



Quantitative Drug Analysis - Cocaine HCl

Test No. 19-506 Summary Report

Each sample set consisted of two items with different concentrations of cocaine HCl. Participants were asked to determine the concentration of cocaine HCl in each item. Data were returned from 55 participants and are compiled into the following tables:

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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 two items containing different concentrations of cocaine HCl and caffeine. Participants were requested to analyze each item and report the quantitative determination of cocaine HCl present in the samples.

SAMPLE PREPARATION -

The appropriate amounts of cocaine HCl and caffeine for each Item were thoroughly mixed to ensure homogeneity.

ITEMS 1 and 2 (PREPARATION): For each Item, approximately 350 mg of the powder 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 zip top bag and heat sealed closed. The heat sealed bag was then placed into a pre-labeled 5 1/2 inch coin envelope.

SAMPLE PACK ASSEMBLY: One of each of the Item 1 and Item 2 envelopes was placed into a larger pre-labeled sample pack envelope.

VERIFICATION: Laboratories that conducted predistribution analysis of the samples reported consistent results that were comparable to the preparation concentrations of cocaine HCl. The following methods were used to examine the items: LC and LC/MS.

<u>Item</u>	<u>Preparation Cocaine HCl</u>
1	26%
2	74%

Summary Comments

This test was designed to allow participants to assess their proficiency in the determination of cocaine HCl concentrations. Each participant was supplied with a sample set consisting of two items containing creatine and different concentrations of cocaine HCl. Participants were requested to determine the cocaine HCl concentration for both items. (Refer to the Manufacturer's Information for preparation details.)

The results are separated into two tables: reported results and raw analytical data. The table of reported results shows the concentration that each participant would report according to their normal reporting procedures (e.g. mean, lowest result, truncated results). The table of raw data shows the results from each determination made by the laboratory to produce their reported results. All but one participant reported using the mean of duplicate/several determinations as their reporting procedure. One participant reported "Other" but did not specify which reporting procedure they utilized.

The raw data was used to calculate the grand mean and the standard deviation (STD) for each item. No participants reported "extreme" data (± 3 STD from the grand mean) for Item 1 or Item 2 in this test. The calculated grand mean of Item 1 was 23.11 with a standard deviation of 1.744, and the grand mean of Item 2 was 69.11 with a standard deviation of 3.484. These calculations are provided to assist the participants and accrediting bodies in determining the acceptability of the results.

As a supplemental examination of the raw data, Bivariate Control Analysis was also performed to analyze the measurements of both samples simultaneously. In this analysis, a comparative performance value (CPV) is provided for each participant, which is a unitless ratio indicating the number of standard deviations a participant's results are from the Grand Mean. The closer a participant's CPV is to zero, the more consistent their results are with the other participants' data. For the graphical portion, an ellipse was drawn so that 95% of the time a randomly selected participant was inside of it. One participant, whose results fell outside of the 95% ellipse, but within the 99% control limit, has been marked with a "*". One participant who did not report raw data for either item was marked with an "M" and also excluded from the calculations. For more information regarding Bivariate Control Analysis, please see the supplemental section at the end of this report.

Participants used a variety of methods to examine the samples. The most common method of analysis utilized was GC/FID, followed by LC.

Reported Results

What is the concentration of cocaine HCl in each of the samples?

TABLE 1

WebCode	Item 1	Item 2	Uncertainty (k)
Preparation concentration:	26%	74%	
227BNV	21.5 ± 0.6 (%)	64.4 ± 2.0 (%)	3
274QZP	23.3 ± 3.1 (%)	67.6 ± 8.8 (%)	3.12
2DHKBK	19.7 ± 2.6 (%)	63.7 ± 8.3 (%)	3.12
2RJCWP	23.5 ± 3.1 (%)	69.2 ± 9.0 (%)	3.12
37W4WF	20.4 ± 2.7 (%)	66.1 ± 8.6 (%)	3.12
4CJ99G	23.9 ± 3.2 (%)	66.0 ± 8.6 (&)	3.12
4DEYCB	23.6 ± 2.6 (%)	68.2 ± 7.5 (%)	2.576
4M2X3F	23.8 ± 3.1 (%)	69.5 ± 9.1 (%)	3.12
4QYEFA	26.0 ± 2.1 (%)	75.9 ± 5.9 (%)	2.65
738TEE	23.8 ± 3.1 (%)	67.3 ± 8.8 (%)	3.12
9C3QBC	24.1 ± 3.2 (%)	72.5 ± 9.5 (%)	3.12
AVEVEF	19.9 ± 2.6 (%)	67.6 ± 8.8 (%)	3.12
BT2L29	22.8 ± 3.0 (%)	67.9 ± 8.9 (%)	3.12
CF9HUZ	24.6 ± 2.1 (%)	71.4 ± 5.6 (%)	2
D26JJ9	24.8 ± 2.0 (weight percent)	71.4 ± 6.3 (weight percent)	2
DEW7P4	24 ± 2.4 (percent)	66 ± 6.6 (percent)	10%
DZDJJC	22.5 ± 3.0 (%)	68.3 ± 8.9 (%)	3.12
E7V9JD	24.2 ± 3.2 (%)	72.1 ± 9.4 (%)	3.12
EYVUU6	23.4 ± 3.1 (%)	71.4 ± 9.3 (%)	3.12

