



«Tit» «Name» «Fam\_Nam»  
«Organization»  
«Address1»  
«Address\_2»  
«PO\_Box» «City». «Country»

Sevilla, August, 2020

### **Proficiency Test 2020-1**

Laboratory Code: «**Lab\_code**»

Dear participants,

Enclosed you will find the report of the Proficiency Test 2020-1 on Drugs of Abuse in Hair, organized by the Society of Hair Testing.

Each of the participating laboratories received an identifying code. Your particular code is «**Lab\_code**».

Sets of three samples were sent to sixty-two participating laboratories. Fifty-four of them have sent the report forms back. Five participants did not receive the samples due to problems with the delivery during the COVID-19 pandemic times.

Sample contents were as follows:

- \* Sample A contained cannabis (THC, CBD, CBN and THC-COOH). It also contained methadone, EDDP, tramadol and very low concentrations of opiates (6-MAM and morphine), cocaine (cocaine and BE), diazepam and nordazepam.
- \* Sample B contained opiates (6-MAM, morphine and low concentrations of codeine), cocaine (cocaine, BE, cocaethylene and low concentrations of norcocaine), amphetamine compounds (amphetamine, methamphetamine and MDMA), cannabis (THC, CBD, CBN and THC-COOH). It also contained acetylcodeine, anhydroecgonine methyl ester and low concentrations of methadone, EDDP, tramadol, diazepam, nordazepam and ketamine.
- \* Sample C contained opiates (6-MAM, morphine and codeine), cocaine (cocaine, BE, norcocaine and cocaethylene), cannabis (THC, CBD, CBN and THC-COOH). It also contained methadone, EDDP, heroin, acetylcodeine and low concentrations of tramadol, diazepam and nordazepam.

**Z-score**

Z-score has been calculated based on robust estimators (median instead of mean and interquartile instead of standard deviation).

Z-score has been calculated as follows:

$$\text{Z-score} = (x - \chi) / \text{IQR}$$

Where:

x: Concentration reported by the participant

$\chi$ : Median concentration obtained from the participating laboratories

IQR: Interquartile range: It is calculated as: Q3-Q1 (the upper quartile minus the lower quartile)

Q3: Third quartile (percentile 75)

Q1: First quartile (percentile 25)

**Decision criteria**

The following criteria have been adopted:

Satisfactory results:  $Z\text{-score} \leq \pm 2$

Questionable results:  $\pm 2 < Z\text{-score} \leq \pm 3$

Unsatisfactory results:  $Z\text{-score} \geq \pm 3$

Yours faithfully.

Carmen Jurado

# QUALITATIVE RESULTS

Laboratory Code: **Lab**

Sample A				Sample B				Sample C			
Substances	A	T	F	Substances	A	T	F	Substances	A	T	F
THC		P		MAM		P		MAM		P	
THC-COOH		P		Morphine		P		Morphine		P	
Methadone		P		Codeine <sup>1</sup>		P		Codeine		P	
Tramadol		P		Cocaine		P		Cocaine		P	
				BE		P		BE		P	
				Amphetamine		P		THC		P	
				Methamphetamine		P		THC-COOH		P	
				MDMA		P		Methadone		P	
				THC		P					
				THC-COOH		P					
				Methadone <sup>2</sup>		P					

- The median concentration of codeine in Sample B is 0.10 ng/mg, which is lower than the cut-off proposed by SoHT (0.2 ng/mg).
- The median concentration of Methadone in Sample B is 0.10 ng/mg, which is lower than the cut-off proposed by SoHT (0.2 ng/mg).

**A:** Your answer

**P:** Positive

**NR:** Not reported

**FN:** False Negative

**T:** True answer

**N:** Negative

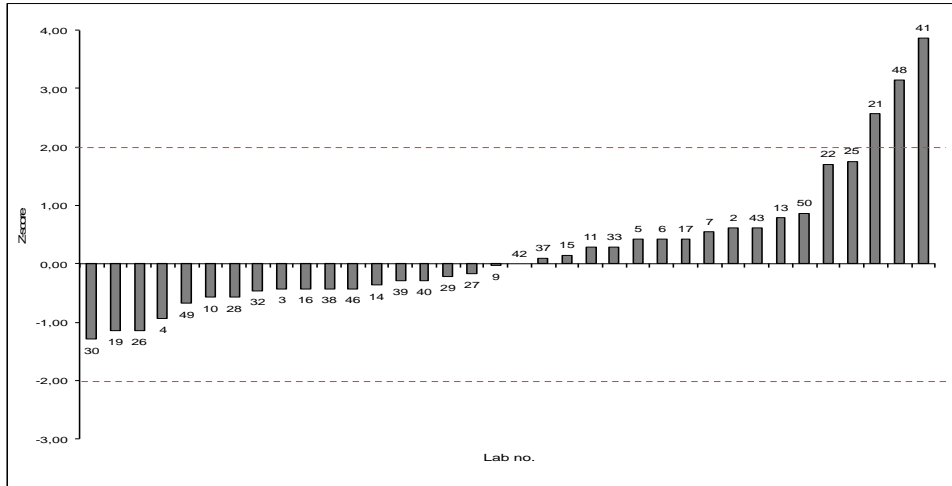
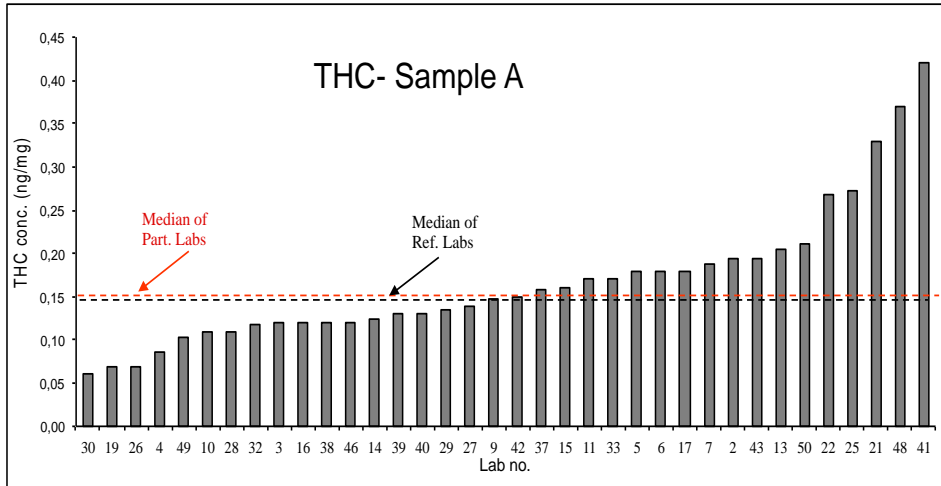
**NA:** Not analyzed

**FP:** False Positive

**F:** False answer

## Comments:

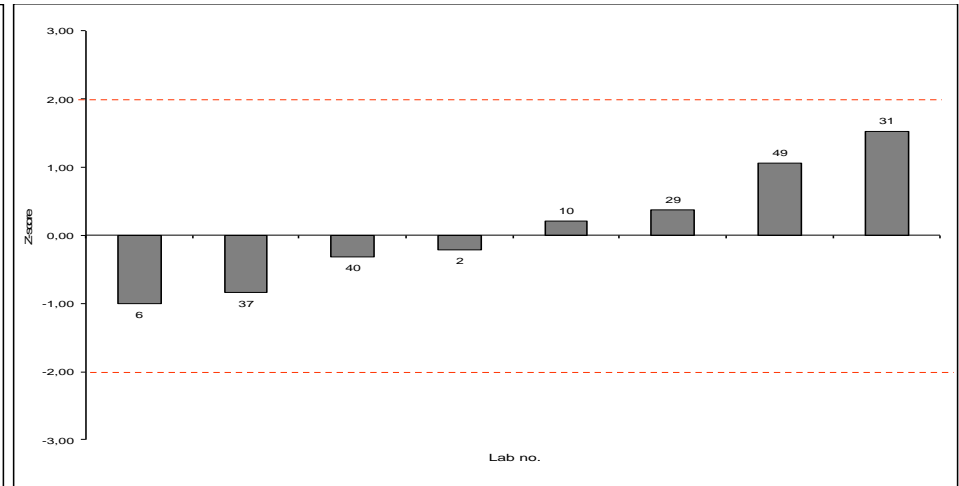
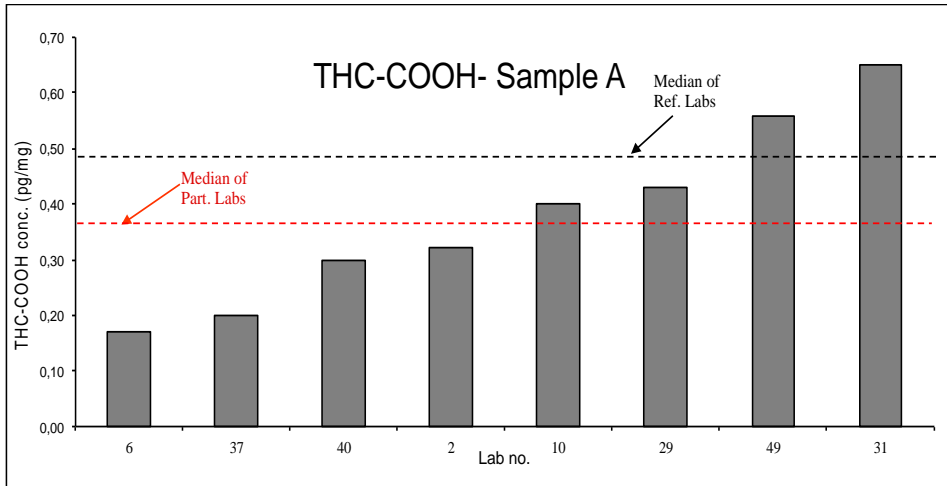
- Sample A contains low concentrations of MAM (0.07 ng/mg, median conc.), morphine (0.05 ng/mg, median conc.), cocaine (0.07 ng/mg, median conc.), benzoylecgonine (0.09 ng/mg, median conc.), EDDP (0.02 ng/mg, median conc.), diazepam (0.01 ng/mg, median conc.), nordazepam (0.007 ng/mg, median conc.)
- Sample B contains norcocaine (0.03 ng/mg, median conc.), cocaethylene (0.05 ng/mg, median conc.) and low concentrations of EDDP (0.01 ng/mg, median conc.), tramadol (0.06 ng/mg, median conc.), diazepam (0.01 ng/mg, median conc.) and nordazepam (0.006 ng/mg, median conc.).
- Sample C contains norcocaine (0.16 ng/mg, median conc.), cocaethylene (0.13 ng/mg, median conc.) and low concentrations of EDDP (0.03 ng/mg, median conc.), tramadol (0.05 ng/mg, median conc.), diazepam (0.03 ng/mg, median conc.) and nordazepam (0.01 ng/mg, median conc.).



Lab	THC (ng/mg)	Z-score
2	0.19	0.61
3	0.12	-0.43
4	0.09	-0.93
5	0.18	0.43
6	0.18	0.43
7	0.19	0.54
9	0.15	-0.03
10	0.11	-0.57
11	0.17	0.29
13	0.21	0.79
14	0.12	-0.36
15	0.16	0.14
16	0.12	-0.43
17	0.18	0.43
19	0.07	-1.14
21	0.33	2.57
22	0.27	1.70
25	0.27	1.76
26	0.07	-1.14
27	0.14	-0.17
28	0.11	-0.57
29	0.14	-0.21
30	0.06	-1.29
32	0.12	-0.46
33	0.17	0.29
36	P	

