



## **Quantitative Drug Analysis - Methamphetamine HCl**

### **Test No. 25-5051 Summary Report**

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Each sample pack consisted of two items containing different concentrations of methamphetamine hydrochloride (HCl), which participants were asked to analyze. Data were returned from 92 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 with different concentrations of methamphetamine hydrochloride (HCl) and creatine monohydrate. Participants were asked to analyze each item and report the concentration of methamphetamine HCl in the sample.

**SAMPLE PREPARATION:** Prior to production, the appropriate amount of methamphetamine HCl and diluent for each item were combined and thoroughly mixed to ensure homogeneity. For each item, approximately 500 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, heat sealed and then placed into a pre-labeled envelope.

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

**VERIFICATION:** The laboratories that participated in predistribution received additional specimens for duplicate testing of each item. Predistribution results were consistent with each other and the manufacturer's preparation information. The labs used the following combined list of examination methods: LC, LC/MS, FTIR, and GC/FID.

Item	Preparation Concentration - Methamphetamine HCl	Diluent	Sample Size
1	93%	Creatine monohydrate	500 mg
2	65%	Creatine monohydrate	500 mg

*Please note that the preparation concentration is the value used for calculations during the test preparation phase and may not necessarily represent the final concentration of the samples. It is advised to wait for the Grand Mean statistics available in this Summary Report as well as wait for the Individual Reports before evaluating performance.*

## **Summary Comments**

This test was designed to allow participants to assess their proficiency in the determination of powdered methamphetamine hydrochloride (HCl) concentrations. Each sample pack consisted of two items: Item 1 contained approximately 93% methamphetamine HCl, and Item 2 contained approximately 65% methamphetamine HCl. Refer to the Manufacturer's Information for preparation details.

The results are separated into two tables: reported results (Table 1) and raw analytical data (Table 3). 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 analytical data shows the results from each determination made by the laboratory to produce their reported results. The majority of the population used the mean of duplicate/several determinations for their quantitative reporting procedures.

The raw data was used to calculate the grand mean and the standard deviation for each item. If a participant's data was marked with an "X", it was considered extreme data ( $\pm 5$  STD from grand mean) and the results were excluded from the calculations of the grand mean and standard deviation. Of the 92 responding participants, 1 participant was marked as extreme for both Items 1 and 2. The calculated grand mean concentration of Item 1 was 92.04% with a standard deviation of 2.420, and the grand mean concentration of Item 2 was 64.09% with a standard deviation of 1.765. These calculations are supplied to assist the participants and accrediting bodies in determining the acceptability of the results.

The most utilized method of analysis among participants was GC/FID.

As a supplemental examination of the raw data, Bivariate Control Analysis was also performed to analyze the measurement 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 99% of the time, a randomly selected participant was inside of it. One participant's data was marked with an "X", as it fell outside the 99.5% control limit and their results were excluded from the calculations in this supplemental examination. For more information regarding Bivariate Control Analysis, please see the supplemental section at the end of this report.

## Reported Results

*What is the concentration of methamphetamine HCl in each of the samples?*

TABLE 1

WebCode	Item 1 Reported Concentration (units)	Item 2 Reported Concentration (units)	Uncertainty (k)
<b>Preparation concentration:</b>	<b>93%</b>	<b>65%</b>	
26QCNN	89.38 ± 5.40 (%)	62.00 ± 3.70 (%)	3
2DKC8M	0.44 ± 0.06 (grams)	0.31 ± 0.04 (grams)	3
2MVETN	92 ± 3 (%)	64 ± 3 (%)	2
2R4ZGK	91 ± 5 (%)	64 ± 5 (%)	2.05
3GHXUJ	93.5 ± 3.0 (%)	63.7 ± 3.0 (%)	2
3LCUGP	81,7 (%)	57,8 (%)	
3WHWLM	93 ± 7 (%)	64 ± 5 (%)	2
4X9HRH	92.2 ± 5.5 (%)	64.3 ± 5.5 (%)	3
6AW2NY	90.0 ± 4.2 (%)	62.4 ± 4.2 (%)	2
6GBMVH	92.2 ± 7.2 (%)	64.9 ± 5.0 (%)	2.65
6T8TNF	0.45 ± 0.03 (grams)	0.30 ± 0.02 (grams)	3
738NFK	91.0 ± 1.3 (%)	63.2 ± 1.3 (%)	2
74338J	91 ± 3 (percent)	63 ± 3 (percent)	2
79XXQH	93.1 ± 6.2 (%)	65.3 ± 4.4 (%)	2
7G7VAF	92.8 ± 3 (%)	64.6 ± 3 (%)	2
7N86KE	0.45 ± 0.03 (grams)	0.31 ± 0.02 (grams)	2
7QFYKK	90.60 ± 8.10 (%)	62.40 ± 5.60 (%)	3
7VQADE	91.8 ± 3.0 (%)	60.5 ± 3.0 (%)	2
7Y9DKK	92.4 ± 1.3 (%)	63.7 ± 1.3 (%)	2

TABLE 1

WebCode	Item 1 Reported Concentration (units)	Item 2 Reported Concentration (units)	Uncertainty (k)
<b>Preparation concentration:</b>	<b>93%</b>	<b>65%</b>	
7YQL9E	89.8 ± 3.0 (%)	63.1 ± 3.0 (%)	2
8A8KJG	0.45 ± 0.06 (grams)	0.28 ± 0.04 (grams)	3
8FAC9D	92.3 ± 2.5 (percent)	64.4 ± 2.5 (percent)	2
8TLZ3W	94 ± 12 (%)	65 ± 8 (%)	3
9CLJAG	91.69 ± 3.0 (%)	63.99 ± 2.1 (%)	3
9WEFRV	93.1 ± 4.2 (percentage)	64.6 ± 4.2 (percentage)	2
A4BHNF	91.0 ± 7.9 (%)	63.8 ± 5.5 (%)	3
A96G3B	91.7 ± 1.3 (%)	64.1 ± 1.3 (%)	2
AYUFGA	93.7 ± 1.0 (%)	64.6 ± 1.0 (%)	2
B489DU	92,2 ± 5,7 (weight%)	62,5 ± 3,9 (weight%)	2
B7ETYA	0.44 ± 0.03 (grams)	0.31 ± 0.02 (grams)	3
BKWHXC	92.0 ± 7.7 (%)	66.0 ± 5.5 (%)	2
BNU2ZA	90.29 ± 7.22 (%)	62.35 ± 4.99 (%)	3
CH7L6C	92.9 ± 1.7 (%)	65.0 ± 1.7 (%)	2
DBDXMB	94 ± 3.7 (%)	66 ± 3.7 (%)	2
DJXWKB	93.3 ± 7.3 (%)	65.4 ± 5.2 (%)	2.65
DPYDQB	93.1 ± 6.2 (%)	65.6 ± 4.4 (%)	2
DUU8NC	92% ± 3 (g)	65% ± 3 (g)	2
FEVCD	90.3 ± 1.3 (%)	63.0 ± 1.3 (%)	2
FLQXEP	90.9 ± 4.2 (Percent)	62.4 ± 4.2 (Percent)	2