TABLE 1

WebCode	Item 1	Item 2	Uncertainty (k)
Preparation concentration:	26%	74%	
F7DG88	20 ± 3 (%w/w)	69 ± 10 (%w/w)	2
FCEVP3	19.7 ± 2.6 (%)	65.6 ± 8.6 (%)	3.12
FRWJ37	23.0 ± 3.0 (%)	69.2 ± 9.0 (%)	3.12
GBNRXG	24.1 ± 2.3 (%)	72.5 ± 2.3 (%)	2
H8JLX2	24.5 ± 3.2 (%)	73.7 ± 9.6 (%)	3.12
HPECRA	23.8 ± 3.1 (%)	69.7 ± 9.1 (%)	3.12
JLEMN8	24.7 ± 3.3 (%)	70.7 ± 9.2 (%)	3.12
KBAY8U	24 ± 3 (%)	74 ± 7 (%)	2.576
KJK2TV	23.0 ± 2.6 (%)	68.9 ± 7.6 (%)	2.576
KRE7LW	21.4 ± 2.4 (%)	65.8 ± 7.3 (%)	2.576
LCJ4M4	21 ± 2 (%w/w)	69 ± 5 (%w/w)	2
LTK4BX	23.6 ± 3.1 (%)	70.6 ± 9.2 (%)	3.12
LVC6AU	24.50 ± 1.76 (%w/w)	73.85 ± 5.43 (%w/w)	2
MKBYX8	25.70 ± 0.66 (%)	73.08 ± 0.89 (%)	2
NMRNVP	22.9 ± 2.0 (%)	67.6 ± 5.2 (%)	2
NWEPBY	23.53 ± 0.21 (%)	71.13 ± 0.18 (%)	
P34G3T	23.3 ± 3.1 (%)	63.9 ± 8.4 (%)	3.12
PQQG7Y	24.9 ± 1.8 (%)	77.2 ± 2.6 (%)	2
PZBRFQ	21.0 ± 2.4 (%)	64.8 ± 7.2 (%)	2.576
PZEFW6	27.10 ± 1.23 (%)	75.79 ± 0.85 (%)	2
RFE2CW	21.9 ± 2.9 (%)	66.2 ± 8.7 (%)	3.12

TABLE 1

WebCode	Item 1	Item 2	Uncertainty (k)
Preparation concentration:	26%	74%	
RL7BMU	22.6 ± 3.0 (%)	67.9 ± 8.9 (%)	3.12
TBM2UU	86.8 ± 6.7 (mg)	244 ± 16 (mg)	2
TKNLWM	25.1 ± 1.0 (%)	66.5 ± 1.0 (%)	3
UR7ABP	22.8 ± 3.0 (%)	69.2 ± 9.0 (%)	3.12
VAL3CX	25.7 ± 1.2 (%)	76.9 ± 1.2 (%)	2
WBBVKL	22.9 ± 3.0 (%)	66.5 ± 8.7 (%)	3.12
WC2UXK	24.7 ± 1.2 (%)	71.7 ± 3.4 (%)	2
WRF3YN	19.7 ± 2.6 (%)	63.5 ± 8.3 (%)	3.12
XVDY2N	20.4 ± 2.7 (%)	64.4 ± 8.4 (%)	3.12
Y7A8GK	21.3 ± 2.8 (%)	66.1 ± 8.6 (%)	3.12
YT4DMM	23.3 ± 3.1 (%)	69.2 ± 9.0 (%)	3.12
YUW3AN	24 ± 2 (% w/w)	71 ± 5 (%w/w)	2
ZEYCTH	23.3 ± 3.1 (%)	71.1 ± 9.3 (%)	3.12
ZK3GGV	230 (µg/mg)	676.5 (µg/mg)	
ZXCWPL	23.2 ± 3.1 (%)	69.1 ± 9.0 (%)	3.12