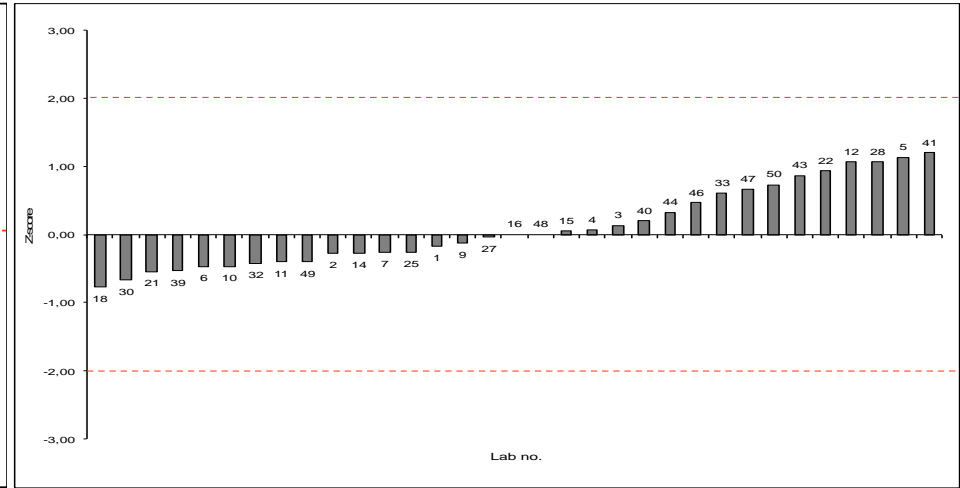
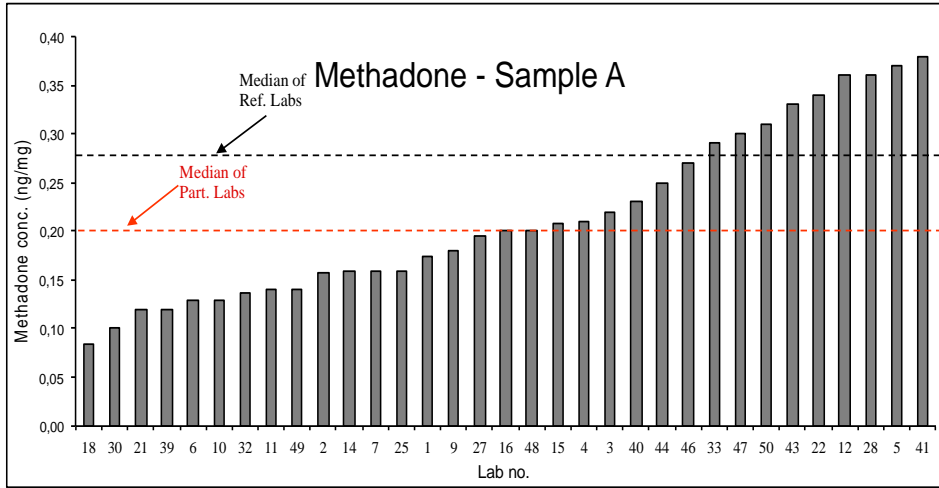
Lab	THC (ng/mg)	Z-score
37	0.16	0.10
38	0.12	-0.43
39	0.13	-0.29
40	0.13	-0.29
41	0.42	3.86
42	0.15	0.00
43	0.19	0.61
46	0.12	-0.43
48	0.37	3.14
49	0.10	-0.67
50	0.21	0.86
51	P	

Average	0.17
SD	0.08
CV%	47.36
Median	0.15
Minimum	0.06
Quartile 25	0.12
Quartile 75	0.19
Maximum	0.42
Iqr	0.07



Lab	THC-COOH (pg/mg)	Z-score
2	0.32	-0.21
6	0.17	-1.00
7	<1.00	
10	0.40	0.21
11	<0.50	
16	N	
19	N	
24	N	
29	0.43	0.37
30	<0.16	
31	0.65	1.53
37	0.20	-0.84
38	N	
40	0.30	-0.32
41	N	
49	0.56	1.05
51	U	

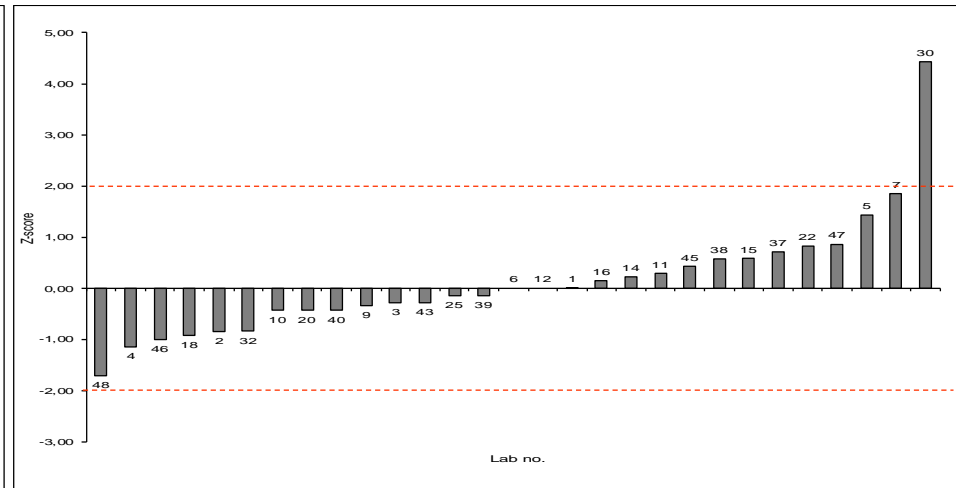
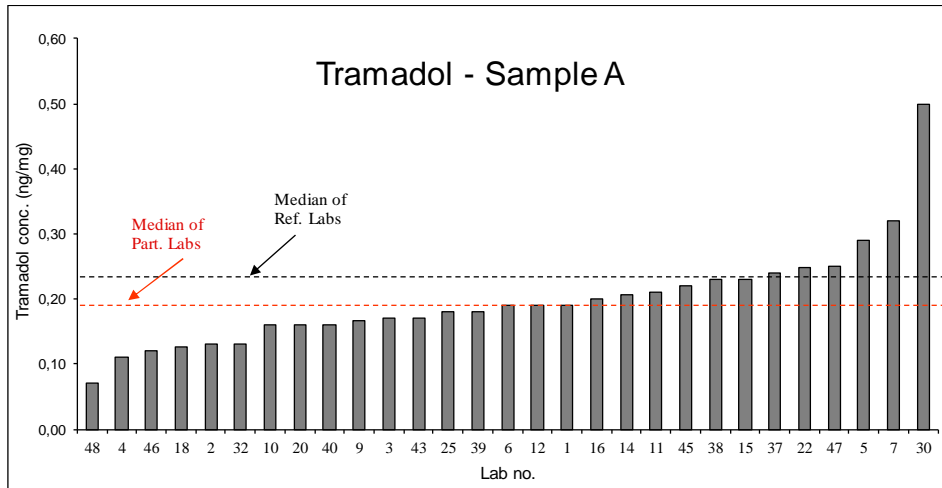
Average	0,38
SD	0,16
CV%	41,19
Median	0,36
Minimum	0,17
Quartile 25	0,28
Quartile 75	0,46
Maximum	0,65
Iqr	0,19



Lab	Methadone (ng/mg)	Z-score
1	0.18	-0.17
2	0.16	-0.28
3	0.22	0.13
4	0.21	0.07
5	0.37	1.13
6	0.13	-0.47
7	0.16	-0.27
9	0.18	-0.13
10	0.13	-0.47
11	0.14	-0.40
12	0.36	1.07
13	N	
14	0.16	-0.28
15	0.21	0.05
16	0.20	0.00
17	N	
18	0.08	-0.77
21	0.12	-0.54
22	0.34	0.93
23	N	
25	0.16	-0.27
26	N	
27	0.20	-0.03
28	0.36	1.07
30	0.10	-0.67
32	0.14	-0.42

Lab	Methadone (ng/mg)	Z-score
33	0.29	0.60
34	N	
37	N	
38	N	
39	0.12	-0.53
40	0.23	0.20
41	0.38	1.20
42	N	
43	0.33	0.87
44	0.25	0.33
45	N	
46	0.27	0.47
47	0.30	0.67
48	0.20	0.00
49	0.14	-0.40
50	0.31	0.73
51	U	

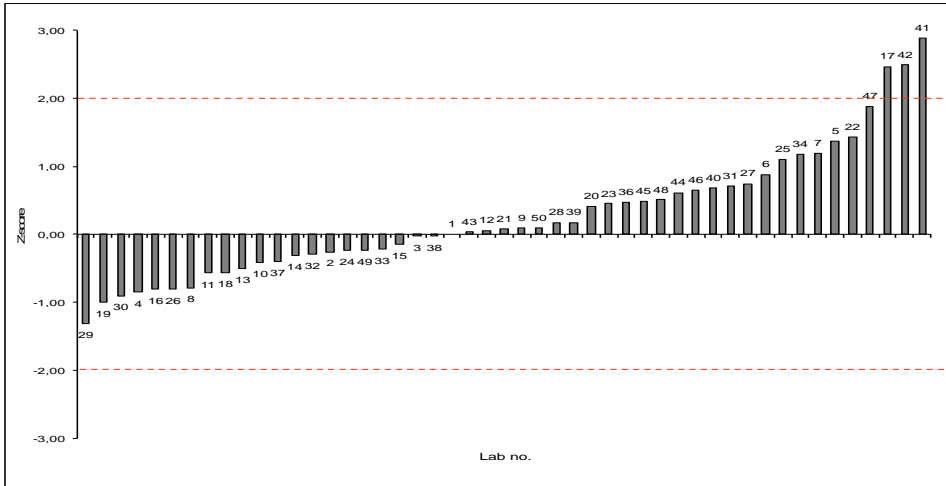
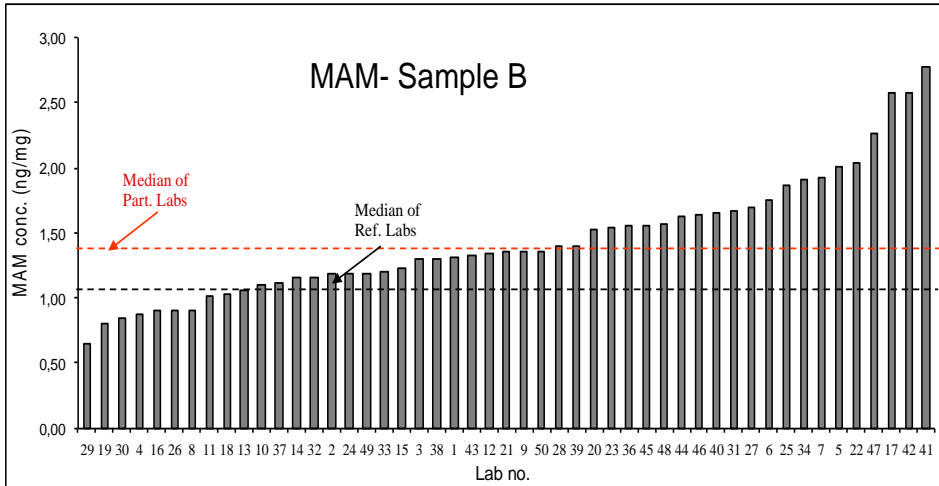
Average	0.22
SD	0.09
CV%	39.98
Median	0.20
Minimum	0.08
Quartile 25	0.14
Quartile 75	0.29
Maximum	0.38
Iqr	0.15



Lab	Tramadol (ng/mg)	Z-score
1	0.19	0.01
2	0.13	-0.86
3	0.17	-0.29
4	0.11	-1.14
5	0.29	1.43
6	0.19	0.00
7	0.32	1.86
9	0.17	-0.34
10	0.16	-0.43
11	0.21	0.29
12	0.19	0.00
14	0.21	0.22
15	0.23	0.59
16	0.20	0.14
18	0.13	-0.91
20	0.16	-0.43
22	0.25	0.83
25	0.18	-0.14
26	P	
27	P	
30	0.50	4.43
32	0.13	-0.84
34	N	
37	0.24	0.71
38	0.23	0.57
39	0.18	-0.14

Lab	Tramadol (ng/mg)	Z-score
40	0.16	-0.43
42	N	
43	0.17	-0.29
45	0.22	0.43
46	0.12	-1.00
47	0.25	0.86
48	0.07	-1.71
51	U	

Average	0.20
SD	0.08
CV%	39.37
Median	0.19
Minimum	0.07
Quartile 25	0.16
Quartile 75	0.23
Maximum	0.50
Iqr	0.07

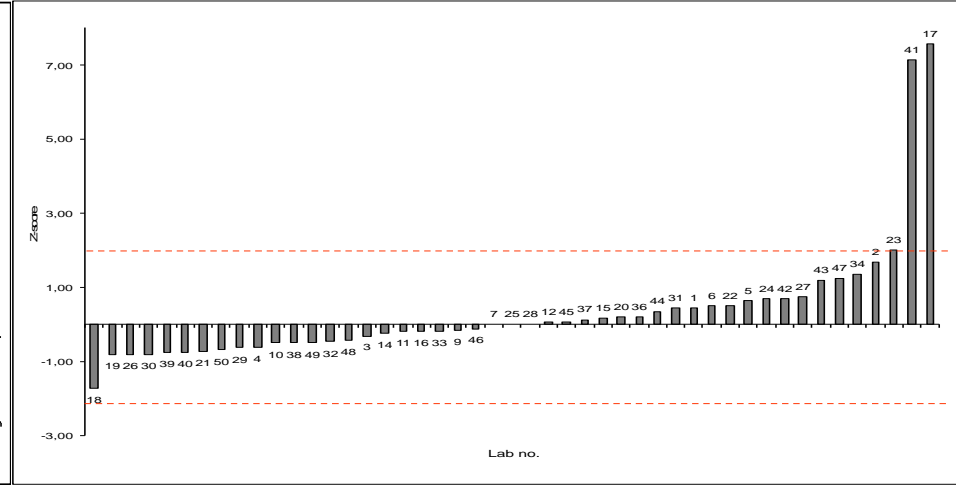
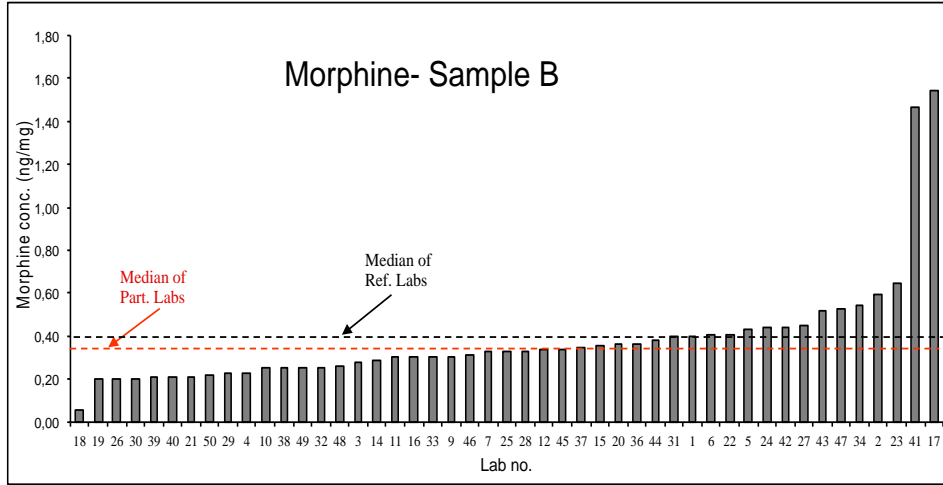