TABLE 1

WebCode	Item 1 Reported Concentration (units)	Item 2 Reported Concentration (units)	Uncertainty (k)
<b>Preparation concentration:</b>	<b>93%</b>	<b>65%</b>	
FM4CZD	94.67 (%)	63.99 (%)	
FYXQZA	91.7 ± 9.1 (%)	63.2 ± 6.2 (%)	
GCKFE7	86.3 ± 10.8 (%)	65.0 ± 5.5 (%)	2.65
GU3HU7	92.6 ± 1.7 (%)	64.1 ± 1.7 (%)	2
HQWCT6	95 ± 6.3 (%)	65 ± 6.3 (%)	2
JAMQ6A	90.7 ± 2.0 (% by weight)	65.4 ± 2.0 (% by weight)	2
K2UTXZ	89.5 ± 4.6 (%)	62.0 ± 3.2 (%)	2
K9NXQ2	97.8 ± 5.5 (%)	67.4 ± 5.5 (%)	3
KNE3R4	91 ± 3 (%)	64 ± 3 (%)	2
LN7YZ4	91.6 ± 6.3 (%)	63.9 ± 4.4 (%)	3
M79G6Y	92.5 ± 1.7 (%)	64.5 ± 1.7 (%)	2
M86Z8Z	92.2 ± 4.8 (%)	65.6 ± 3.4 (%)	2
MDCGMG	94 ± 12 (%)	67 ± 9 (%)	3
MJG3TY	92.0 ± 2.5 (%)	63.6 ± 2.5 (%)	2
MPNQ7Z	92.8 ± 1.7 (%)	65.1 ± 1.7 (%)	2
MRFMYZ	92.0 ± 7.7 (%)	66.1 ± 5.5 (%)	2
MTLA9Y	92.4 ± 3.0 (mg/mL)	64.2 ± 3.0 (mg/mL)	2
NUYYDW	92.9 ± 4.9 (%)	65.5 ± 4.1 (%)	2
NVCTTW	0.44 ± 0.03 (grams)	0.30 ± 0.02 (grams)	3
PBXGWZ	91 ± 3 (%)	63 ± 3 (%)	2

TABLE 1

WebCode	Item 1 Reported Concentration (units)	Item 2 Reported Concentration (units)	Uncertainty (k)
<b>Preparation concentration:</b>	<b>93%</b>	<b>65%</b>	
PEYKL2	93.2 ± 2.0 (percent)	66.5 ± 1.7 (percent)	3
PK6BVY	90.8 ± 7.0 (%)	63.2 ± 5.1 (%)	2.65
PXETM2	88.11 (%)	61.92 (%)	
QTEXLE	92 ± 12 (%)	64 ± 8 (%)	3
QZDRBZ	90.2 ± 3.4 (%)	62.1 ± 2.3 (%)	3
QZX8Q3	93.6 ± 5.8 (%)	67.6 ± 5.8 (%)	1.99
R88CWR	94.42 ± 2.5 (mg/ml)	64.70 ± 2.2 (mg/ml)	3
R88ELW	90 ± 3 (%)	61 ± 3 (%)	2
RJN2VW	92 ± 3 (%)	63 ± 3 (%)	2
RQ7AJT	92 ± 5 (%)	65 ± 5 (%)	2
RUMWTT	96 ± 11 (%)	67 ± 8 (%)	2
T4TW7Z	93.4 ± 1.3 (%)	64.3 ± 1.3 (%)	2
TB7MRR	87.0 ± 10 (%)	60.9 ± 10 (%)	2
TX3J6C	87.1 ± 5.0 (%)	63.7 ± 4.1 (%)	2
U3DYAU	95.3 ± 8.8 (percent pure)	66.7 ± 5.8 (percent pure)	2.65
UMUDLU	92 ± 3.3 (%)	65 ± 3.3 (%)	2
UNRGJC	91.7 ± 6.1 (wt%)	62.2 ± 4.1 (wt%)	3
UYDNEU	89.3 ± 7.1 (%)	62.4 ± 4.9 (%)	2.65
V2AXJT	91 ± 3 (%)	64 ± 3 (%)	2
V9R88P	92.8 ± 2.5 (%)	63.3 ± 2.5 (%)	2

TABLE 1

WebCode	Item 1 Reported Concentration (units)	Item 2 Reported Concentration (units)	Uncertainty (k)
<b>Preparation concentration:</b>	<b>93%</b>	<b>65%</b>	
W2PG3Q	92.0 ± 3 (percent)	64.3 ± 3 (percent)	2
W3NFHR	100 ± N/A (%)	68.4 ± N/A (%)	N/A
W8GGLR	92.69 ± 5.21 (%)	64.87 ± 5.21 (%)	2
WRZNRU	89.64 (%)	61.72 (%)	
XAFDL7	91 ± 12 (%)	65 ± 8 (%)	3
XEB8J8	94.1 ± 4.2 (%)	64.9 ± 4.2 (%)	2
XH8XJR	91.84 ± 5.60 (%)	63.97 ± 3.90 (%)	2
XQP9XT	6.04 ± 0.26 (% w/w)	4.48 ± 0.26 (% w/w)	2
XTVNBQ	92.86 ± 5.21 (percent)	64.77 ± 5.21 (percent)	2
XWVXJ8	96 ± 10 (%)	67 ± 10 (%)	
YEPUCL	92.8 ± 3.0 (%)	65.7 ± 3.0 (%)	2
YRWZ8L	92.6 ± 2.9 (%)	64.6 ± 2.0 (%)	2
YYBRQR	91.3 ± 1.3 (%)	63.2 ± 1.3 (%)	2



