?

Tetrahydrocannabinol (THC) Tetrahydrocannabinolic Acid (THCA)
 Cannabinol (CBN) Cannabidiol (CBD)
 Other(s): _____

c) Is Marihuana (Cannabis) detected/identified in Item 2?

- Yes, Marihuana (Cannabis) is detected/identified
- No, Marihuana (Cannabis) is not detected/identified

Please return all pages of this data sheet.

Participant Code:
WebCode:

Quantitative Results for Item 2

a) Please record the concentration of Total THC (combination of THC and THCA) that was obtained. (Results should be reported using your laboratory reporting criteria for decimal places, uncertainty, and units.)

<u>Reported Concentration</u>	<u>Uncertainty (k=)</u>	<u>Units</u>
_____ +/-	_____	_____

b) Please list your raw data determinations below in percent of Total THC. (Results not reported in % will be excluded from statistical calculations.)

Raw Data (%):

c) For quantitative analysis of THC, are reported concentrations:

- A single determination? The mean of duplicate / several determinations?
- Other? (Specify): _____

d) Additional quantitative information for Item 2

Participant Code:

WebCode:

Examination Results for Item 3

Select the box(es) associated with the methods used and Cannabinoids found.

a) What method(s) were used to examine and/or quantitate Item 3?

	<u>Examination</u>	<u>Quantitation</u>
Color Tests	<input type="checkbox"/>	<input type="checkbox"/>
Crystal Tests	<input type="checkbox"/>	<input type="checkbox"/>
FTIR	<input type="checkbox"/>	<input type="checkbox"/>
GC	<input type="checkbox"/>	<input type="checkbox"/>
GC-FID	<input type="checkbox"/>	<input type="checkbox"/>
GC-IR	<input type="checkbox"/>	<input type="checkbox"/>
GC/MS	<input type="checkbox"/>	<input type="checkbox"/>
LC	<input type="checkbox"/>	<input type="checkbox"/>
LC/MS	<input type="checkbox"/>	<input type="checkbox"/>
Macroscopic	<input type="checkbox"/>	<input type="checkbox"/>
Microscopic	<input type="checkbox"/>	<input type="checkbox"/>
TLC	<input type="checkbox"/>	<input type="checkbox"/>
UV	<input type="checkbox"/>	<input type="checkbox"/>
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>

b) Which Cannabinoids were identified in Item 3?

Tetrahydrocannabinol (THC) Tetrahydrocannabinolic Acid (THCA)
 Cannabinol (CBN) Cannabidiol (CBD)
 Other(s): _____

c) Is Marihuana (Cannabis) detected/identified in Item 3?

- Yes, Marihuana (Cannabis) is detected/identified
- No, Marihuana (Cannabis) is not detected/identified

Please return all pages of this data sheet.

Participant Code:

WebCode:

Quantitative Results for Item 3

a) Please record the concentration of Total THC (combination of THC and THCA) that was obtained. (Results should be reported using your laboratory reporting criteria for decimal places, uncertainty, and units.)

<u>Reported Concentration</u>	<u>Uncertainty (k=)</u>	<u>Units</u>
_____ +/- _____	_____	_____

b) Please list your raw data determinations below in percent of Total THC. (Results not reported in % will be excluded from statistical calculations.)

Raw Data (%):

c) For quantitative analysis of THC, are reported concentrations:

- A single determination? The mean of duplicate / several determinations?
- Other? (Specify): _____

d) Additional quantitative information for Item 3

Participant Code:

WebCode:

Additional Comments

Return Instructions: Data must be received via online data entry, fax (please include a cover sheet), or mail by *December 11, 2017* to be included in the report. Emailed data sheets are not accepted.

QUESTIONS?

TEL: +1-571-434-1925 (8 am - 4:30 pm EST)
 EMAIL: forensics@cts-interlab.com
www.ctsforensics.com

Participant Code:

ONLINE DATA ENTRY: www.cts-portal.com

FAX: +1-571-434-1937

MAIL: Collaborative Testing Services, Inc.
 P.O. Box 650820
 Sterling, VA 20165-0820 USA

Please return all pages of this data sheet.

Page 8 of 9

Collaborative Testing Services ~ Forensic Testing Program

RELEASE OF DATA TO ACCREDITATION BODIES

The following Accreditation Releases will apply only to:

Participant Code:

WebCode:

for Test No. **17-503: Marihuana Identification and THC Quantitation**

This release page must be completed and received by **December 11, 2017** to have this participant's submitted data included in the reports forwarded to the respective Accreditation Bodies.

Have the laboratory's designated individual complete the following steps only if your laboratory is accredited in this testing/calibration discipline by one or more of the following Accreditation Bodies.

Step 1: Provide the applicable Accreditation Certificate Number(s) for your laboratory

ASCLD/LAB Certificate No. _____

ANAB Certificate No. _____

A2LA Certificate No. _____

Step 2: Complete the Laboratory Identifying Information in its entirety

Signature and Title _____

Laboratory Name _____

Location (City/State) _____

Return Instructions

Accreditation Release

Please submit the completed Accreditation Release at the same time as your full data sheet. See Data Sheet Return Instructions on the previous page.

*Questions? Contact us 8 am-4:30 pm EST
Telephone: +1-571-434-1925
email: forensics@cts-interlab.com*

Please return all pages of this data sheet.

Page 9 of 9