Lab	MAM (ng/mg)	Z-score
1	1.31	-0.08
2	1.18	-0.33
3	1.30	-0.10
4	0.88	-0.92
5	2.01	1.29
6	1.76	0.80
7	1.92	1.12
8	0.91	-0.86
9	1.36	0.01
10	1.10	-0.49
11	1.02	-0.65
12	1.34	-0.02
13	1.06	-0.58
14	1.15	-0.39
15	1.24	-0.23
16	0.90	-0.88
17	2.57	2.39
18	1.03	-0.63
19	0.80	-1.08
20	1.52	0.33
21	1.35	0.00
22	2.04	1.35
23	1.54	0.37
24	1.19	-0.31
25	1.87	1.02
26	0.90	-0.88

Lab	MAM (ng/mg)	Z-score
27	1.69	0.67
28	1.40	0.10
29	0.65	-1.38
30	0.85	-0.98
31	1.67	0.63
32	1.16	-0.37
33	1.20	-0.29
34	1.91	1.10
36	1.55	0.39
37	1.11	-0.47
38	1.30	-0.10
39	1.40	0.10
40	1.66	0.61
41	2.78	2.80
42	2.58	2.41
43	1.33	-0.04
44	1.62	0.54
45	1.56	0.41
46	1.64	0.57
47	2.27	1.80
48	1.57	0.43
49	1.19	-0.31
50	1.36	0.02
51	P	

Average	1.44
SD	0.47
CV%	32.28
Median	1.35
Minimum	0.65
Quartile 25	1.15
Quartile 75	1.66
Maximum	2.78
Iqr	0.51

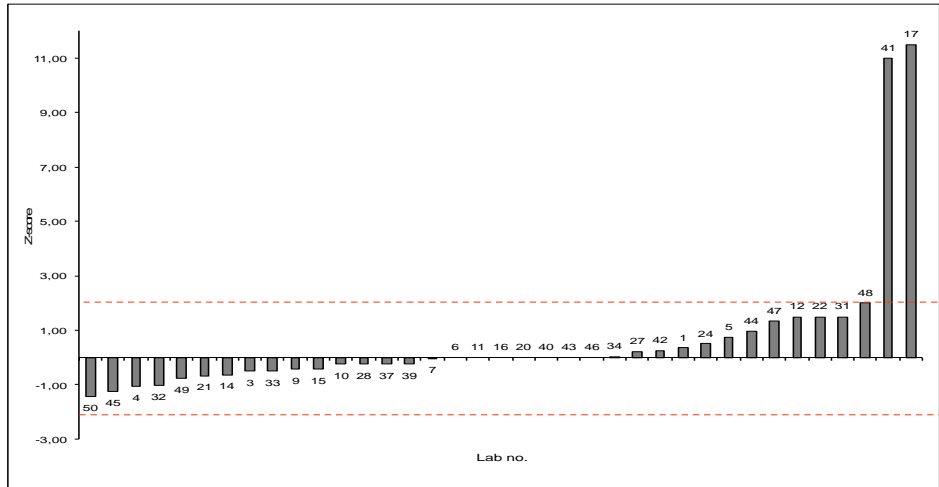
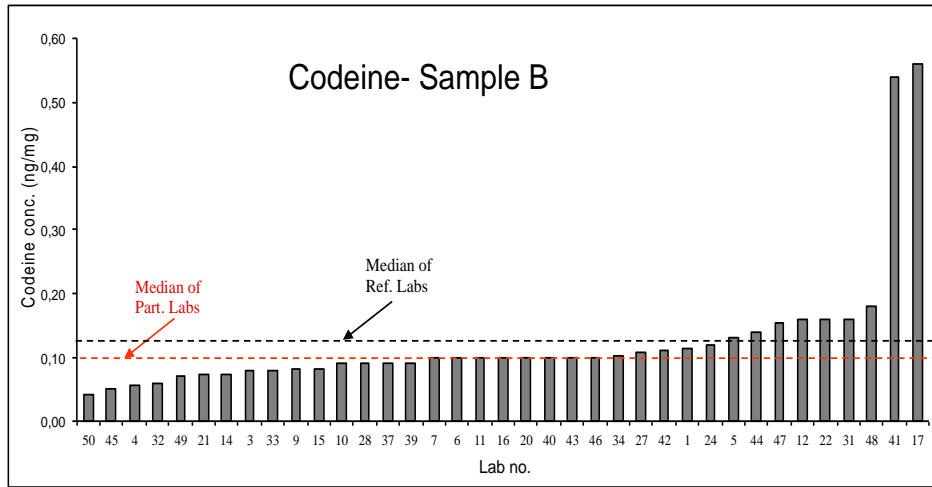




Lab	Morphine (ng/mg)	Z-score
1	0.40	0.44
2	0.60	1.67
3	0.28	-0.31
4	0.23	-0.63
5	0.43	0.63
6	0.41	0.50
7	0.33	0.00
8	N	
9	0.30	-0.17
10	0.25	-0.50
11	0.30	-0.19
12	0.34	0.06
13	N	
14	0.29	-0.25
15	0.36	0.16
16	0.30	-0.19
17	1.54	7.56
18	0.06	-1.72
19	0.20	-0.81
20	0.36	0.19
21	0.21	-0.74
22	0.41	0.50
23	0.65	2.00
24	0.44	0.69
25	0.33	0.00
26	0.20	-0.81

Lab	Morphine (ng/mg)	Z-score
27	0.45	0.74
28	0.33	0.00
29	0.23	-0.64
30	0.20	-0.81
31	0.40	0.44
32	0.25	-0.48
33	0.30	-0.19
34	0.54	1.34
36	0.36	0.19
37	0.35	0.13
38	0.25	-0.50
39	0.21	-0.75
40	0.21	-0.75
41	1.47	7.13
42	0.44	0.69
43	0.52	1.19
44	0.38	0.34
45	0.34	0.06
46	0.31	-0.13
47	0.53	1.25
48	0.26	-0.44
49	0.25	-0.50
50	0.22	-0.69
51	U	

Average	0.38
SD	0.26
CV%	68.48
Median	0.33
Minimum	0.06
Quartile 25	0.25
Quartile 75	0.41
Maximum	1.54
Iqr	0.16

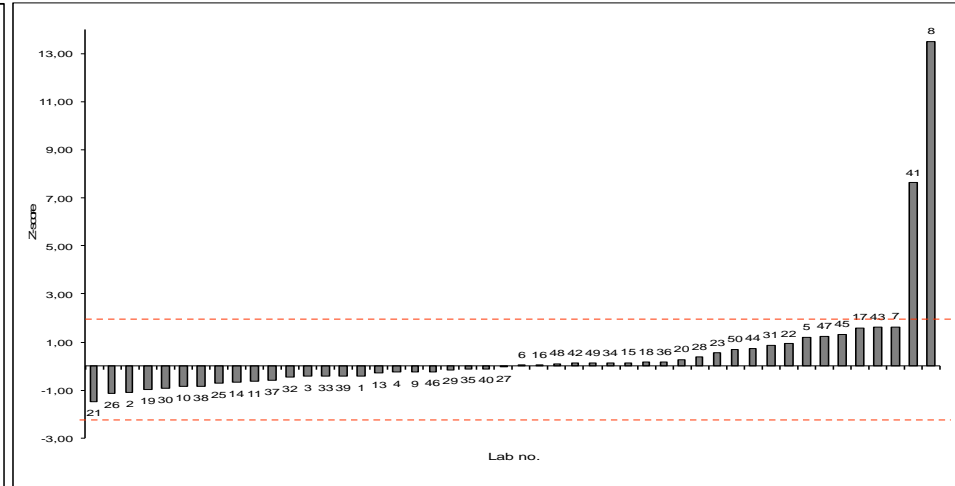
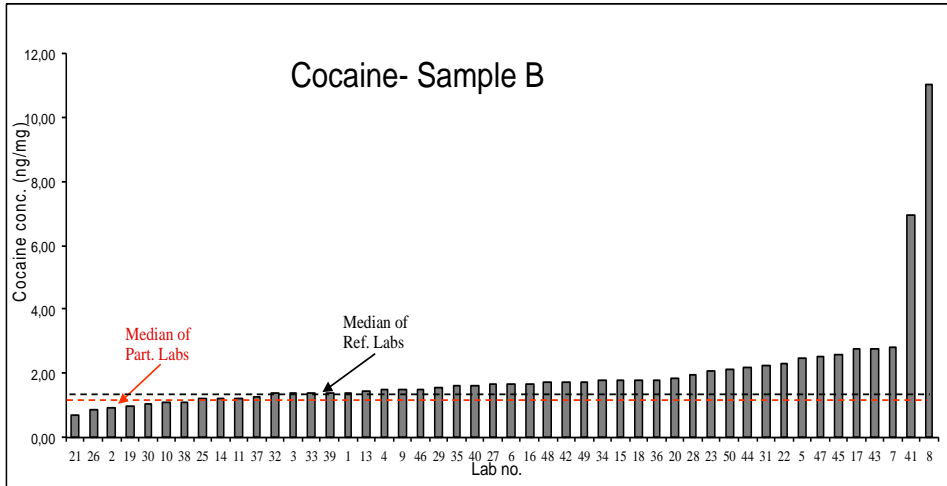


Lab	Codeine (ng/mg)	Z-score
1	0.11	0.35
2	N	
3	0.08	-0.50
4	0.06	-1.08
5	0.13	0.75
6	0.10	0.00
7	0.10	-0.03
8	N	
9	0.08	-0.43
10	0.09	-0.25
11	0.10	0.00
12	0.16	1.50
13	N	
14	0.07	-0.63
15	0.08	-0.43
16	0.10	0.00
17	0.56	11.50
18	N	
19	N	
20	0.10	0.00
21	0.07	-0.68
22	0.16	1.50
23	N	
24	0.12	0.50
25	N	
26	N	

Lab	Codeine (ng/mg)	Z-score
27	0.11	0.23
28	0.09	-0.25
29	N	
30	<0.10	
31	0.16	1.50
32	0.06	-1.03
33	0.08	-0.50
34	0.10	0.03
36	P	
37	0.09	-0.25
38	N	
39	0.09	-0.25
40	0.10	0.00
41	0.54	11.00
42	0.11	0.25
43	0.10	0.00
44	0.14	0.98
45	0.05	-1.25
46	0.10	0.00
47	0.15	1.33
48	0.18	2.00
49	0.07	-0.75
50	0.04	-1.43
51	U	

Average	0.13
SD	0.11
CV%	84.56
Median	0.10
Minimum	0.04
Quartile 25	0.08
Quartile 75	0.12
Maximum	0.56
Iqr	0.04