## **Reporting Procedures**

TABLE 2

<b>WebCode</b>	<b>Reporting Procedures</b>
26QCNN	The mean of duplicate/several determinations.
2DKC8M	The mean of duplicate/several determinations.
2MVETN	truncated average of 5 integrals
2R4ZGK	The lowest value of duplicate/several determinations.
3GHXUJ	The mean of duplicate/several determinations.
3LCUGP	The mean of duplicate/several determinations.
3WHWLM	Each sample has 2 aliquots tested. Those 2 aliquots are each injected in triplicate. Those triplicate injections are averaged and then 2 aliquot averages are truncated to the nearest whole percent.
4X9HRH	The mean of duplicate/several determinations.
6AW2NY	The mean of duplicate/several determinations.
6GBMVH	The mean of duplicate/several determinations.
6T8TNF	The mean of duplicate/several determinations.
738NFK	The mean of duplicate/several determinations.
74338J	The mean of at least three integrated peaks; the mean is then truncated.
79XXQH	The mean of duplicate/several determinations.
7G7VAF	The mean of duplicate/several determinations.
7N86KE	The mean of duplicate/several determinations.
7QFYKK	The mean of duplicate/several determinations.
7VQADE	The mean of duplicate/several determinations.
7Y9DKK	The mean of duplicate/several determinations.
7YQL9E	The mean of duplicate/several determinations.
8A8KJG	The mean of duplicate/several determinations.
8FAC9D	The mean of duplicate/several determinations.
8TLZ3W	The mean of duplicate/several determinations.
9CLJAG	The mean of duplicate/several determinations.

TABLE 2

WebCode	Reporting Procedures
9WEFRV	The mean of duplicate/several determinations.
A4BHNF	The mean of duplicate/several determinations.
A96G3B	The mean of duplicate/several determinations.
AYUFGA	The mean of duplicate/several determinations.
B489DU	The mean of duplicate/several determinations.
B7ETYA	The mean of duplicate/several determinations.
BKWHXC	The mean of duplicate/several determinations.
BNU2ZA	The mean of duplicate/several determinations.
CH7L6C	The lowest value of duplicate/several determinations.
DBDXMB	The mean of duplicate/several determinations.
DJXWKB	The mean of duplicate/several determinations.
DPYDQB	The mean of duplicate/several determinations.
DUU8NC	The mean of duplicate/several determinations.
FEVCD	The mean of duplicate/several determinations.
FLQXEP	The mean of duplicate/several determinations.
FM4CZD	The mean of duplicate/several determinations.
FYXQZA	The mean of duplicate/several determinations.
GCKFE7	The mean of duplicate/several determinations.
GU3HU7	The mean of duplicate/several determinations.
HQWCT6	The mean of duplicate/several determinations.
JAMQ6A	The mean of duplicate/several determinations.
K2UTXZ	The mean of duplicate/several determinations.
K9NXQ2	The mean of duplicate/several determinations.
KNE3R4	The mean of duplicate/several determinations.
LNY7Z4	The mean of duplicate/several determinations.
M79G6Y	The mean of duplicate/several determinations.

TABLE 2

WebCode	Reporting Procedures
M86Z8Z	The mean of duplicate/several determinations.
MDCGMG	The mean of duplicate/several determinations.
MJG3TY	The mean of duplicate/several determinations.
MPNQ7Z	The mean of duplicate determinations from signal S4 (terminal methyl)
MRFMYZ	The mean of duplicate/several determinations.
MTLA9Y	The mean of duplicate/several determinations.
NUYYDW	The mean of duplicate/several determinations.
NVCTTW	The mean of duplicate/several determinations.
PBXGWZ	The mean of duplicate/several determinations.
PEYKL2	The mean of duplicate/several determinations.
PK6BYY	The mean of duplicate/several determinations.
PXETM2	The mean of duplicate/several determinations.
QTEXLE	The mean of duplicate/several determinations.
QZDRBZ	The mean of duplicate/several determinations.
QZX8Q3	The mean of duplicate/several determinations.
R88CWR	The mean of duplicate/several determinations.
R88ELW	The mean of at least three integrated peaks; the mean is then truncated.
RJN2VW	Truncated average of 5 integrals
RQ7AJT	The lowest value of duplicate/several determinations.
RUMWTT	The mean of duplicate/several determinations.
T4TW7Z	The mean of duplicate/several determinations.
TB7MRR	The mean of duplicate/several determinations.
TX3J6C	The mean of duplicate/several determinations.
U3DYAU	The mean of duplicate/several determinations.
UMUDLU	The mean of duplicate/several determinations.
UNRGJC	The mean of duplicate/several determinations.

TABLE 2

WebCode	Reporting Procedures
UYDNEU	The mean of duplicate/several determinations.
V2AXJT	The mean of duplicate/several determinations.
V9R88P	The mean of duplicate/several determinations.
W2PG3Q	The mean of duplicate/several determinations.
W3NFHR	The mean of duplicate/several determinations.
W8GGLR	The mean of duplicate/several determinations.
WRZNRU	The mean of duplicate/several determinations.
XAFDL7	The mean of duplicate/several determinations.
XEB8J8	The mean of duplicate/several determinations.
XH8XJR	The mean of duplicate/several determinations.
XQP9XT	The mean of duplicate/several determinations.
XTVNBQ	The mean of duplicate / several determinations (two extracts). However Item 2 reported concentration is the lowest value of two determined means derived from duplicate determinations of two extracts.
XWVXJ8	The mean of duplicate/several determinations.
YEPUCL	The mean of duplicate/several determinations.
YRWZ8L	The mean of duplicate/several determinations.
YYBRQR	The mean of duplicate/several determinations.

Response Summary		Participants: 92
The mean of duplicate/several determinations:	82	(89.1%)
The lowest value of duplicate/several determinations:	3	(3.3%)
Other:	7	(7.6%)
No Reporting Procedure Provided:	0	(0.0%)

# Raw Data & Statistical Analysis

List of raw data determinations in percent.