Reporting Procedures

TABLE 2

WebCode	Reporting Procedures
227BNV	The mean of duplicate/several determinations.
274QZP	The mean of duplicate/several determinations.
2DHKBK	The mean of duplicate/several determinations.
2RJCWP	The mean of duplicate/several determinations.
37W4WF	The mean of duplicate/several determinations.
4CJ99G	The mean of duplicate/several determinations.
4DEYCB	The mean of duplicate/several determinations.
4M2X3F	The mean of duplicate/several determinations.
4QYEFA	The mean of duplicate/several determinations.
738TEE	The mean of duplicate/several determinations.
9C3QBC	The mean of duplicate/several determinations.
AVEVEF	The mean of duplicate/several determinations.
BT2L29	The mean of duplicate/several determinations.
CF9HUZ	[Participant selected "Other" but did not include what reporting procedure they utilized.]
D26JJ9	The mean of duplicate/several determinations.
DEW7P4	The mean of duplicate/several determinations.
DZDJJC	The mean of duplicate/several determinations.
E7V9JD	The mean of duplicate/several determinations.
EYVUU6	The mean of duplicate/several determinations.
F7DG88	The mean of duplicate/several determinations.
FCEVP3	The mean of duplicate/several determinations.
FRWJ37	The mean of duplicate/several determinations.
GBNRXG	The mean of duplicate/several determinations.
H8JLX2	The mean of duplicate/several determinations.
HPECRA	The mean of duplicate/several determinations.

TABLE 2

WebCode	Reporting Procedures
JLEMN8	The mean of duplicate/several determinations.
KBAY8U	The mean of duplicate/several determinations.
KJK2TV	The mean of duplicate/several determinations.
KRE7LW	The mean of duplicate/several determinations.
LCJ4M4	The mean of duplicate/several determinations.
LTK4BX	The mean of duplicate/several determinations.
LVC6AU	The mean of duplicate/several determinations.
MKBYX8	The mean of duplicate/several determinations.
NMRNVP	The mean of duplicate/several determinations.
NWEPBY	The mean of duplicate/several determinations.
P34G3T	The mean of duplicate/several determinations.
PQQG7Y	The mean of duplicate/several determinations.
PZBRFQ	The mean of duplicate/several determinations.
PZEFW6	The mean of duplicate/several determinations.
RFE2CW	The mean of duplicate/several determinations.
RL7BMU	The mean of duplicate/several determinations.
TBM2UU	The mean of duplicate/several determinations.
TKNLWM	The mean of duplicate/several determinations.
UR7ABP	The mean of duplicate/several determinations.
VAL3CX	The mean of duplicate/several determinations.
WBBVKL	The mean of duplicate/several determinations.
WC2UXK	The mean of duplicate/several determinations.
WRF3YN	The mean of duplicate/several determinations.
XVDY2N	The mean of duplicate/several determinations.
Y7A8GK	The mean of duplicate/several determinations.
YT4DMM	The mean of duplicate/several determinations.

TABLE 2

WebCode	Reporting Procedures
YUW3AN	The mean of duplicate/several determinations.
ZEYCTH	The mean of duplicate/several determinations.
ZK3GGV	The mean of duplicate/several determinations.
ZXCWPL	The mean of duplicate/several determinations.

Response Summary	Participants: 55
The mean of duplicate/several determinations:	54 (98.2%)
The lowest value of duplicate/several determinations:	0 (0.0%)
Other:	1 (1.8%)

Raw Data

List of raw data determinations in percent.

TABLE 3 - Item 1

WebCode	Preparation target concentration : 26%						Mean
227BNV	21.50	21.70	21.30				21.50
274QZP	23.00	23.50					23.25
2DHKBK	19.80	19.70					19.75
2RJCWP	23.50	23.50					23.50
37W4WF	20.50	20.40					20.45
4CJ99G	23.90	23.90					23.90
4DEYCB	23.60	23.60	23.50				23.57
4M2X3F	23.50	24.30					23.90
4QYEFA	25.59	26.08	26.07	26.10	26.01	26.10	25.99
738TEE	23.90	23.80					23.85
9C3QBC	24.20	24.10					24.15
AVEVEF	20.10	19.80					19.95
BT2L29	22.70	23.00					22.85
CF9HUZ	25.10	24.78	24.79	24.54	24.22	24.42	24.64
D26JJ9	24.80	24.88	25.20	25.09	24.71	24.42	24.85
DEW7P4	24.30	23.80					24.05
DZDJJC	22.70	22.40					22.55
E7V9JD	24.10	24.40					24.25
EYUUU6	23.40	23.50					23.45
F7DG88	19.74	19.96	20.35	20.82			20.22
FCEVP3	19.70	19.70					19.70
FRWJ37	23.20	22.90					23.05
GBNRXG	24.15	24.03	24.05	24.05			24.07
H8JLX2	24.60	24.50					24.55
HPECRA	23.80	23.80					23.80
JLEMN8	25.10	24.40					24.75
KBAY8U	24.10	24.10	24.17				24.12
KJK2TV	22.70	22.90	23.40				23.00
KRE7LW	21.40	21.50	21.30				21.40
LCJ4M4	20.92	21.00	20.52	20.55			20.75