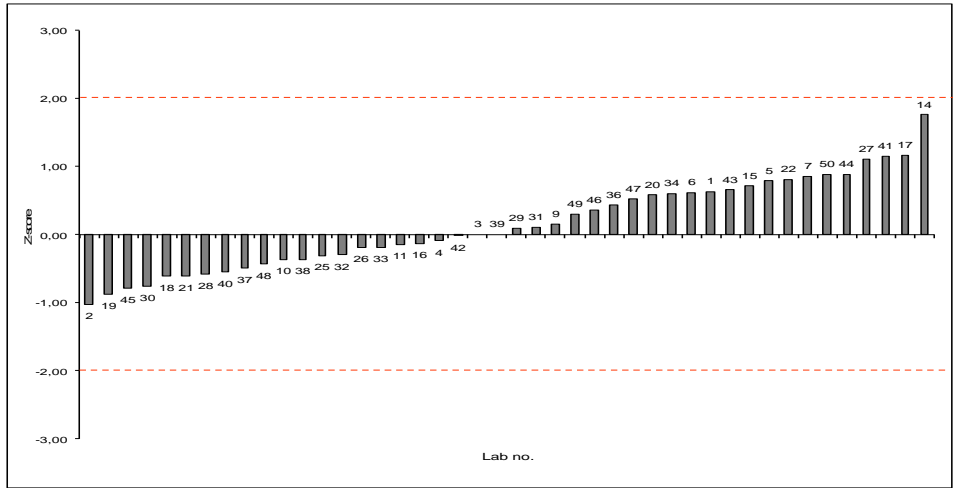
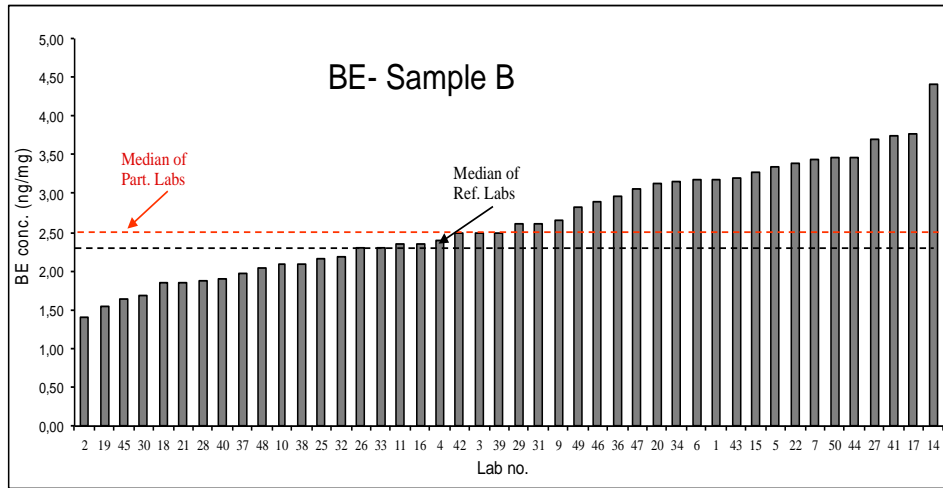
The median Codeine concentration is below the cut-off proposed by SoHT (0.20 ng/mg)



Lab	Cocaine (ng/mg)	Z-score
1	1.40	-0.40
2	0.94	-1.08
3	1.40	-0.41
4	1.50	-0.26
5	2.50	1.19
6	1.70	0.03
7	2.81	1.64
8	11.00	13.51
9	1.51	-0.24
10	1.10	-0.84
11	1.23	-0.65
12	>1.00	
13	1.47	-0.31
14	1.22	-0.66
15	1.78	0.15
16	1.70	0.03
17	2.78	1.59
18	1.80	0.17
19	1.00	-0.99
20	1.87	0.28
21	0.67	-1.46
22	2.32	0.93
23	2.06	0.55
25	1.19	-0.71
26	0.90	-1.13
27	1.66	-0.03

Lab	Cocaine (ng/mg)	Z-score
28	1.94	0.38
29	1.58	-0.14
30	1.05	-0.91
31	2.27	0.86
32	1.36	-0.46
33	1.40	-0.41
34	1.77	0.13
35	1.60	-0.12
36	1.80	0.17
37	1.28	-0.58
38	1.10	-0.84
39	1.40	-0.41
40	1.60	-0.12
41	6.94	7.62
42	1.76	0.12
43	2.79	1.61
44	2.19	0.73
45	2.58	1.30
46	1.52	-0.23
47	2.53	1.23
48	1.75	0.10
49	1.76	0.12
50	2.15	0.68
51	P	

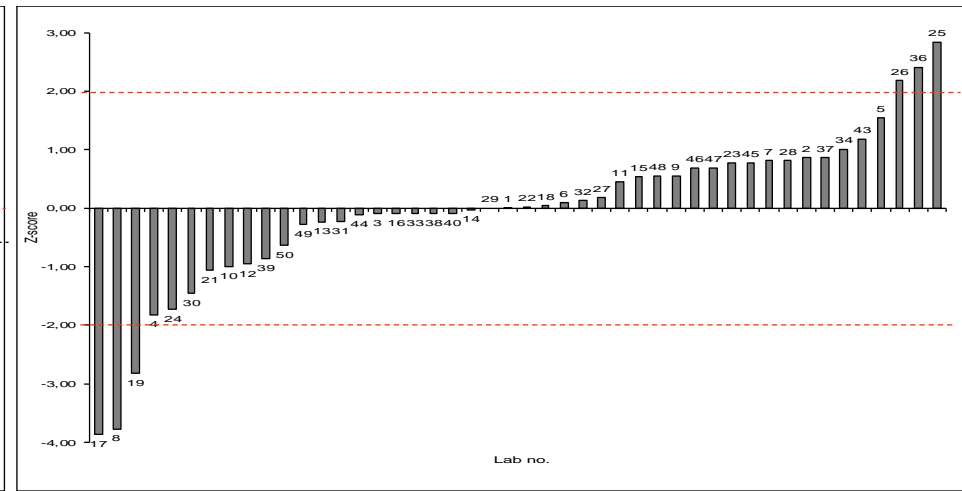
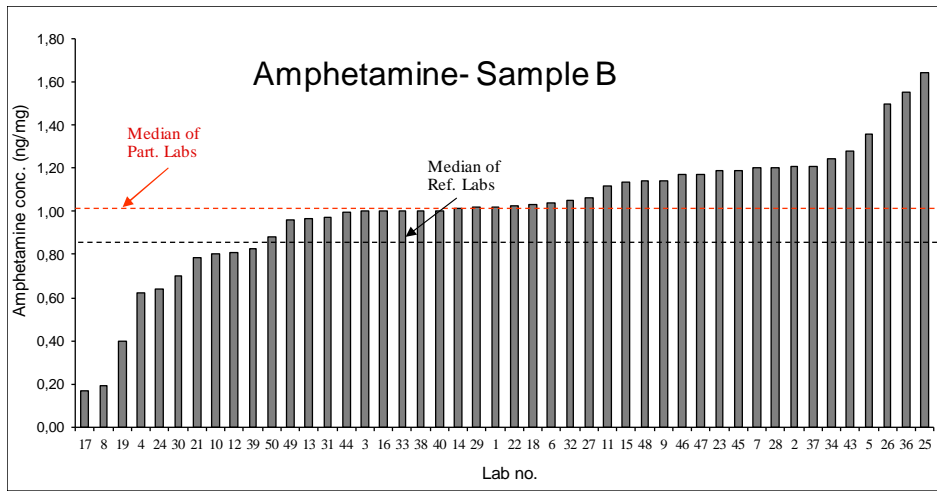
Average	1.99
SD	1.60
CV%	80.15
Median	1.68
Minimum	0.67
Quartile 25	1.39
Quartile 75	2.08
Maximum	11.00
Iqr	0.69



Lab	BE (ng/mg)	Z-score
1	3.18	0.63
2	1.39	-1.03
3	2.50	0.00
4	2.40	-0.09
5	3.35	0.79
6	3.17	0.62
7	3.43	0.86
8	>12.5	
9	2.66	0.15
10	2.10	-0.37
11	2.34	-0.15
12	>1.00	
13	>1.00	
14	4.40	1.76
15	3.27	0.72
16	2.36	-0.13
17	3.76	1.17
18	1.84	-0.61
19	1.55	-0.88
20	3.13	0.58
21	1.85	-0.61
22	3.38	0.81
25	2.17	-0.31
26	2.30	-0.19
27	3.69	1.10
28	1.87	-0.58

Lab	BE (ng/mg)	Z-score
29	2.60	0.09
30	1.69	-0.75
31	2.62	0.11
32	2.17	-0.30
33	2.30	-0.19
34	3.15	0.60
35	>1.90	
36	2.97	0.44
37	1.97	-0.49
38	2.10	-0.37
39	2.50	0.00
40	1.90	-0.56
41	3.74	1.15
42	2.48	-0.02
43	3.21	0.66
44	3.45	0.88
45	1.65	-0.79
46	2.89	0.36
47	3.07	0.53
48	2.03	-0.44
49	2.82	0.30
50	3.45	0.88
51	P	

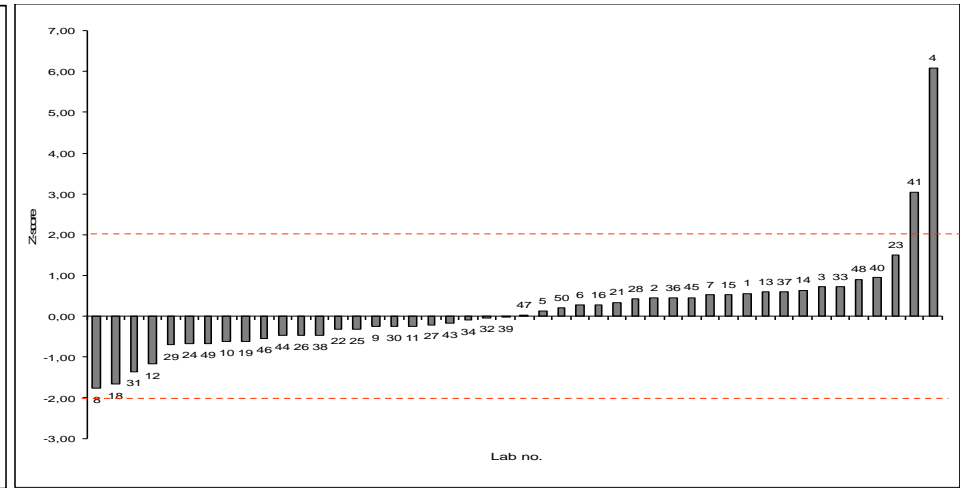
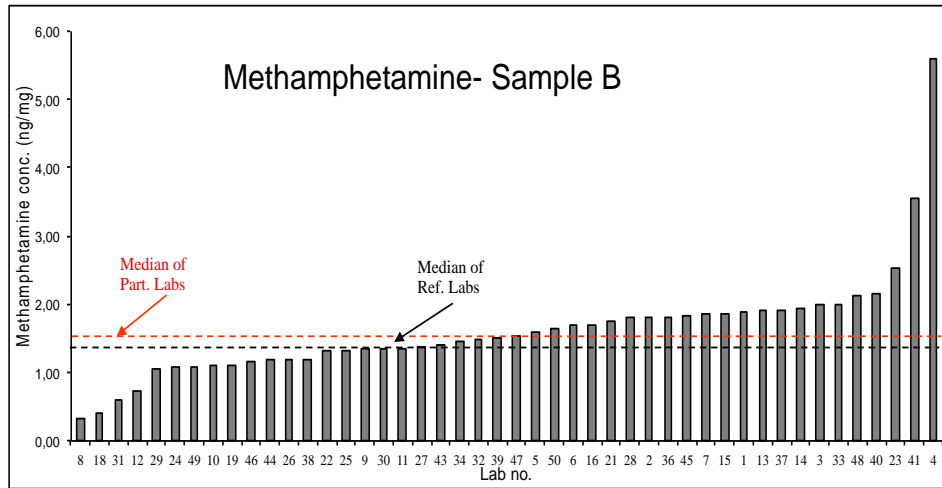
Average	2.63
SD	0.70
CV%	26.64
Median	2.50
Minimum	1.39
Quartile 25	2.10
Quartile 75	3.18
Maximum	4.40
Iqr	1.08



Lab	Amphetamine (ng/mg)	Z-score
1	1.02	0.01
2	1.21	0.86
3	1.00	-0.09
4	0.62	-1.82
5	1.36	1.55
6	1.04	0.09
7	1.20	0.82
8	0.19	-3.77
9	1.14	0.55
10	0.80	-1.00
11	1.12	0.45
12	0.81	-0.95
13	0.97	-0.23
14	1.01	-0.03
15	1.14	0.54
16	1.00	-0.09
17	0.17	-3.86
18	1.03	0.05
19	0.40	-2.82
21	0.79	-1.06
22	1.02	0.02
23	1.19	0.77
24	0.64	-1.73
25	1.65	2.84
26	1.50	2.18
27	1.06	0.18

Lab	Amphetamine (ng/mg)	Z-score
28	1.20	0.82
29	1.02	0.00
30	0.70	-1.45
31	0.97	-0.23
32	1.05	0.13
33	1.00	-0.09
34	1.24	1.01
36	1.55	2.41
37	1.21	0.86
38	1.00	-0.09
39	0.83	-0.86
40	1.00	-0.09
41	N	
42	N	
43	1.28	1.18
44	1.00	-0.11
45	1.19	0.77
46	1.17	0.68
47	1.17	0.68
48	1.14	0.55
49	0.96	-0.27
50	0.88	-0.64
51	P	