TABLE 3 - Item 1

WebCode	Preparation Concentration : 93%								Mean
26QCNN	89.27	89.51							89.39
2DKC8M	88.93								88.93
2MVETN	92.54	92.29	92.47	91.91	92.13				92.27
2R4ZGK	92.00	91.00	92.00	92.00	93.00	92.00			92.00
3GHXUJ	93.41	93.44	93.46	93.47	93.57	93.62	93.63	93.66	93.53
3LCUGP	83.10	80.30							81.70
3WHWLM	93.30	93.80	93.60	93.40	93.20	93.00			93.38
4X9HRH	92.20								92.20
6AW2NY	89.58	89.63	90.73						89.98
6GBMVH	92.93	91.25	92.27	92.37	92.12	92.45			92.23
6T8TNF	93.21	93.78	91.22	91.55					92.44
738NFK	90.58	91.20	91.78	90.82					91.10
74338J	92.06	92.09	91.87	91.47	91.68				91.83
79XXQH	92.95	93.31							93.13
7G7VAF	92.59	93.20	92.26	92.85	93.23	93.05	92.82	92.47	92.81
7N86KE	92.63	92.37	93.19	93.31					92.88
7QFYKK	90.38	90.98							90.68
7VQADE	91.39	91.81	91.61	91.57	92.03	91.95	91.93	92.06	91.79
7Y9DKK	92.39	92.26	92.73	92.32					92.43
7YQL9E	89.15	89.64	89.22	89.22	90.33	90.42	90.05	90.29	89.79
8A8KJG	91.90								91.90
8FAC9D	92.51	92.42	91.93	92.36					92.31
8TLZ3W	93.37	94.97							94.17
9CLJAG	91.68	91.70							91.69
9WEFRV	92.91	93.21	93.11						93.07
A4BHNF	90.90	91.00							90.95

TABLE 3 - Item 1

WebCode	Preparation Concentration : 93%						Mean
A96G3B	91.85	91.62					91.74
AYUFGA	93.69	93.90					93.80
B489DU	89.72	92.44	94.47				92.21
B7ETYA	90.48	89.91	91.97	92.09			91.11
BKWHXC	92.52	91.63					92.08
BNU2ZA	90.55	90.03					90.29
CH7L6C	93.00	92.70					92.85
DBDXMB	93.60	94.80					94.20
DJXWKB	93.20	94.28	93.22	93.50	92.93	92.87	93.33
DPYDQB	93.03	93.10					93.06
DUU8NC	92.91	92.50	93.39				92.93
FEVCD	89.79	90.91					90.35
FLQXEP	90.17	90.95	91.56				90.89
FM4CZD	92.72	96.63					94.67
FYXQZA	91.60	91.90	91.60				91.70
GCKFE7	90.68	87.06	87.97	83.04	87.15	81.98	86.31
GU3HU7	92.40	92.88					92.64
HQWCT6	97.06	96.97	93.83	94.04			95.48
JAMQ6A	89.51	89.61	91.68	92.02			90.71
K2UTXZ	89.57	89.46					89.52
K9NXQ2	97.80						97.80
KNE3R4	91.79	91.90	91.39				91.69
LNY7Z4	91.35	91.85					91.60
M79G6Y	92.55	92.47					92.51
M86Z8Z	92.24						92.24
MDCGMG	93.67	93.42					93.55
MJG3TY	92.39	92.30	91.73	91.56			92.00
MPNQ7Z	92.45	93.25					92.85

TABLE 3 - Item 1

WebCode	Preparation Concentration : 93%								Mean
MRFMYZ	91.97	92.22							92.09
MTLA9Y	92.48	92.36	92.14	92.11	92.54	92.28	92.21	92.45	92.32
NUYYDW	92.98	92.82							92.90
NVCTTW	93.12	93.03	90.21	90.86					91.81
PBXGWZ	90.76	91.04	91.31						91.04
PEYKL2	93.80	94.00	91.90						93.23
PK6BVY	90.80	90.70	90.59	90.76	90.74	91.07			90.78
PXETM2	86.15	87.04	88.43	89.71	89.31	88.00			88.11
QTEXLE	91.90	91.14							91.52
QZDRBZ	90.70	89.60							90.15
QZX8Q3	93.70	93.80	93.40						93.63
R88CWR	94.53	94.30							94.42
R88ELW	90.77	90.50	90.52	90.14	90.33				90.45
RJN2VW	92.57	92.19	92.12	91.91	92.07				92.17
RQ7AJT	93.00	92.00							92.50
RUMWTT	95.90	97.10							96.50
T4TW7Z	93.94	92.98							93.46
TB7MRR	87.90	86.40							87.15
TX3J6C	88.76	85.58							87.17
U3DYAU	97.06	92.66	96.03	95.75	93.44	96.84			95.30
UMUDLU	91.90	91.90							91.90
UNRGJC	91.70	91.90	91.60	91.70					91.73
UYDNEU	90.18	89.73	89.58	89.15	88.24	88.63			89.25
V2AXJT	91.12	91.17	91.95						91.41
V9R88P	92.46	92.29	93.39	93.21					92.84
W2PG3Q	91.85	91.98	92.30	91.57	92.01	92.38	92.10	92.21	92.05
W3NFHR	103.70	101.70	102.10						102.50
W8GGLR	92.84	92.55							92.70

TABLE 3 - Item 1

WebCode	Preparation Concentration : 93%								Mean
WRZNRU	89.52	90.08	89.41	90.21	89.74	88.87			89.64
XAFDL7	90.82	90.55							90.69
XEB8J8	94.50	93.88	93.89						94.09
XH8XJR	92.38	91.30							91.84
XQP9XT	5.920	6.290	5.900						6.037 X
XTVNBQ	93.06	92.66							92.86
XWVXJ8	101.21	89.99							95.60
YEPUCL	92.83	93.07	92.32	92.41	92.68	92.96	93.32	92.83	92.80
YRWZ8L	92.25	92.93							92.59
YYBRQR	91.43	91.41	91.63	91.03					91.38

Statistical Analysis for Item 1				Participants: 92	
Preparation Concentration:	93%	Number of Participants Included:		91	
Grand Mean:	92.04	Number of Participants Excluded:		1	
Standard Deviation:	2.420	Number of Participants without Raw Data:		0	



TABLE 3 - Item 2

WebCode	Preparation Concentration : 65%								Mean
26QCNN	61.85	62.15							62.00
2DKC8M	62.31								62.31
2MVETN	64.78	64.49	64.30	64.31	64.39				64.45
2R4ZGK	64.00	64.00	64.00	64.00	64.00	64.00			64.00
3GHXUJ	63.60	63.60	63.63	63.67	63.77	63.80	63.81	63.92	63.73
3LCUGP	54.80	60.80							57.80
3WHWLM	64.80	64.70	64.90	64.40	64.50	64.10			64.57
4X9HRH	64.30								64.30
6AW2NY	61.86	62.58	62.63						62.36
6GBMVH	65.09	65.14	64.93	64.91	64.51	64.83			64.90
6T8TNF	62.62	62.92	64.92	64.13					63.65
738NFK	62.89	63.23	63.67	63.25					63.26
74338J	63.58	63.26	63.09	63.10	63.29				63.26
79XXQH	65.37	65.24							65.30
7G7VAF	65.13	65.14	64.89	64.56	64.00	64.31	64.44	63.96	64.55
7N86KE	63.66	63.23	64.21	64.04					63.79
7QFYKK	62.73	62.17							62.45
7VQADE	60.83	60.46	60.79	60.71	60.10	60.57	60.34	60.54	60.54
7Y9DKK	63.46	63.43	63.95	64.18					63.76
7YQL9E	62.77	63.11	63.13	63.21	63.40	62.86	63.34	63.26	63.14
8A8KJG	58.53								58.53
8FAC9D	63.80	64.23	64.87	64.74					64.41
8TLZ3W	65.16	64.79							64.98
9CLJAG	63.87	64.10							63.99
9WEFRV	63.78	64.49	65.50						64.59
A4BHNF	63.90	63.70							63.80
A96G3B	64.36	63.87							64.12
AYUFGA	64.39	64.95							64.67