TABLE 3 - Item 1

WebCode	Preparation target concentration : 26%						Mean		
LTK4BX	23.40	23.90					23.65		
LVC6AU	24.43	24.58					24.51		
MKBYX8	25.89	26.29	25.50	25.60	25.48	25.47	25.71		
NMRNVP	22.73	22.21	23.19	23.17	23.24	22.77	22.89		
NWEPBY	21.26	20.84	20.91				21.00		
P34G3T	23.70	22.80					23.25		
PQQG7Y	24.30	24.60	25.00	25.10	25.10	25.30	25.40	25.40	25.03
PZBRFQ	20.90	21.20	20.90					21.00	
PZEFW6	27.35	26.85						27.10	
RFE2CW	22.00	21.90						21.95	
RL7BMU	22.50	22.80						22.65	
TBM2UU									
TKNLWM	25.10	25.20						25.15	
UR7ABP	22.60	23.20						22.90	
VAL3CX	24.80	26.00	25.20	26.40	25.30	26.40		25.68	
WBBVKL	22.90	23.00						22.95	
WC2UXK	24.63	24.75						24.69	
WRF3YN	19.70	19.80						19.75	
XVDY2N	20.20	20.60						20.40	
Y7A8GK	21.00	21.50						21.25	
YT4DMM	23.00	23.60						23.30	
YUW3AN	23.50	23.80						23.65	
ZEYCTH	23.40	23.30						23.35	
ZK3GGV	21.84	24.17						23.01	
ZXCWPL	22.90	23.40						23.15	

Statistical Analysis for Item 1		Participants: 55	
Preparation Target Concentration:	26%	Number of Participants Included:	54
Grand Mean:	23.11	Number of Participants Excluded:	0
Standard Deviation:	1.744	Number of Participants without Raw Data:	1

TABLE 3 - Item 2

WebCode	Preparation target concentration : 74%						Mean
227BNV	64.10	64.80	64.40				64.43
274QZP	67.40	67.70					67.55
2DHKBK	61.80	65.80					63.80
2RJCWP	69.60	69.00					69.30
37W4WF	65.90	66.30					66.10
4CJ99G	65.40	66.50					65.95
4DEYCB	68.50	67.90	68.00				68.13
4M2X3F	68.70	70.40					69.55
4QYEFA	75.49	75.63	75.97	75.82	76.17	76.18	75.88
738TEE	68.80	65.90					67.35
9C3QBC	72.70	72.40					72.55
AVEVEF	67.80	67.40					67.60
BT2L29	68.80	67.10					67.95
CF9HUZ	71.42	72.11	71.14	71.46	70.91	71.25	71.38
D26JJ9	69.92	70.61	70.38	72.54	72.29	72.61	71.39
DEW7P4	66.80	65.60					66.20
DZDJJC	69.60	67.20					68.40
E7V9JD	72.30	72.00					72.15
EYVUU6	71.50	71.40					71.45
F7DG88	70.65	66.07	68.13	69.46			68.58
FCEVP3	65.30	66.10					65.70
FRWJ37	70.10	68.40					69.25
GBNRXG	73.39	72.75	72.00	72.04			72.55
H8JLX2	74.20	73.40					73.80
HPECRA	69.20	70.10					69.65
JLEMN8	71.50	70.00					70.75
KBAY8U	75.08	73.69	73.25				74.01
KJK2TV	69.10	69.00	68.50				68.87
KRE7LW	65.20	66.40	65.80				65.80
LCJ4M4	68.35	68.56	68.90	69.08			68.72
LTK4BX	70.00	71.30					70.65
LVC6AU	73.40	74.32					73.86