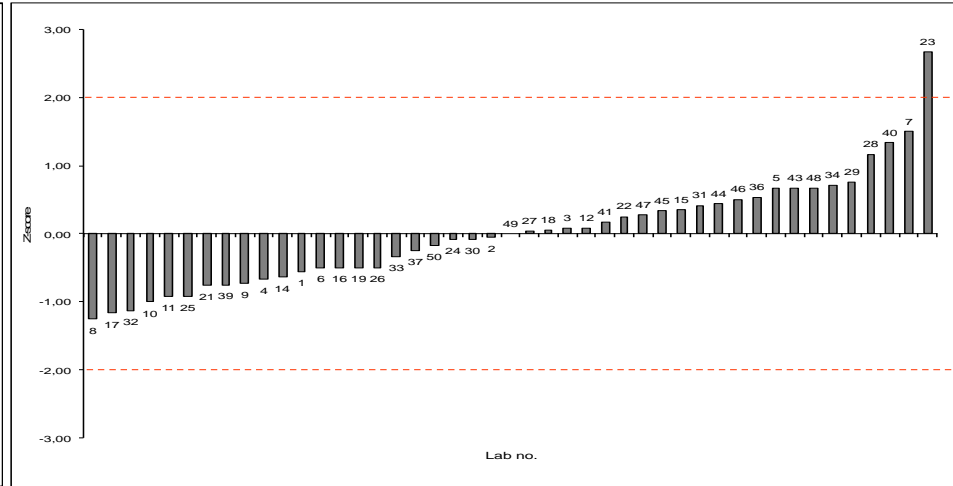
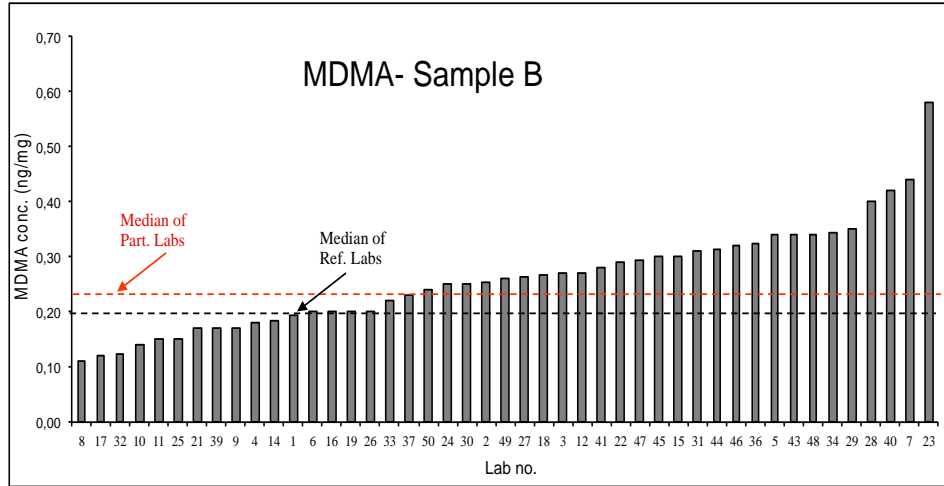
Average	1.01
SD	0.29
CV%	28.52
Median	1.02
Minimum	0.17
Quartile 25	0.96
Quartile 75	1.19
Maximum	1.65
Iqr	0.22



Lab	Methamphetamine (ng/mg)	Z-score
1	1.89	0.56
2	1.82	0.45
3	2.00	0.72
4	5.60	6.09
5	1.60	0.12
6	1.70	0.27
7	1.87	0.52
8	0.34	-1.76
9	1.35	-0.26
10	1.10	-0.63
11	1.36	-0.24
12	0.74	-1.16
13	1.92	0.60
14	1.95	0.64
15	1.87	0.52
16	1.70	0.27
17	N	
18	0.40	-1.67
19	1.10	-0.63
21	1.74	0.33
22	1.31	-0.31
23	2.53	1.51
24	1.07	-0.67
25	1.31	-0.31
26	1.20	-0.48
27	1.38	-0.21

Lab	Methamphetamine (ng/mg)	Z-score
28	1.80	0.42
29	1.05	-0.70
30	1.35	-0.25
31	0.61	-1.36
32	1.50	-0.04
33	2.00	0.72
34	1.46	-0.10
36	1.82	0.45
37	1.92	0.60
38	1.20	-0.48
39	1.50	-0.03
40	2.15	0.94
41	3.56	3.04
42	N	
43	1.41	-0.16
44	1.20	-0.48
45	1.83	0.46
46	1.16	-0.54
47	1.53	0.01
48	2.13	0.91
49	1.07	-0.67
50	1.65	0.19
51	P	

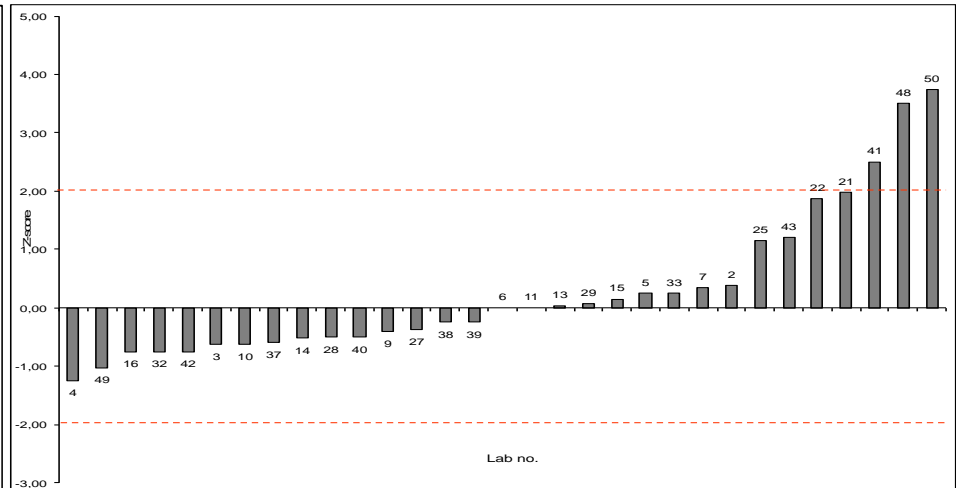
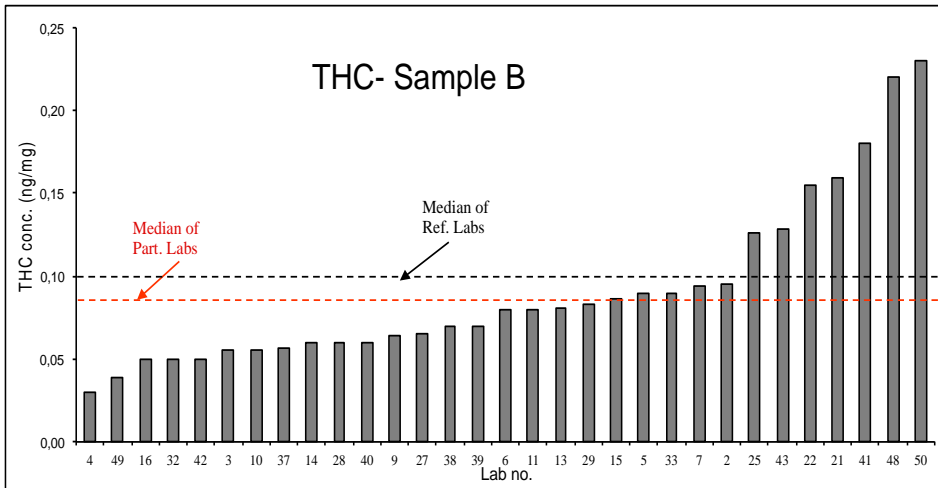
Average	1.62
SD	0.80
CV%	49.39
Median	1.52
Minimum	0.34
Quartile 25	1.20
Quartile 75	1.87
Maximum	5.60
Iqr	0.67



Lab	MDMA (ng/mg)	Z-score
1	0.19	-0.56
2	0.25	-0.06
3	0.27	0.08
4	0.18	-0.67
5	0.34	0.67
6	0.20	-0.50
7	0.44	1.50
8	0.11	-1.25
9	0.17	-0.73
10	0.14	-1.00
11	0.15	-0.92
12	0.27	0.08
13	N	
14	0.18	-0.64
15	0.30	0.35
16	0.20	-0.50
17	0.12	-1.17
18	0.27	0.05
19	0.20	-0.50
21	0.17	-0.76
22	0.29	0.25
23	0.58	2.67
24	0.25	-0.08
25	0.15	-0.92
26	0.20	-0.50
27	0.26	0.03

Lab	MDMA (ng/mg)	Z-score
28	0.40	1.17
29	0.35	0.75
30	0.25	-0.08
31	0.31	0.42
32	0.13	-1.13
33	0.22	-0.33
34	0.35	0.71
36	0.32	0.53
37	0.23	-0.25
38	N	
39	0.17	-0.75
40	0.42	1.33
41	0.28	0.17
42	N	
43	0.34	0.67
44	0.31	0.44
45	0.30	0.33
46	0.32	0.50
47	0.29	0.28
48	0.34	0.67
49	0.26	0.00
50	0.24	-0.17
51	U	

Average	0.26
SD	0.09
CV%	35.78
Median	0.26
Minimum	0.11
Quartile 25	0.19
Quartile 75	0.31
Maximum	0.58
Iqr	0.12

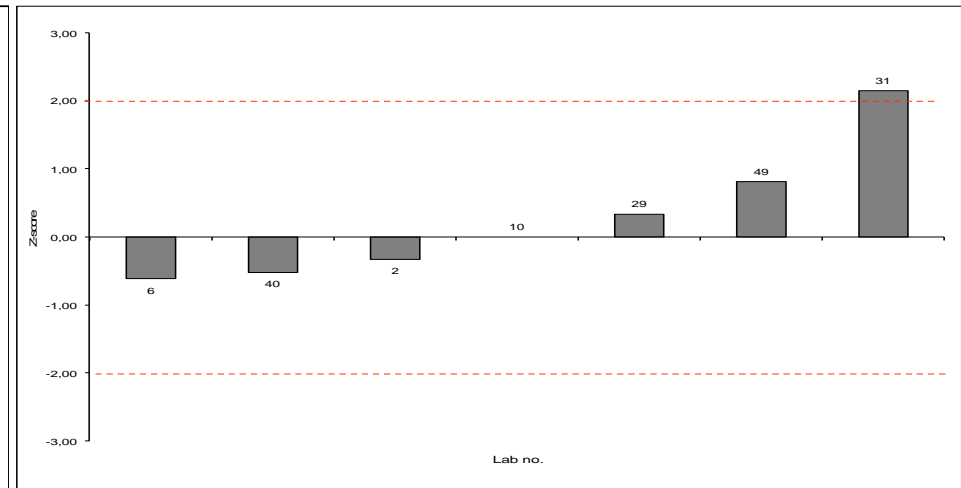
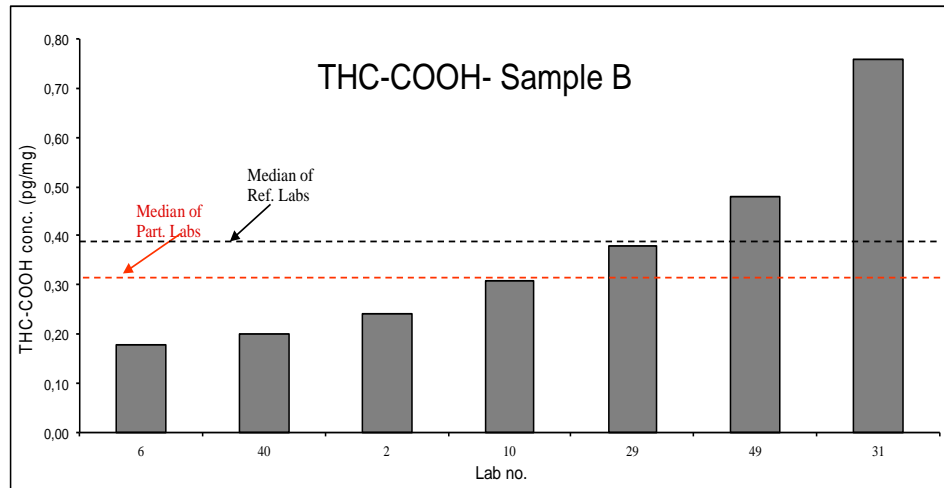


Lab	THC (ng/mg)	Z-score
2	0.10	0.38
3	0.06	-0.63
4	0.03	-1.25
5	0.09	0.25
6	0.08	0.00
7	0.09	0.35
9	0.06	-0.40
10	0.06	-0.63
11	0.08	0.00
13	0.08	0.03
14	0.06	-0.52
15	0.09	0.15
16	0.05	-0.75
17	N	
19	N	
21	0.16	1.98
22	0.16	1.88
25	0.13	1.15
26	N	
27	0.07	-0.38
28	0.06	-0.50
29	0.08	0.08
30	<0.05	
32	0.05	-0.75
33	0.09	0.25
36	N	

Lab	THC (ng/mg)	Z-score
37	0.06	-0.60
38	0.07	-0.25
39	0.07	-0.25
40	0.06	-0.50
41	0.18	2.50
42	0.05	-0.75
43	0.13	1.20
46	<0.05	
48	0.22	3.50
49	0.04	-1.03
50	0.23	3.75
51	U	