TABLE 3 - Item 2

WebCode	Preparation Concentration : 65%								Mean
B489DU	61.65	61.55	64.41						62.54
B7ETYA	63.34	63.16	64.26	63.88					63.66
BKWHXC	65.90	66.14							66.02
BNU2ZA	62.98	61.72							62.35
CH7L6C	65.20	64.80							65.00
DBDXMB	65.80	65.20							65.50
DJXWKB	65.95	65.30	65.49	64.42	65.42	65.72			65.38
DPYDQB	65.81	65.37							65.59
DUU8NC	66.03	65.26	66.51						65.93
FEVCD	63.63	62.44							63.04
FLQXEP	62.37	62.65	62.13						62.38
FM4CZD	63.53	64.45							63.99
FYXQZA	63.20	63.10	63.40						63.23
GCKFE7	65.49	65.54	64.00	63.96	65.92	65.22			65.02
GU3HU7	64.43	64.82							64.63
HQWCT6	65.73	65.68	63.66	63.79					64.72
JAMQ6A	64.50	64.38	66.49	66.60					65.49
K2UTXZ	62.24	61.69							61.97
K9NXQ2	67.40								67.40
KNE3R4	64.99	64.85	64.02						64.62
LN7Z4	63.97	63.97							63.97
M79G6Y	64.64	64.55							64.60
M86Z8Z	65.56								65.56
MDCGMG	66.57	67.37							66.97
MJG3TY	63.69	63.59	63.60	63.64					63.63
MPNQ7Z	65.84	64.52							65.18
MRFMYZ	66.08	66.30							66.19
MTLA9Y	64.20	63.98	64.04	64.22	64.48	64.45	64.41	64.52	64.29

TABLE 3 - Item 2

WebCode	Preparation Concentration : 65%								Mean
NUYYDW	66.28	64.71							65.50
NVCTTW	62.30	63.27	63.24	63.53					63.09
PBXGWZ	63.10	63.39	63.40						63.30
PEYKL2	67.10	66.90	65.40						66.47
PK6BVY	62.82	64.20	63.20	63.57	62.72	62.68			63.20
PXETM2	61.79	61.35	62.49	61.21	62.65	62.03			61.92
QTEXLE	63.83	63.24							63.54
QZDRBZ	62.40	61.90							62.15
QZX8Q3	68.20	66.90	67.60						67.57
R88CWR	64.88	64.53							64.71
R88ELW	62.17	61.97	61.89	61.73	61.89				61.93
RJN2VW	63.56	63.18	63.29	63.14	63.26				63.28
RQ7AJT	65.00	65.00							65.00
RUMWTT	67.00	67.70							67.35
T4TW7Z	64.60	64.17							64.39
TB7MRR	60.40	60.30							60.35
TX3J6C	63.48	63.99							63.74
U3DYAU	68.14	66.36	65.79	66.57	65.63	67.79			66.71
UMUDLU	64.70	65.40							65.05
UNRGJC	64.10	61.80	61.80	61.30					62.25
UYDNEU	62.54	63.30	62.22	62.32	62.02	62.09			62.42
V2AXJT	64.34	63.89	64.25						64.16
V9R88P	63.25	63.13	63.40	63.48					63.32
W2PG3Q	64.12	64.45	63.94	63.89	64.45	64.60	64.12	64.64	64.28
W3NFHR	66.60	68.60	70.10						68.43
W8GGLR	64.64	65.11							64.88
WRZNRU	62.19	61.93	64.29	59.71	61.41	60.77			61.72
XAFDL7	63.78	65.37							64.58

TABLE 3 - Item 2

WebCode	Preparation Concentration : 65%								Mean
XEB8J8	64.75	65.00	65.05						64.93
XH8XJR	63.84	64.10							63.97
XQP9XT	4.390	4.560	4.490						4.480 X
XTVNBQ	65.09	64.46	64.78	64.87					64.80
XWVXJ8	69.53	64.82							67.18
YEPUCL	65.98	65.89	65.97	65.41	65.56	65.74	65.84	65.57	65.75
YRWZ8L	64.53	64.78							64.66
YYBRQR	63.48	63.50	63.07	63.02					63.27

Statistical Analysis for Item 2				Participants: 92	
Preparation Concentration:	65%	Number of Participants Included:		91	
Grand Mean:	64.09	Number of Participants Excluded:		1	
Standard Deviation:	1.765	Number of Participants without Raw Data:		0	

TABLE 3 - Response Summary

Response Summary	Item 1	Item 2
Preparation Concentration	93%	65%
Grand Mean	92.04	64.09
Standard Deviation	2.420	1.765

## Method of Analysis

TABLE 4

WebCode	GC	GC/MS	GC/FID	LC	LC/MS	NMR	Other
26QCNN			✓				
2DKC8M		✓					
2MVETN						✓	
2R4ZGK			✓				
3GHXUJ			✓				
3LCUGP		✓					
3WHWLM			✓				
4X9HRH							UV-Vis
6AW2NY							UV-Vis
6GBMVH			✓				
6T8TNF	✓						
738NFK			✓				
74338J			✓			✓	
79XXQH		✓			✓		Weight Determination
7G7VAF			✓				
7N86KE	✓						
7QFYKK		✓	✓				
7VQADE			✓				
7Y9DKK			✓				
7YQL9E			✓				
8A8KJG		✓					
8FAC9D						✓	
8TLZ3W			✓				
9CLJAG				✓			
9WEFRV							UV-Vis
A4BHNF			✓				
A96G3B						✓	
AYUFGA						✓	
B489DU				✓			
B7ETYA		✓	✓				Color tests
BKWHXC				✓			
BNU2ZA		✓					
CH7L6C						✓	
DBDXMB						✓	
DJXWKB			✓				