TABLE 3 - Item 2

WebCode	Preparation target concentration : 74%							Mean
MKBYX8	72.55	73.46	72.79	73.22	72.78	73.68		73.08
NMRNVP	67.39	68.07	67.33	67.59	67.74	67.22		67.56
NWEPBY	63.49	63.54	63.59	63.36				63.50
P34G3T	62.20	65.50						63.85
PQQG7Y	78.60	77.40	77.80	78.00	76.00	76.40	76.00 76.40	77.08
PZBRFQ	65.10	65.50	64.00					64.87
PZEFW6	76.51	75.06						75.79
RFE2CW	67.00	65.50						66.25
RL7BMU	68.40	67.40						67.90
TBM2UU								
TKNLWM	67.30	65.80						66.55
UR7ABP	69.00	69.50						69.25
VAL3CX	75.70	76.40	76.90	77.60	77.00	77.70		76.88
WBBVKL	66.30	66.80						66.55
WC2UXK	71.86	71.61						71.74
WRF3YN	61.90	65.20						63.55
XVDY2N	63.00	66.00						64.50
Y7A8GK	67.00	65.20						66.10
YT4DMM	69.80	68.70						69.25
YUW3AN	70.20	71.10						70.65
ZEYCTH	72.00	70.40						71.20
ZK3GGV	69.09	66.24						67.67
ZXCWPL	69.20	69.00						69.10

Statistical Analysis for Item 2			Participants: 55	
Preparation Target Concentration:	74%	Number of Participants Included:	54	
Grand Mean:	69.11	Number of Participants Excluded:	0	
Standard Deviation:	3.484	Number of Participants without Raw Data:	1	

TABLE 3 - Response Summary

Response Summary	Item 1	Item 2
Preparation concentration	26%	74%
Grand Mean	23.11	69.11
Standard Deviation	1.744	3.484

Method of Analysis

TABLE 4

WebCode	GC	LC	FTIR	GC/MS	LC/MS	UV	GC/FID	Other
227BNV							✓	
274QZP							✓	
2DHKBK							✓	
2RJCWP							✓	
37W4WF							✓	
4CJ99G							✓	
4DEYCB							✓	
4M2X3F							✓	
4QYEFA							✓	
738TEE							✓	
9C3QBC							✓	
AVEVEF							✓	
BT2L29							✓	
CF9HUZ							✓	
D26JJ9							✓	
DEW7P4		✓						
DZDJJC							✓	
E7V9JD							✓	
EYVUU6							✓	
F7DG88					✓			
FCEVP3							✓	
FRWJ37							✓	
GBNRXG							✓	
H8JLX2							✓	
HPECRA							✓	
JLEMN8							✓	
KBAY8U					✓			
KJK2TV							✓	
KRE7LW							✓	
LCJ4M4		✓						
LTK4BX							✓	

TABLE 4

WebCode	GC	LC	FTIR	GC/MS	LC/MS	UV	GC/FID	Other
LVC6AU		✓						
MKBYX8		✓				✓		
NMRNVP							✓	
NWEPBY		✓						
P34G3T							✓	
PQQG7Y							✓	
PZBRFQ							✓	
PZEFW6					✓			
RFE2CW							✓	
RL7BMU							✓	
TBM2UU		✓				✓		
TKNLWM								HPLC
UR7ABP							✓	
VAL3CX				✓				
WBBVKL							✓	
WC2UXK		✓						
WRF3YN							✓	
XVDY2N							✓	
Y7A8GK							✓	
YT4DMM							✓	
YUW3AN							✓	
ZEYCTH							✓	
ZK3GGV		✓						
ZXCWPL							✓	

Response Summary								Participants: 55
	GC	LC	FTIR	GC/MS	LC/MS	UV	GC/FID	
Participants	0	8	0	1	3	2	42	
Percent	0.0%	14.5%	0.0%	1.8%	5.5%	3.6%	76.4%	

Additional Comments

TABLE 5

WebCode	Additional Comments
LVC6AU	Item 1 creatine indicated
NWEPBY	The results given in point 2 [Table 3 - Raw Data] are calculated for cocaine base. These results after averaging them, have been converted into cocaine hydrochloride and are respectively: sample 1 = 23.53% and sample 2 = 71.13%.
TBM2UU	As per laboratory policy, results are not reported as a percentage. Raw data is also not presented as a percentage.

Supplemental: Hotelling T-Squared Bivariate Control Analysis

Hotelling T-Squared Bivariate Control Analysis is used in many other industries to examine results. Although not typically used in forensic science, CTS is presenting an introduction to this type of statistical data analysis. A laboratory may choose to delve deeper in a participant's results by studying both sets of statistics available in this report. The statistics presented in Table 3 (Raw Data) of this report examine the results of each item independently of each other. However, because the same materials are chosen for both samples, there should be a correlation of measurement performance between the two samples. A bivariate analysis technique judges measurement performance on both samples simultaneously, represented as an ellipse. For each participant, the mean of Item 1 (x-axis) is plotted against the mean of Item 2 (y-axis). The horizontal and vertical cross-hairs are the grand means for each Item. When 20 or more participants are included in the statistics, an ellipse is drawn so that 95% of the time a randomly selected participant will be included inside.