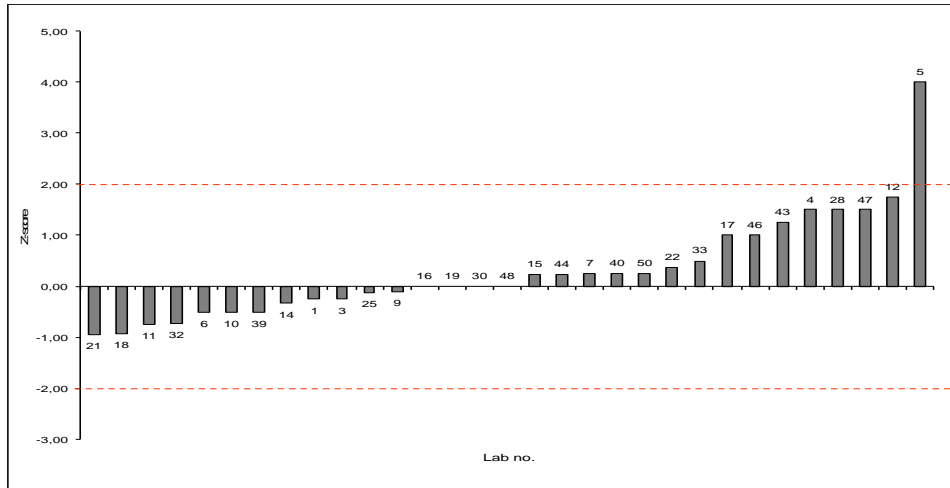
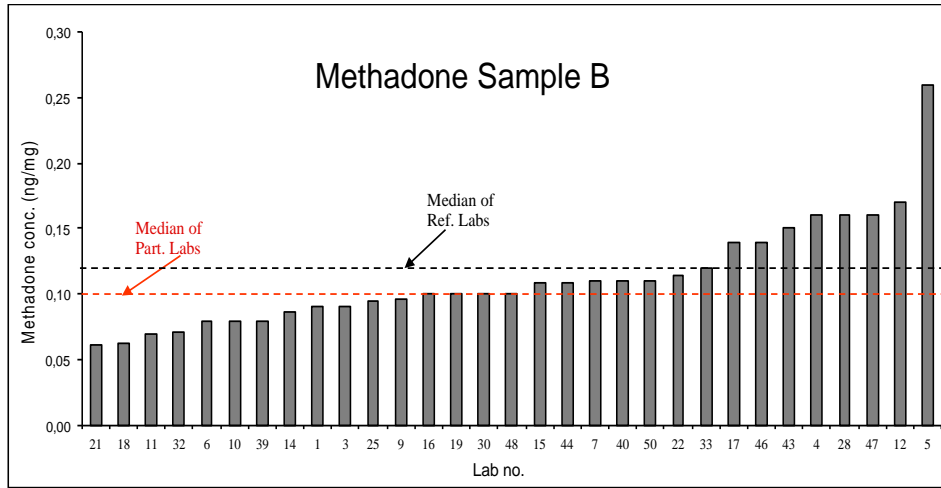
Average	0.09
SD	0.05
CV%	54.66
Median	0.08
Minimum	0.03
Quartile 25	0.06
Quartile 75	0.09
Maximum	0.23
Iqr	0.04





Lab	THC-COOH (pg/mg)	Z-score
2	0.24	-0.33
6	0.18	-0.62
7	<1.00	
10	0.31	0.00
11	<0.50	
16	N	
24	N	
29	0.38	0.33
30	<0.16	
31	0.76	2.14
37	N	
38	N	
40	0.20	-0.52
41	N	
49	0.48	0.81
51	U	

Average	0.36
SD	0.19
CV%	51.83
Median	0.31
Minimum	0.18
Quartile 25	0.22
Quartile 75	0.43
Maximum	0.76
Iqr	0.21

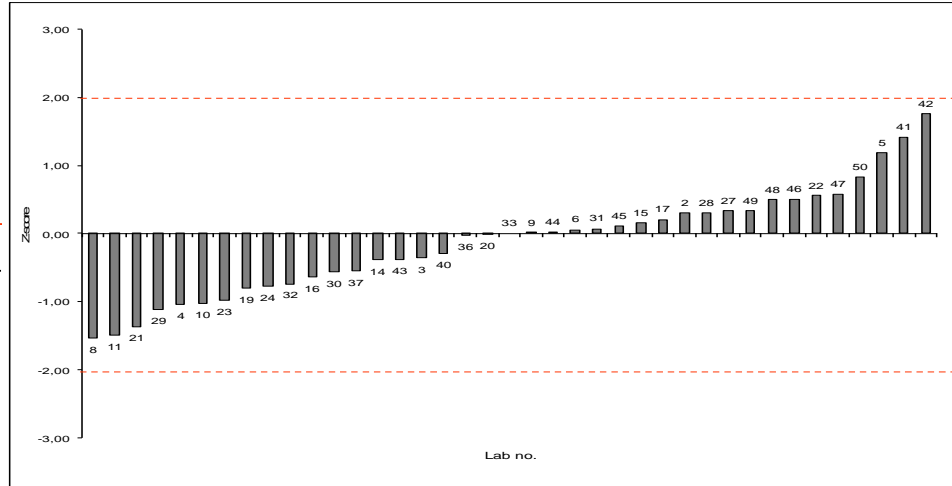
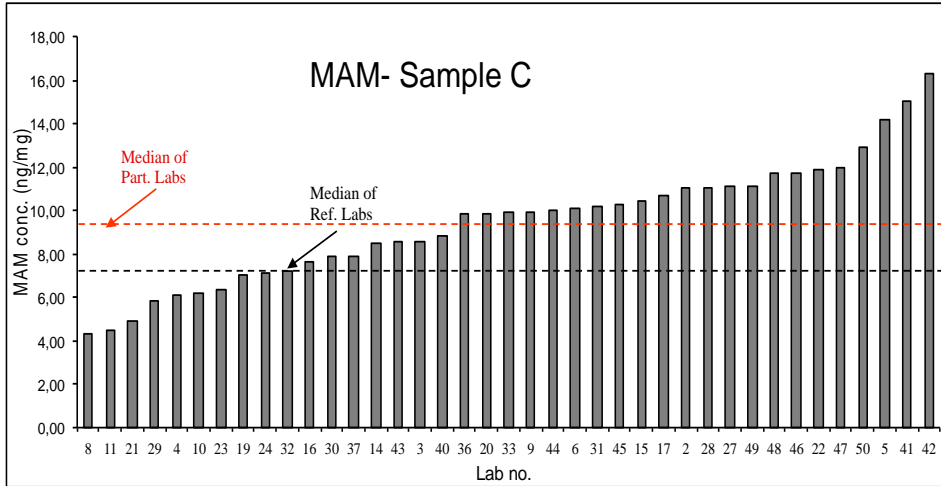


Lab	Methadone (ng/mg)	Z-score
1	0.09	-0.25
2	N	
3	0.09	-0.25
4	0.16	1.50
5	0.26	4.00
6	0.08	-0.50
7	0.11	0.25
9	0.10	-0.10
10	0.08	-0.50
11	0.07	-0.75
12	0.17	1.75
13	N	
14	0.09	-0.33
15	0.11	0.23
16	0.10	0.00
17	0.14	1.00
18	0.06	-0.93
19	0.10	0.00
21	0.06	-0.95
22	0.12	0.38
25	0.10	-0.13
26	N	
27	N	
28	0.16	1.50
30	0.10	0.00
32	0.07	-0.73

Lab	Methadone (ng/mg)	Z-score
33	0.12	0.50
34	N	
37	N	
38	N	
39	0.08	-0.50
40	0.11	0.25
41	N	
42	N	
43	0.15	1.25
44	0.11	0.23
45	N	
46	0.14	1.00
47	0.16	1.50
48	0.10	0.00
49	N	
50	0.11	0.25
51	U	

Average	0.11
SD	0.04
CV%	35.50
Median	0.10
Minimum	0.06
Quartile 25	0.09
Quartile 75	0.13
Maximum	0.26
Iqr	0.04

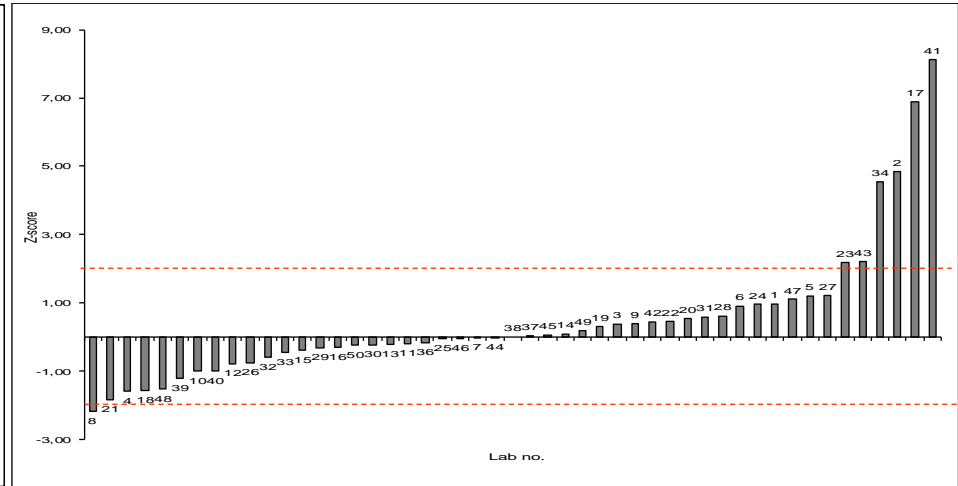
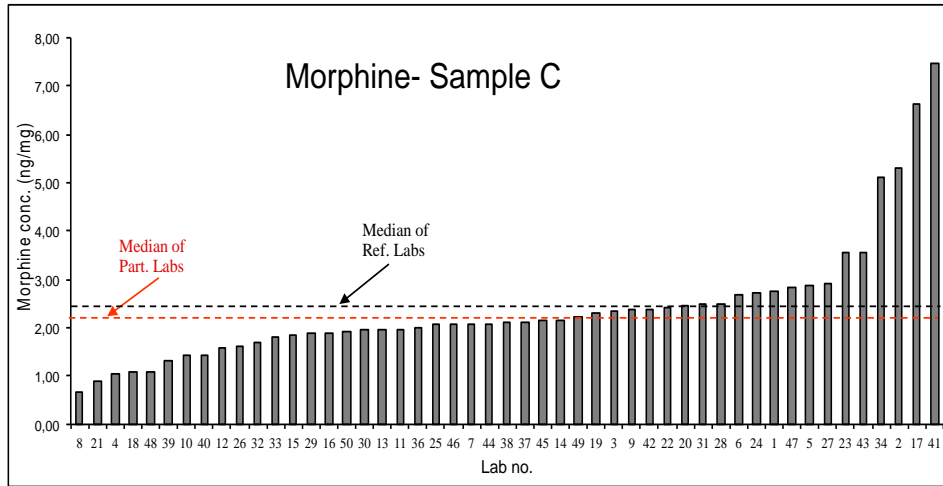
The median Methadone concentration is below the cut-off proposed by SoHT (0.20 ng/mg)



Lab	MAM (ng/mg)	Z-score
1	>1.00	
2	10.99	0.30
3	8.60	-0.36
4	6.10	-1.05
5	14.20	1.18
6	10.10	0.06
7	>2.00	
8	4.30	-1.54
9	9.93	0.01
10	6.20	-1.02
11	4.50	-1.49
12	>2.50	
13	>5.00	
14	8.50	-0.39
15	10.46	0.15
16	7.60	-0.63
17	10.66	0.21
18	>4.00	
19	7.00	-0.80
20	9.85	-0.01
21	4.95	-1.36
22	11.92	0.56
23	6.34	-0.98
24	7.09	-0.77
25	>5.00	
26	>5.00	

Lab	MAM (ng/mg)	Z-score
27	11.10	0.33
28	11.00	0.30
29	5.85	-1.11
30	7.85	-0.56
31	10.17	0.07
32	7.24	-0.73
33	9.90	0.00
34	>5.00	
36	9.81	-0.02
37	7.90	-0.55
38	>5.00	
39	>2.20	
40	8.86	-0.29
41	15.05	1.42
42	16.26	1.75
43	8.53	-0.38
44	9.98	0.02
45	10.30	0.11
46	11.74	0.51
47	12.00	0.58
48	11.70	0.50
49	11.10	0.33
50	12.90	0.83
51	P	