TABLE 4

WebCode	GC	GC/MS	GC/FID	LC	LC/MS	NMR	Other
DPYDQB		✓			✓		FTIR, Weight Determination
DUU8NC				✓			
FEVCD						✓	
FLQXEP							UV-Vis
FM4CZD					✓		
FYXQZA			✓				
GCKFE7			✓				
GU3HU7							<sup>1</sup> H-NMR
HQWCT6				✓			
JAMQ6A						✓	
K2UTXZ				✓			
K9NXQ2							UV-Vis
KNE3R4							HPLC
LN7Z4			✓				
M79G6Y						✓	
M86Z8Z		✓					Ultraviolet/Visible Spectrophotometry, Infrared Spectrophotometry, and Weight Determination
MDCGMG			✓				
MJG3TY						✓	
MPNQ7Z						✓	
MRFMYZ							LC/UV
MTLA9Y			✓				
NUYYDW				✓			
NVCTTW			✓				
PBXGWZ				✓			
PEYKL2						✓	
PK6BVY			✓				
PXETM2	✓			✓			
QTEXLE			✓				
QZDRBZ			✓				
QZX8Q3					✓		
R88CWR				✓			
R88ELW						✓	
RJN2VW						✓	
RQ7AJT			✓				
RUMWTT				✓			

TABLE 4

WebCode	GC	GC/MS	GC/FID	LC	LC/MS	NMR	Other
T4TW7Z						✓	
TB7MRR							UPLC
TX3J6C		✓					
U3DYAU			✓				
UMUDLU						✓	
UNRGJC			✓				
UYDNEU			✓				
V2AXJT				✓			
V9R88P						✓	
W2PG3Q			✓				
W3NFHR		✓					
W8GGLR						✓	
WRZNRU				✓			
XAFDL7			✓				
XEB8J8							UV-Vis
XH8XJR				✓			
XQP9XT					✓		
XTVNBQ						✓	
XWVXJ8					✓		
YEPUCL			✓				
YRWZ8L						✓	
YYBRQR			✓				
<b>Response Summary</b>							<b>Participants: 92</b>
Method:	<b>GC</b>	<b>GC/MS</b>	<b>GC/FID</b>	<b>LC</b>	<b>LC/MS</b>	<b>NMR</b>	
Participants:	3	11	33	14	6	21	
Percent:	3.3%	12.0%	35.9%	15.2%	6.5%	22.8%	



## Additional Comments

TABLE 5

WebCode	Additional Comments
26QCNN	89.38% methamphetamine HCl is detected in Item 1. 62.00% methamphetamine HCl is detected in item 2.
2MVETN	For both items, five out of a possible six integral values were used to determine the purity.
3WHWLM	The item is first confirmed on GCMS for the presence of methamphetamine and then run as previously stated on our GCFID for quantitation. Each sample has 2 aliquots tested. Those 2 aliquot are each injected in triplicate. Those triplicate injections are averaged and then the 2 aliquot averages are truncated to the nearest whole percent (to the ones place).
74338J	For both items, 5 out of a possible six integral values were used to determine the purity.
7VQADE	12 injections made up the average. The lowest two and highest two values for each item were excluded from question 2 above.
7YQL9E	The average of 12 injections were used to calculate the result for each item's answer.
B489DU	Measured with qNMR the result for: Item1: $92,60 \pm 0,86$ weight% metamphetamine-HCl Item2: $64,50 \pm 0,77$ weight% metamphetamine-HCl
B7ETYA	Item 1 was found to contain methamphetamine with a methamphetamine actual value of 0.44 grams +/- 0.03 grams with an uncertainty of 6%. Item 2 was found to contain methamphetamine with a methamphetamine actual value of 0.31 grams +/- 0.02 grams with an uncertainty of 6%.
K2UTXZ	Sample size was below required sample size for acceptance in casework. Increasing the amount to 1 gram of material is highly recommended.
LN7Z4	The laboratory routinely reports methamphetamine in its base form for casework. However, within this proficiency testing (PT) scheme, the reported results were adjusted by applying the salt-to-base conversion ratio. The results in methamphetamine base form are: Item 1: 73.60% Item 2: 51.40%
M86Z8Z	Under "other" above: Infrared Spectrophotometry Ultraviolet/Visible Spectrophotometry Weight Determination
MJG3TY	The sample chemical composition was verified using Raman Spectroscopy for each item.
NUYYDW	MA Base results Item 1 - Overall $74.6 \pm 4.0$ % Item 2 - Overall $52.6 \pm 3.3$ % Individual MA Base Results Item 1 - 74.70 and 74.58 % Item 2 - 53.25 and 51.99 %
QZDRBZ	item 1 contain 90.2 % of methamphetamine and item 2 contain 62.1 % of methamphetamine
R88ELW	For both items, five out of a possible six integral values were used to determine the purity.
RJN2VW	For both items, five out of a possible six integral values were used to determine the purity
RUMWTT	Laboratory reports results in the base form: Item 1: 78% Item 2: 54%
TX3J6C	Calculations were completed for the Methamphetamine Hydrochloride conversion per PT instructions.
W3NFHR	Results in Meth free base : Item 1 : 83.5%, 81.9%, 82.2% Item 2: 53.6%, 55.2%, 56.5% Item 1: White powder containing methamphetamine Item 2 : White powder containing methamphetamine and creatine
XH8XJR	$k=2$ , uncertainty = 6.1 %
XWVXJ8	For info Base Form: Item 1 ; 81.621%, 72.576%. Item 2 ; 56.071%, 52.260%.

## 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 99% 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 were 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 99% ellipse, but within a 99.5% control limit (ellipse) that is calculated.
X	Excluded	Results fall outside of 99.5% 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
26QCNN		89.39	-2.646	-1.09	62.00	-2.085	-1.18
2DKC8M		88.93	-3.105	-1.28	62.31	-1.776	-1.01
2MVETN		92.27	0.233	0.10	64.45	0.368	0.21
2R4ZGK		92.00	-0.035	-0.01	64.00	-0.086	-0.05
3GHXUJ		93.53	1.497	0.62	63.73	-0.361	-0.20
3LCUGP	*	81.70	-10.335	-4.27	57.80	-6.286	-3.56
3WHWLM		93.38	1.348	0.56	64.57	0.481	0.27
4X9HRH		92.20	0.165	0.07	64.30	0.214	0.12
6AW2NY		89.98	-2.058	-0.85	62.36	-1.728	-0.98
6GBMVH		92.23	0.196	0.08	64.90	0.816	0.46
6T8TNF		92.44	0.405	0.17	63.65	-0.438	-0.25
738NFK		91.10	-0.940	-0.39	63.26	-0.826	-0.47
74338J		91.83	-0.201	-0.08	63.26	-0.822	-0.47
79XXQH		93.13	1.091	0.45	65.30	1.219	0.69
7G7VAF		92.81	0.773	0.32	64.55	0.468	0.27
7N86KE		92.88	0.840	0.35	63.79	-0.301	-0.17
7QFYKK		90.68	-1.355	-0.56	62.45	-1.636	-0.93
7VQADE		91.79	-0.242	-0.10	60.54	-3.543	-2.01
7Y9DKK		92.43	0.390	0.16	63.76	-0.331	-0.19
7YQL9E		89.79	-2.245	-0.93	63.14	-0.951	-0.54
8A8KJG	*	91.90	-0.135	-0.06	58.53	-5.556	-3.15
8FAC9D		92.31	0.270	0.11	64.41	0.324	0.18
8TLZ3W		94.17	2.135	0.88	64.98	0.889	0.50
9CLJAG		91.69	-0.345	-0.14	63.99	-0.101	-0.06
9WEFRV		93.07	1.038	0.43	64.59	0.502	0.28