When considering your participant's position on the plot relative to the ellipse, remember that, generally speaking, if a participant's plotted point falls on the major axis outside of the ellipse, the participant is consistent in its measurements between the two samples but exhibits an offset from the grand mean (systematic difference). If a plotted point falls to the side of the ellipse, it indicates possible differences in the way that the participant tested the two samples or differences in sample behavior (consistency difference). The two-sample plot enables you to see which sample, if either, is "extreme" and to ascertain the nature of the "extreme" data.

Systematic Difference

Bias is illustrated in the control ellipse on the two sample plot. If a particular analysis/sample combination did not show bias, the control ellipse would become a circle. Differences in procedures, conditions, instrumentation and sample preparation all contribute to the bias of a participant. When these differences become too large, a participant may receive a Data Flag. When the test results for both samples are both high or low compared to the group, a participant has a fixed set of factors on which to focus to identify a cause. Furthermore, since additional testing on similar samples should produce similar high or low results, it is possible to determine that a systematic error has been successfully corrected.

Consistency Difference

The participant's results indicate that there are differences in the way the two samples tested (the plotted point falls to the side of the ellipse). This type of error may be attributed to the analyst deviating from the procedure when testing one of the samples or a material interaction occurrence with the instrument or room conditions. The inconsistency is reflected in the Comparative Performance Values (CPV) for the two samples, such as a +1.5 CPV for Item 1 and a -2.2 CPV for Item 2. CPV is the number of standard deviations a value is from the grand mean.

Key for Data Flags		
<u>Data Flag</u>	<u>Statistically Included/Excluded</u>	<u>Explanation</u>
*	Included	Results fall outside 95% ellipse, but within a 99% control limit (ellipse) that is calculated.
X	Excluded	Results fall outside of 99% control limit.
M	Excluded	Data is missing for at least one item

Bivariate Control Analysis

WebCode	Data Flag	Item 1			Item 2		
		Participant Mean	Difference from Grand Mean	CPV	Participant Mean	Difference from Grand Mean	CPV
227BNV		21.50	-1.607	-0.92	64.43	-4.680	-1.34
274QZP		23.25	0.143	0.08	67.55	-1.564	-0.45
2DHKBK		19.75	-3.357	-1.92	63.80	-5.314	-1.53
2RJCWP		23.50	0.393	0.23	69.30	0.186	0.05
37W4WF		20.45	-2.657	-1.52	66.10	-3.014	-0.86
4CJ99G		23.90	0.793	0.45	65.95	-3.164	-0.91
4DEYCB		23.57	0.460	0.26	68.13	-0.980	-0.28
4M2X3F		23.90	0.793	0.45	69.55	0.436	0.13
4QYEFA		25.99	2.885	1.65	75.88	6.763	1.94
738TEE		23.85	0.743	0.43	67.35	-1.764	-0.51
9C3QBC		24.15	1.043	0.60	72.55	3.436	0.99
AVEVEF		19.95	-3.157	-1.81	67.60	-1.514	-0.43
BT2L29		22.85	-0.257	-0.15	67.95	-1.164	-0.33
CF9HUZ		24.64	1.535	0.88	71.38	2.268	0.65
D26JJ9		24.85	1.743	1.00	71.39	2.278	0.65
DEW7P4		24.05	0.943	0.54	66.20	-2.914	-0.84
DZDJJC		22.55	-0.557	-0.32	68.40	-0.714	-0.20
E7V9JD		24.25	1.143	0.66	72.15	3.036	0.87
EYUUU6		23.45	0.343	0.20	71.45	2.336	0.67
F7DG88		20.22	-2.889	-1.66	68.58	-0.536	-0.15
FCEVP3		19.70	-3.407	-1.95	65.70	-3.414	-0.98
FRWJ37		23.05	-0.057	-0.03	69.25	0.136	0.04
GBNRXG		24.07	0.963	0.55	72.55	3.431	0.98
H8JLX2		24.55	1.443	0.83	73.80	4.686	1.34
HPECRA		23.80	0.693	0.40	69.65	0.536	0.15