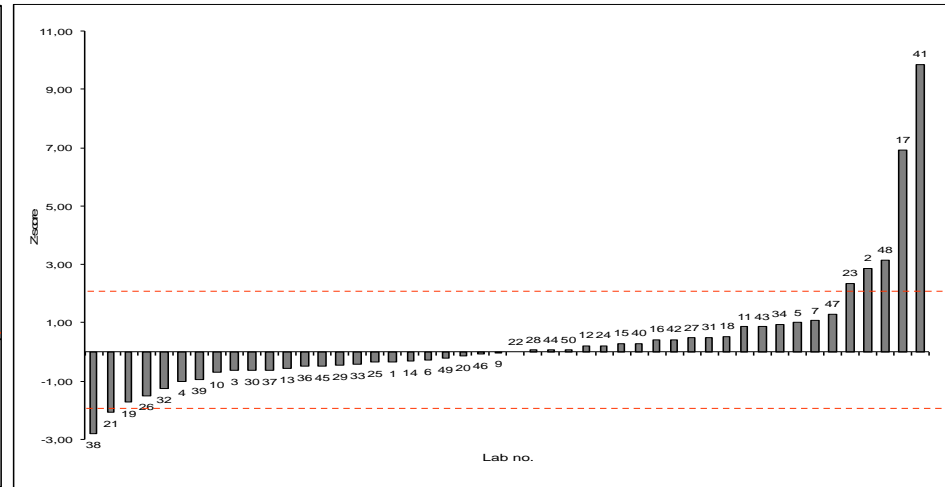
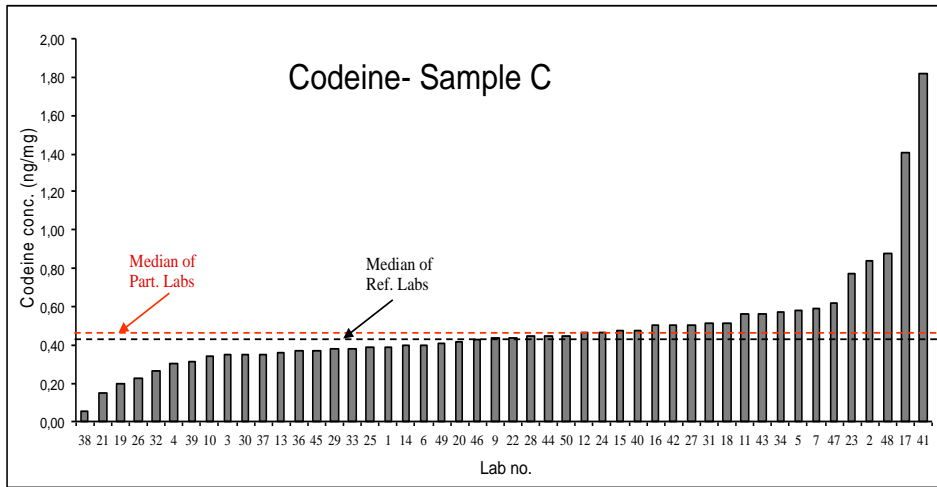
Average	9.45
SD	2.74
CV%	29.05
Median	9.90
Minimum	4.30
Quartile 25	7.42
Quartile 75	11.05
Maximum	16.26
Iqr	3.63



Lab	Morphine (ng/mg)	Z-score
1	2.74	0.97
2	5.29	4.83
3	2.35	0.38
4	1.05	-1.59
5	2.89	1.20
6	2.70	0.91
7	2.09	-0.02
8	0.66	-2.18
9	2.37	0.40
10	1.44	-1.00
11	1.97	-0.20
12	1.58	-0.79
13	1.95	-0.22
14	2.16	0.09
15	1.85	-0.39
16	1.90	-0.30
17	6.64	6.88
18	1.07	-1.56
19	2.30	0.30
20	2.46	0.55
21	0.89	-1.83
22	2.40	0.45
23	3.54	2.18
24	2.73	0.95
25	2.07	-0.05
26	1.60	-0.76

Lab	Morphine (ng/mg)	Z-score
27	2.90	1.21
28	2.50	0.61
29	1.89	-0.32
30	1.95	-0.23
31	2.49	0.59
32	1.71	-0.59
33	1.80	-0.45
34	5.10	4.55
36	1.99	-0.17
37	2.13	0.05
38	2.10	0.00
39	1.30	-1.21
40	1.44	-1.00
41	7.46	8.12
42	2.39	0.44
43	3.56	2.21
44	2.09	-0.01
45	2.14	0.06
46	2.07	-0.05
47	2.83	1.11
48	1.09	-1.53
49	2.22	0.18
50	1.94	-0.24
51	P	

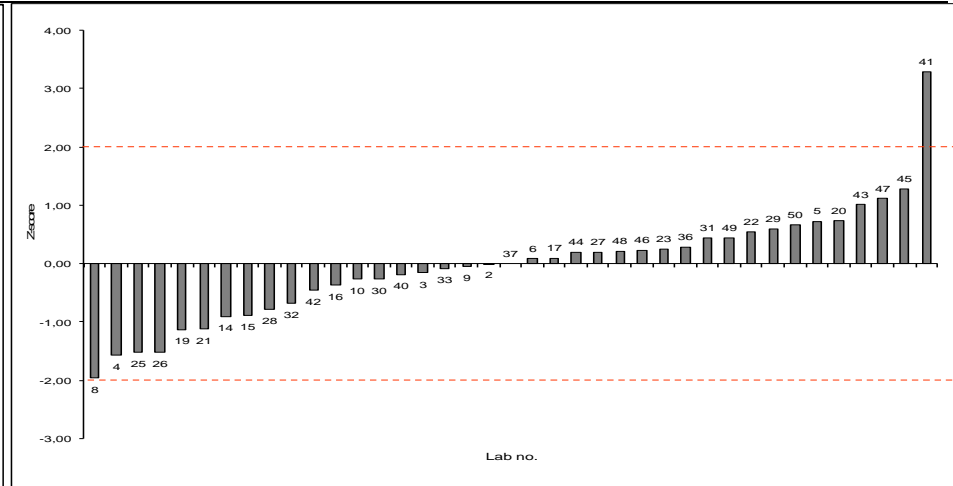
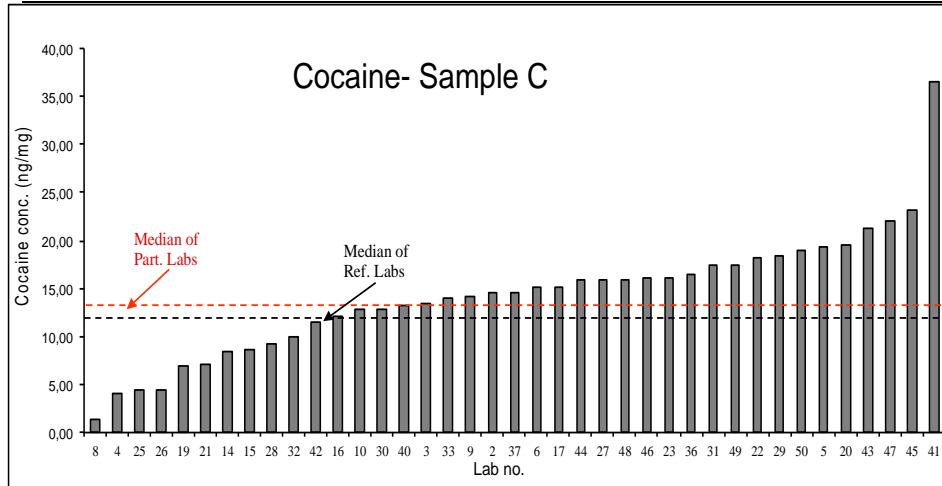
Average	2,40
SD	1,29
CV%	53,57
Median	2,10
Minimum	0,66
Quartile 25	1,85
Quartile 75	2,50
Maximum	7,46
Iqr	0,66



Lab	Codeine (ng/mg)	Z-score
1	0.39	-0.35
2	0.84	2.85
3	0.35	-0.64
4	0.30	-1.00
5	0.58	1.00
6	0.40	-0.29
7	0.59	1.06
8	N	
9	0.44	-0.01
10	0.34	-0.71
11	0.56	0.86
12	0.47	0.21
13	0.36	-0.55
14	0.40	-0.31
15	0.48	0.29
16	0.50	0.43
17	1.41	6.93
18	0.52	0.54
19	0.20	-1.71
20	0.42	-0.14
21	0.15	-2.06
22	0.44	0.00
23	0.77	2.36
24	0.47	0.21
25	0.39	-0.36
26	0.23	-1.50

Lab	Codeine (ng/mg)	Z-score
27	0.51	0.48
28	0.45	0.07
29	0.38	-0.46
30	0.35	-0.64
31	0.51	0.50
32	0.27	-1.25
33	0.38	-0.43
34	0.57	0.96
36	0.37	-0.51
37	0.35	-0.64
38	0.05	-2.79
39	0.31	-0.93
40	0.48	0.29
41	1.82	9.86
42	0.50	0.43
43	0.56	0.86
44	0.45	0.07
45	0.37	-0.50
46	0.43	-0.07
47	0.62	1.29
48	0.88	3.14
49	0.41	-0.21
50	0.45	0.07
51	U	

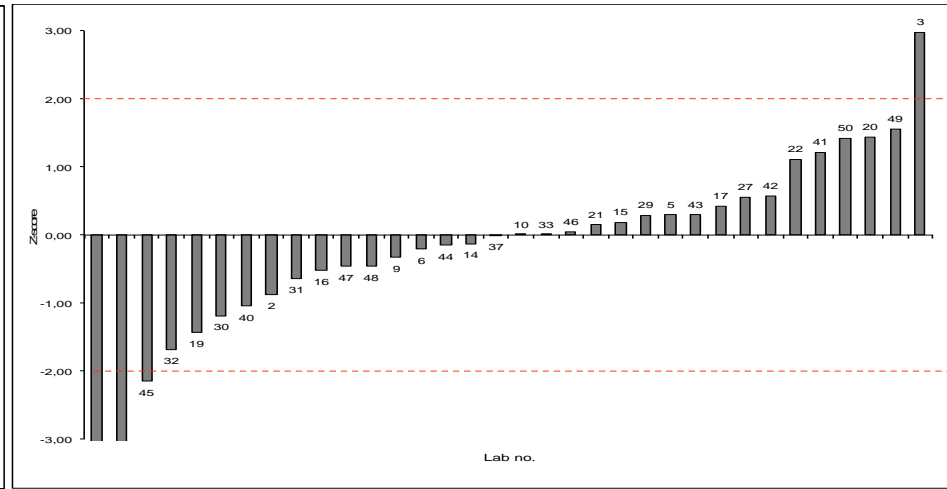
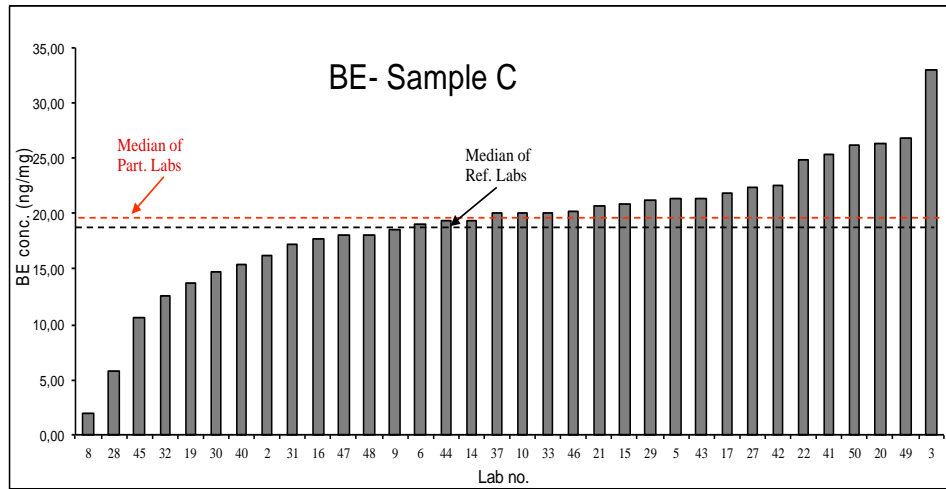
Average	0.49
SD	0.28
CV%	57.69
Median	0.44
Minimum	0.05
Quartile 25	0.37
Quartile 75	0.51
Maximum	1.82
Iqr	0.14



Lab	Cocaine (ng/mg)	Z-score
1	>5.00	
2	14.54	0.00
3	13.50	-0.16
4	4.00	-1.57
5	19.40	0.72
6	15.10	0.08
7	>2.00	
8	1.40	-1.96
9	14.22	-0.05
10	12.80	-0.26
11	>10.00	
12	>1.00	
13	>10.00	
14	8.51	-0.90
15	8.57	-0.89
16	12.10	-0.37
17	15.17	0.09
18	>4.00	
19	7.00	-1.13
20	19.45	0.73
21	7.04	-1.12
22	18.14	0.54
23	16.17	0.24
25	4.40	-1.51
26	4.40	-1.51
27	15.90	0.20

Lab	Cocaine (ng/mg)	Z-score
28	9.30	-0.78
29	18.49	0.59
30	12.80	-0.26
31	17.49	0.44
32	10.05	-0.67
33	14.00	-0.08
34	>5.00	
35	>2.00	
36	16.40	0.28
37	14.55	0.00
38	>2.50	
39	>2.20	
40	13.30	-0.19
41	36.56	3.29
42	11.55	-0.45
43	21.30	1.01
44	15.86	0.20
45	23.10	1.28
46	16.13	0.24
47	22.00	1.11
48	16.00	0.22
49	17.50	0.44
50	19.00	0.66
51	P	