WebCode	Data Flag	Item 1			Item 2		
		Participant Mean	Difference from Grand Mean	CPV	Participant Mean	Difference from Grand Mean	CPV
A4BHNF		90.95	-1.085	-0.45	63.80	-0.286	-0.16
A96G3B		91.74	-0.300	-0.12	64.12	0.029	0.02
AYUFGA		93.80	1.760	0.73	64.67	0.584	0.33
B489DU		92.21	0.175	0.07	62.54	-1.549	-0.88
B7ETYA		91.11	-0.923	-0.38	63.66	-0.426	-0.24
BKWHXC		92.08	0.040	0.02	66.02	1.935	1.10
BNU2ZA		90.29	-1.745	-0.72	62.35	-1.736	-0.98
CH7L6C		92.85	0.815	0.34	65.00	0.914	0.52
DBDXMB		94.20	2.165	0.89	65.50	1.414	0.80
DJXWKB		93.33	1.298	0.54	65.38	1.298	0.74
DPYDQB		93.06	1.029	0.42	65.59	1.506	0.85
DUU8NC		92.93	0.898	0.37	65.93	1.848	1.05
FEVCD		90.35	-1.685	-0.70	63.04	-1.051	-0.60
FLQXEP		90.89	-1.142	-0.47	62.38	-1.703	-0.97
FM4CZD		94.67	2.639	1.09	63.99	-0.097	-0.06
FYXQZA		91.70	-0.335	-0.14	63.23	-0.852	-0.48
GCKFE7	*	86.31	-5.722	-2.36	65.02	0.936	0.53
GU3HU7		92.64	0.605	0.25	64.63	0.539	0.31
HQWCT6		95.48	3.440	1.42	64.72	0.629	0.36
JAMQ6A		90.71	-1.330	-0.55	65.49	1.407	0.80
K2UTXZ		89.52	-2.520	-1.04	61.97	-2.121	-1.20
K9NXQ2		97.80	5.765	2.38	67.40	3.314	1.88
KNE3R4		91.69	-0.342	-0.14	64.62	0.534	0.30
LN7YZ4		91.60	-0.435	-0.18	63.97	-0.116	-0.07
M79G6Y		92.51	0.475	0.20	64.60	0.509	0.29
M86Z8Z		92.24	0.205	0.08	65.56	1.474	0.84
MDCGMG		93.55	1.510	0.62	66.97	2.884	1.63

WebCode	Data Flag	Item 1			Item 2		
		Participant Mean	Difference from Grand Mean	CPV	Participant Mean	Difference from Grand Mean	CPV
MJG3TY		92.00	-0.040	-0.02	63.63	-0.456	-0.26
MPNQ7Z		92.85	0.815	0.34	65.18	1.094	0.62
MRFMYZ		92.09	0.058	0.02	66.19	2.102	1.19
MTLA9Y		92.32	0.286	0.12	64.29	0.202	0.11
NUYYDW		92.90	0.865	0.36	65.50	1.409	0.80
NVCTTW		91.81	-0.230	-0.10	63.09	-1.001	-0.57
PBXGWZ		91.04	-0.999	-0.41	63.30	-0.789	-0.45
PEYKL2		93.23	1.198	0.49	66.47	2.381	1.35
PK6BVY		90.78	-1.259	-0.52	63.20	-0.887	-0.50
PXETM2		88.11	-3.929	-1.62	61.92	-2.166	-1.23
QTEXLE		91.52	-0.515	-0.21	63.54	-0.551	-0.31
QZDRBZ		90.15	-1.885	-0.78	62.15	-1.936	-1.10
QZX8Q3		93.63	1.598	0.66	67.57	3.481	1.97
R88CWR		94.42	2.380	0.98	64.71	0.619	0.35
R88ELW		90.45	-1.583	-0.65	61.93	-2.157	-1.22
RJN2VW		92.17	0.136	0.06	63.28	-0.801	-0.45
RQ7AJT		92.50	0.465	0.19	65.00	0.914	0.52
RUMWTT		96.50	4.465	1.84	67.35	3.264	1.85
T4TW7Z		93.46	1.425	0.59	64.39	0.299	0.17
TB7MRR		87.15	-4.885	-2.02	60.35	-3.736	-2.12
TX3J6C		87.17	-4.865	-2.01	63.74	-0.351	-0.20
U3DYAU		95.30	3.261	1.35	66.71	2.628	1.49
UMUDLU		91.90	-0.135	-0.06	65.05	0.964	0.55
UNRGJC		91.73	-0.310	-0.13	62.25	-1.836	-1.04
UYDNEU		89.25	-2.784	-1.15	62.42	-1.671	-0.95
V2AXJT		91.41	-0.622	-0.26	64.16	0.074	0.04
V9R88P		92.84	0.802	0.33	63.32	-0.771	-0.44