WebCode	Data Flag	Item 1			Item 2		
		Participant Mean	Difference from Grand Mean	CPV	Participant Mean	Difference from Grand Mean	CPV
JLEMN8		24.75	1.643	0.94	70.75	1.636	0.47
KBAY8U		24.12	1.017	0.58	74.01	4.893	1.40
KJK2TV		23.00	-0.107	-0.06	68.87	-0.247	-0.07
KRE7LW		21.40	-1.707	-0.98	65.80	-3.314	-0.95
LCJ4M4		20.75	-2.359	-1.35	68.72	-0.391	-0.11
LTK4BX		23.65	0.543	0.31	70.65	1.536	0.44
LVC6AU		24.51	1.398	0.80	73.86	4.746	1.36
MKBYX8		25.71	2.598	1.49	73.08	3.966	1.14
NMRNVP		22.89	-0.222	-0.13	67.56	-1.557	-0.45
NWEPBY		21.00	-2.103	-1.21	63.50	-5.619	-1.61
P34G3T		23.25	0.143	0.08	63.85	-5.264	-1.51
PQQG7Y		25.03	1.918	1.10	77.08	7.961	2.28
PZBRFQ		21.00	-2.107	-1.21	64.87	-4.247	-1.22
PZEFW6		27.10	3.992	2.29	75.79	6.672	1.91
RFE2CW		21.95	-1.157	-0.66	66.25	-2.864	-0.82
RL7BMU		22.65	-0.457	-0.26	67.90	-1.214	-0.35
TBM2UU	M						
TKNLWM	*	25.15	2.043	1.17	66.55	-2.564	-0.74
UR7ABP		22.90	-0.207	-0.12	69.25	0.136	0.04
VAL3CX		25.68	2.577	1.48	76.88	7.770	2.23
WBBVKL		22.95	-0.157	-0.09	66.55	-2.564	-0.74
WC2UXK		24.69	1.583	0.91	71.74	2.622	0.75
WRF3YN		19.75	-3.357	-1.92	63.55	-5.564	-1.60
XVDY2N		20.40	-2.707	-1.55	64.50	-4.614	-1.32
Y7A8GK		21.25	-1.857	-1.06	66.10	-3.014	-0.86
YT4DMM		23.30	0.193	0.11	69.25	0.136	0.04
YUW3AN		23.65	0.543	0.31	70.65	1.536	0.44

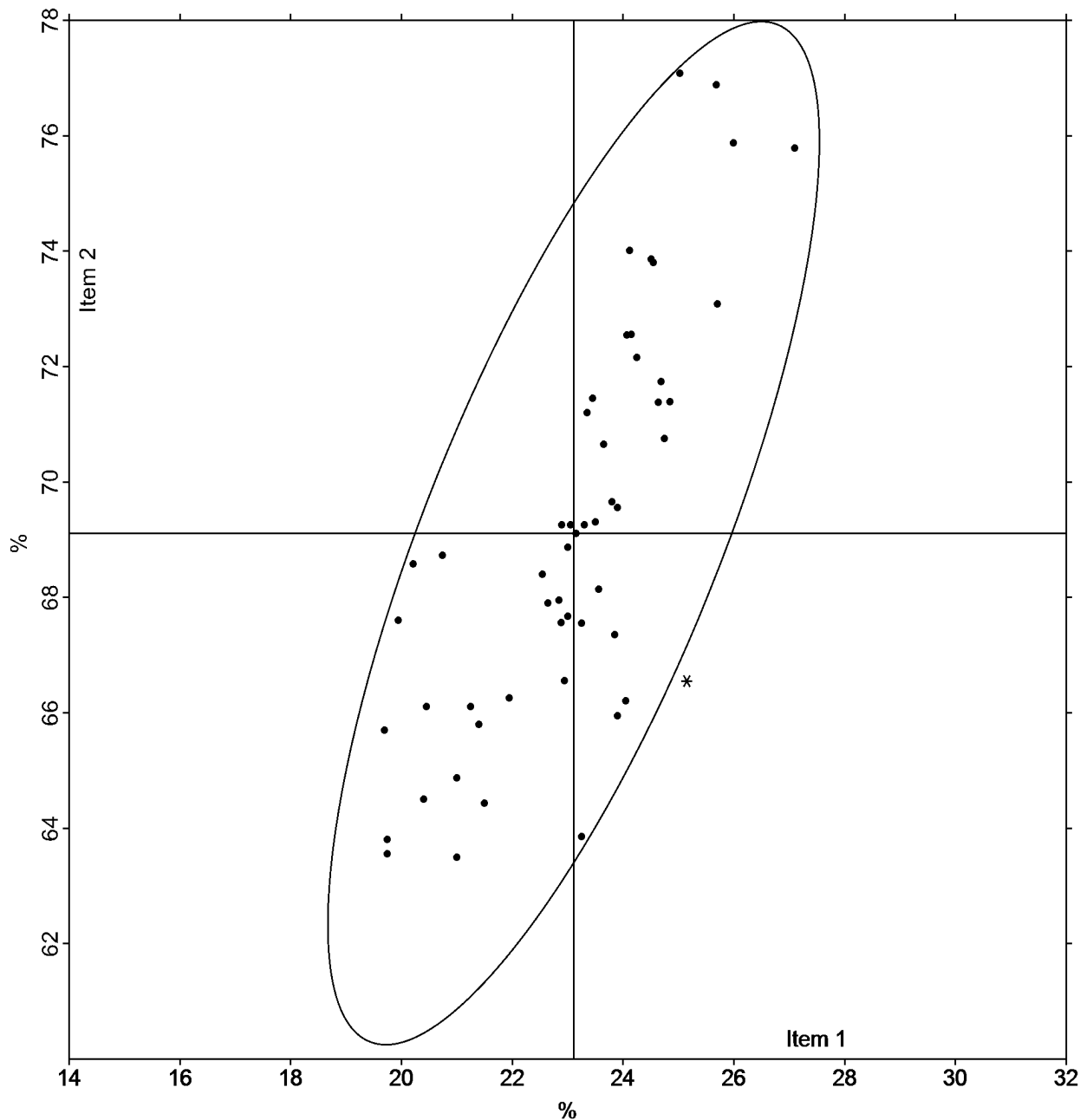
WebCode	Data Flag	Item 1			Item 2		
		Participant Mean	Difference from Grand Mean	CPV	Participant Mean	Difference from Grand Mean	CPV
ZEYCTH		23.35	0.243	0.14	71.20	2.086	0.60
ZK3GGV		23.01	-0.102	-0.06	67.67	-1.449	-0.42
ZXCWPL		23.15	0.043	0.02	69.10	-0.014	0.00