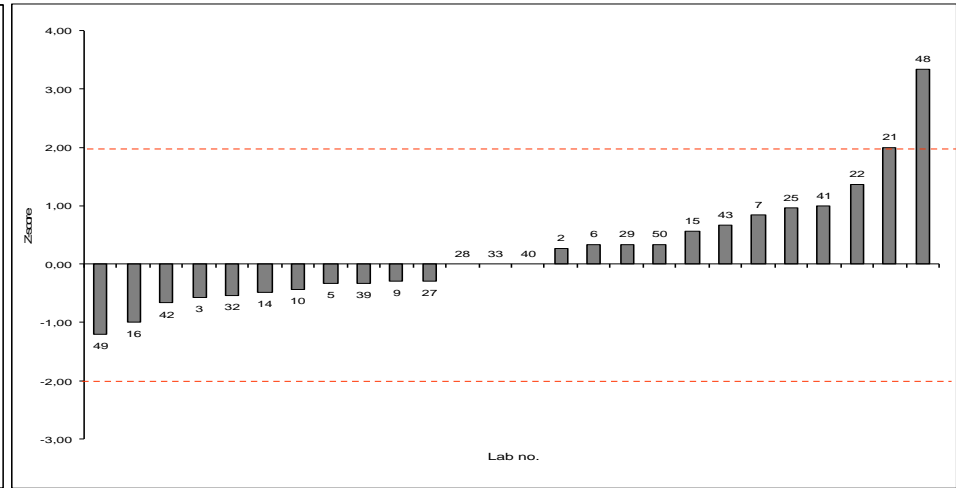
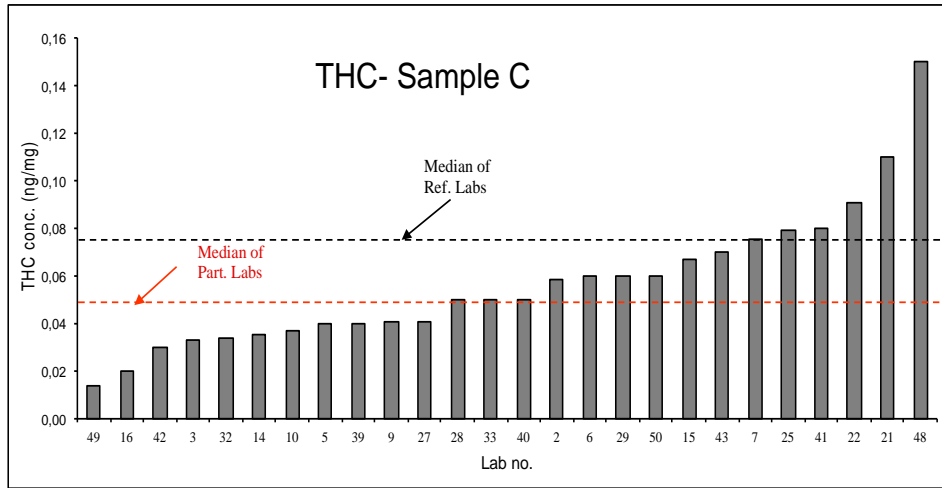
Average	14.29
SD	6.27
CV%	43.87
Median	14.55
Minimum	1.40
Quartile 25	10.80
Quartile 75	17.50
Maximum	36.56
Iqr	6.70



Lab	BE (ng/mg)	Z-score
1	>5.00	
2	16.17	-0.87
3	33.00	2.97
4	>5.00	
5	21.30	0.30
6	19.10	-0.20
7	>2.00	
8	2.00	-4.11
9	18.57	-0.32
10	20.00	0.00
11	>10.00	
12	>1.00	
13	>1.00	
14	19.43	-0.13
15	20.82	0.19
16	17.73	-0.52
17	21.86	0.43
18	>4.00	
19	13.75	-1.42
20	26.25	1.43
21	20.64	0.15
22	24.87	1.11
25	>5.00	
26	>5.00	
27	22.40	0.55
28	5.80	-3.24

Lab	BE (ng/mg)	Z-score
29	21.25	0.29
30	14.79	-1.19
31	17.21	-0.63
32	12.65	-1.68
33	20.00	0.00
34	>5.00	
35	>2.00	
36	>20.00	
37	19.97	0.00
38	>5.00	
39	>2.20	
40	15.40	-1.05
41	25.31	1.21
42	22.49	0.57
43	21.30	0.30
44	19.33	-0.15
45	10.60	-2.14
46	20.20	0.05
47	18.00	-0.45
48	18.00	-0.45
49	26.80	1.55
50	26.20	1.42
51	P	

Average	19.21
SD	5.79
CV%	30.14
Median	19.99
Minimum	2.00
Quartile 25	17.34
Quartile 75	21.72
Maximum	33.00
Iqr	4.38

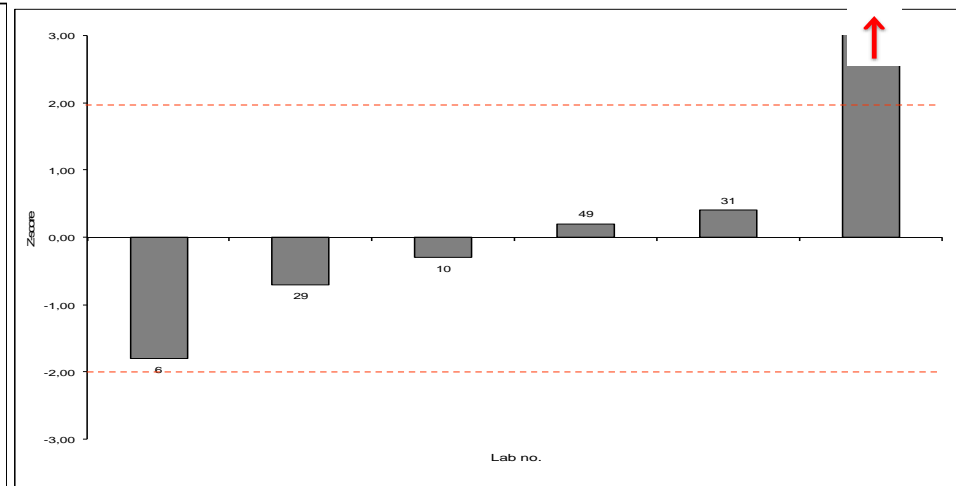
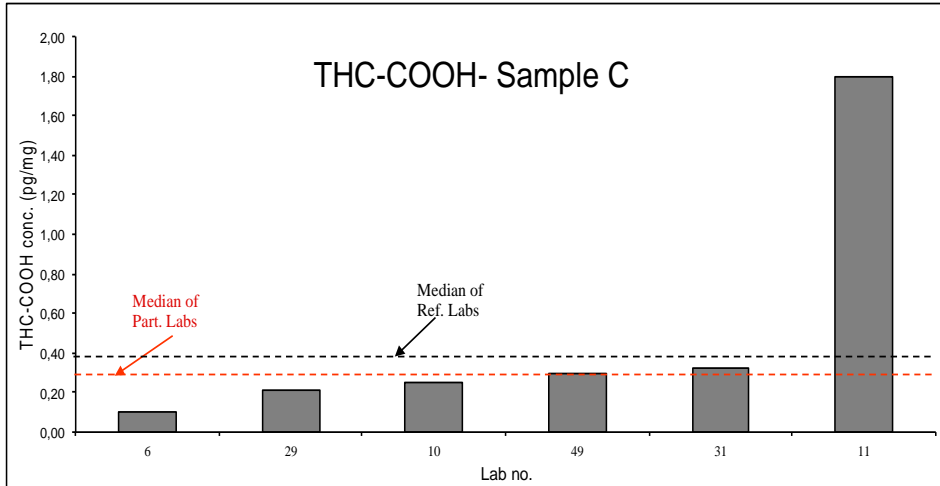


Lab	THC (ng/mg)	Z-score
2	0.06	0.27
3	0.03	-0.57
4	N	
5	0.04	-0.33
6	0.06	0.33
7	0.08	0.83
9	0.04	-0.30
10	0.04	-0.43
11	N	
13	N	
14	0.04	-0.49
15	0.07	0.57
16	0.02	-1.00
17	N	
19	N	
21	0.11	2.00
22	0.09	1.37
25	0.08	0.97
26	N	
27	0.04	-0.30
28	0.05	0.00
29	0.06	0.33
30	<0.05	
32	0.03	-0.53
33	0.05	0.00
36	N	

Lab	THC (ng/mg)	Z-score
37	N	
38	N	
39	0.04	-0.33
40	0.05	0.00
41	0.08	1.00
42	0.03	-0.67
43	0.07	0.67
46	<0.05	
48	0.15	3.33
49	0.01	-1.20
50	0.06	0.33
51	U	

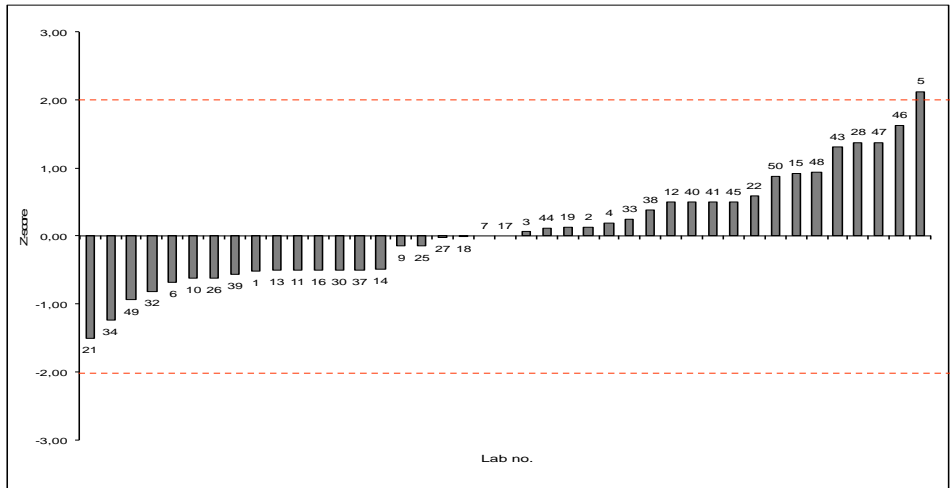
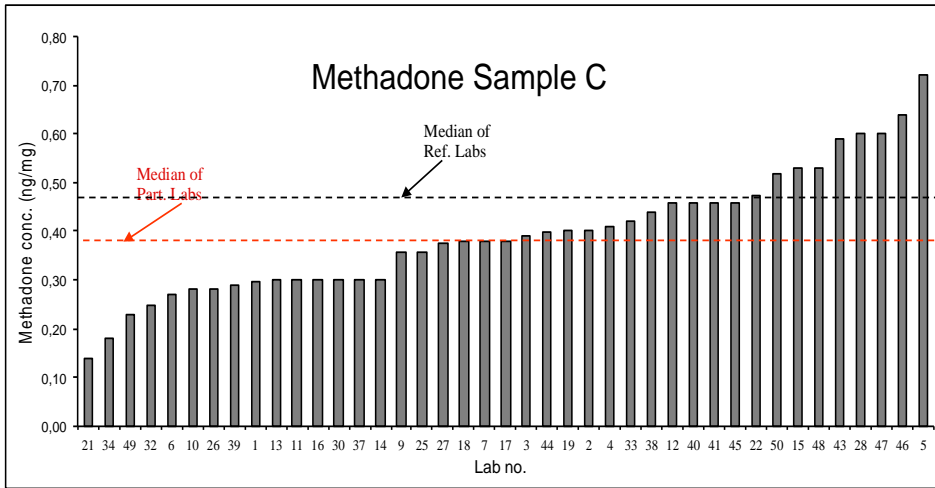
Average	0.06
SD	0.03
CV%	50.56
Median	0.05
Minimum	0.01
Quartile 25	0.04
Quartile 75	0.07
Maximum	0.15
Iqr	0.03





Lab	THC-COOH (pg/mg)	Z-score
2	N	
6	0.10	-1.80
7	<1.00	
10	0.25	-0.30
11	1.80	15.20
16	N	
24	N	
29	0.21	-0.70
30	<0.16	
31	0.32	0.40
37	N	
38	N	
40	N	
41	N	
49	0.30	0.20
51	N	

Average	0.50
SD	0.59
CV%	118.23
Median	0.28
Minimum	0.10
Quartile 25	0.22
Quartile 75	0.32
Maximum	1.80
Iqr	0.10



Lab	Methadone (ng/mg)	Z-score
1	0.30	-0.52
2	0.40	0.13
3	0.39	0.06
4	0.41	0.19
5	0.72	2.13
6	0.27	-0.69
7	0.38	0.00
8	N	
9	0.36	-0.14
10	0.28	-0.63
11	0.30	-0.50
12	0.46	0.50
13	0.30	-0.50
14	0.30	-0.49
15	0.53	0.93
16	0.30	-0.50
17	0.38	0.00
18	0.38	-0.01
19	0.40	0.13
21	0.14	-1.51
22	0.48	0.59
23	N	
25	0.36	-0.14
26	0.28	-0.63
27	0.38	-0.03
28	0.60	1.38

Lab	Methadone (ng/mg)	Z-score
30	0.30	-0.50
32	0.25	-0.82
33	0.42	0.25
34	0.18	-1.24
37	0.30	-0.50
38	0.44	0.38
39	0.29	-0.56
40	0.46	0.50
41	0.46	0.50
42	P	
43	0.59	1.31
44	0.40	0.12
45	0.46	0.50
46	0.64	1.63
47	0.60	1.38
48	0.53	0.94
49	0.23	-0.94
50	0.52	0.88
51	P	

Average	0.39
SD	0.13
CV%	31.86
Median	0.38
Minimum	0.14
Quartile 25	0.30
Quartile 75	0.46
Maximum	0.72
Iqr	0.16