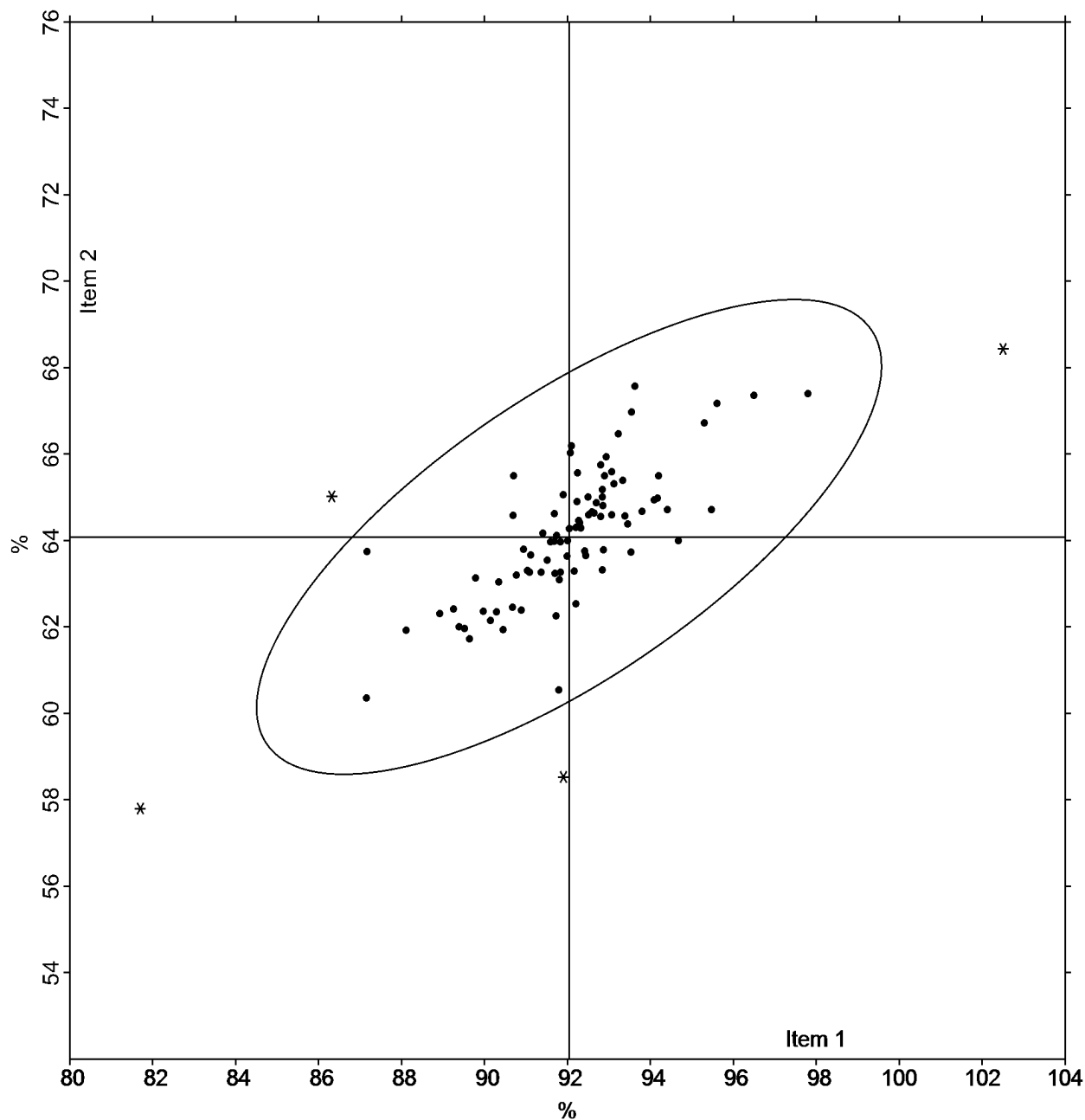
WebCode	Data Flag	Item 1			Item 2		
		Participant Mean	Difference from Grand Mean	CPV	Participant Mean	Difference from Grand Mean	CPV
W2PG3Q	*	92.05	0.015	0.01	64.28	0.191	0.11
W3NFHR		102.5	10.465	4.32	68.43	4.348	2.46
W8GGLR		92.70	0.660	0.27	64.88	0.789	0.45
WRZNRU		89.64	-2.397	-0.99	61.72	-2.369	-1.34
XAFDL7		90.69	-1.350	-0.56	64.58	0.489	0.28
XEB8J8	X	94.09	2.054	0.85	64.93	0.846	0.48
XH8XJR		91.84	-0.195	-0.08	63.97	-0.116	-0.07
XQP9XT		6.037	-85.999	-35.53	4.480	-59.606	-33.78
XTVNBQ		92.86	0.825	0.34	64.80	0.714	0.40
XWVXJ8		95.60	3.567	1.47	67.18	3.090	1.75
YEPUCL		92.80	0.767	0.32	65.75	1.659	0.94
YRWZ8L		92.59	0.555	0.23	64.66	0.569	0.32
YYBRQR		91.38	-0.660	-0.27	63.27	-0.818	-0.46

Response Summary		Item 1	Item 2	Participants: 92
<b>Preparation Concentration</b>		<b>93%</b>	<b>65%</b>	
Grand Mean		92.04	64.09	
Standard Deviation		2.420	1.765	
Participants Included: 91	Participants Excluded: 1	Participants without Raw Data for both items: 0		

## Bivariate Control Analysis

Item 1 Grand Mean: 92.04

Item 2 Grand Mean: 64.09



\*Not all participants marked as outliers (X) are seen on the graph above due to having mean values that are outside of the x-axis or y-axis percentage ranges.

-End of Report-  
(Appendix may follow)

## Test No. 25-5051: Quantitative Drug Analysis - Methamphetamine HCl

DATA MUST BE SUBMITTED BY **June 30, 2025, 11:59 p.m. EDT** TO BE INCLUDED IN THE REPORT

Participant Code: U1234A

WebCode: 9V3LBA

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 methamphetamine HCl samples from separate cases to be quantitatively examined. Using your laboratory's procedures, analyze each sample and report the quantitative determination of methamphetamine 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 methamphetamine HCl present in the samples.*

### Items Submitted (Sample Pack DQ1):

Items 1 & 2: Powdered methamphetamine HCl samples

1a.) What is the concentration of methamphetamine 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"/>	$\pm$ <input type="text"/>	( <input type="text"/> )
Item 2: <input type="text"/>	$\pm$ <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 methamphetamine HCl. (Results not reported in % will be excluded from statistical calculations.) For the purposes of data submission, express results below in the HCl salt form. If your laboratory typically reports the base form, you may do so in the additional comments.

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):

☐ NMR

4.) Additional Comments

**Note:** Please use appropriate punctuation to indicate the end of sentences, sections, and statements in the free-form space below. Extra spacing and returns used for separation within your text will not transfer and may cause your information to be illegible in the Summary Report. The use of lists and tabular formats to deliver information is also cautioned against, as these do not transfer.

## 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 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 ANAB and/or A2LA. (Accreditation Release section below must be completed.)
- ☐ This participant's data is **not** intended for submission to 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.

A2LA Certificate No.

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

Authorized Contact Person and Title

Laboratory Name

Location (City/State)