Response Summary	Item 1	Item 2	Participants: 55
Preparation Concentration	26%	74%	
Grand Mean	23.11	69.11	
Standard Deviation	1.74	3.48	
Participants Included: 54	Participants Excluded: 0	Participants without Raw Data for both items: 1	

Bivariate Control Analysis

Item 1 Grand Mean: 23.11

Item 2 Grand Mean: 69.11



-End of Report-
(Appendix may follow)

Test No. 19-506: Quantitative Drug Analysis - Cocaine HCl

DATA MUST BE SUBMITTED BY **March 9, 2020, 11:59 p.m.** TO BE INCLUDED IN THE REPORT

Participant Code: U1234A

WebCode: HY8RER

The Accreditation Release section can be accessed by using the "Continue to Final Submission" button above. This information can be entered at any time prior to submitting to CTS.

Test Description:

Investigators have submitted two powdered cocaine HCl samples from separate cases to be quantitatively examined. Using your laboratory's procedures, analyze each sample and report the quantitative determination of cocaine HCl present in the samples.

-Please follow your laboratory's policies and procedures for sample homogenization.

-This is not intended as a qualitative test but rather as a quantitative examination of the cocaine HCl present in the samples.

Items Submitted (Sample Pack DQ2):

Items 1 & 2: Powdered cocaine HCl samples

1a.) What is the concentration of cocaine HCl in each of the samples? (Results should be reported using your laboratory reporting criteria for decimal places, uncertainty, and units.)

Reported Concentration	Uncertainty (k= <input type="text"/>)	Units
Item 1: <input type="text"/>	± <input type="text"/>	(<input type="text"/>)
Item 2: <input type="text"/>	± <input type="text"/>	(<input type="text"/>)

1b.) Are the values listed above:

The mean of duplicate / several determinations?

The lowest value of duplicate / several determinations?

Other? (Specify):

2.) Please list your raw data determinations below in percent of cocaine HCl. (Results not reported in % will be excluded from statistical calculations.)

Item 1 (%)	Item 2 (%)
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>

3.) What methods were used to quantitatively examine the items?

- GC
- GC/MS
- GC/FID
- LC
- LC/MS
- Other (specify):
- FTIR
- UV

4.) Additional Comments

Please note: Any additional formatting applied in the free form space below will not transfer to the Summary Report and may cause your information to be illegible. This includes additional spacing and returns that present your responses in lists and tabular formats.

RELEASE OF DATA TO ACCREDITATION BODIES

The Accreditation Release is accessed by pressing the "Continue to Final Submission" button online and can be completed at any time prior to submission to CTS.

CTS submits external proficiency test data directly to ASCLD/LAB, ANAB, and/or 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 below must be completed.)
- This participant's data is not intended for submission to ASCLD/LAB, ANAB, and/or A2LA.

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.

ANAB Certificate No.
(Include ASCLD/LAB Certificate here)

A2LA Certificate No.

Step 2: Complete the Laboratory Identifying Information in its entirety.

Authorized Contact Person and Title

Laboratory Name

Location (City/State)