



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

Sevilla. February. 2021

### **Proficiency Test 2020-2**

Laboratory Code: «**Lab\_code**»

Dear participants,

Enclosed you will find the report of the Proficiency Test 2020-2 on Drugs of Abuse in Hair, organized by the Society of Hair Testing. It includes qualitative and quantitative evaluations of the results. Laboratories reporting only qualitative results have not been included in the quantitative report.

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

Sets of three samples were sent to sixty-six participating laboratories. Sixty-one of them have sent the report forms back.

Sample contents were as follows:

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

ketamine and low concentrations of opiates (6-MAM, morphine and codeine) methadone and EDDP.

### **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:

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

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
MAM		P		Cocaine <sup>1</sup>		P		MAM <sup>3</sup>		P	
Morphine		P		BE		P		Cocaine		P	
Codeine		P		MDMA <sup>2</sup>		P		BE		P	
Cocaine		P		THC		P		Amphetamine		P	
BE		P		THC-COOH		P		Methamphetamine		P	
THC		P						MDMA		P	
THC-COOH		P						THC		P	
Methadone		P						THC-COOH		P	
Tramadol		P						Methadone <sup>4</sup>		P	
Diazepam		P						Tramadol		P	
Nordazepam		P									

- The median concentration of cocaine in Sample B is 0.44 ng/mg, which is lower than the cut-off proposed by SoHT (0.5 ng/mg).
- The median concentration of MDMA in Sample B is 0.13 ng/mg, which is lower than the cut-off proposed by SoHT (0.2 ng/mg).
- The median concentration of MAM in Sample C is 0.14 ng/mg, which is lower than the cut-off proposed by SoHT (0.2 ng/mg).
- The median concentration of methadone in Sample C is 0.18 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 norcocaine (0.05 ng/mg, median conc.), EDDP (0.19 ng/mg, median conc.) and low concentrations of cocaethylene (0.01 ng/mg, median conc.)
- Sample B contains low concentrations of norcocaine (0.01 ng/mg, median conc.), cocaethylene (0.01 ng/mg, median conc.), and amphetamine (0.04 ng/mg, median conc.).
- Sample C contains cocaethylene (0.06 ng/mg, median conc.) and low concentrations of norcocaine (0.02 ng/mg, median conc.), morphine (0.05 ng/mg, median conc.), codeine (0.02 ng/mg, median conc.) and EDDP (0.02 ng/mg, median conc.).

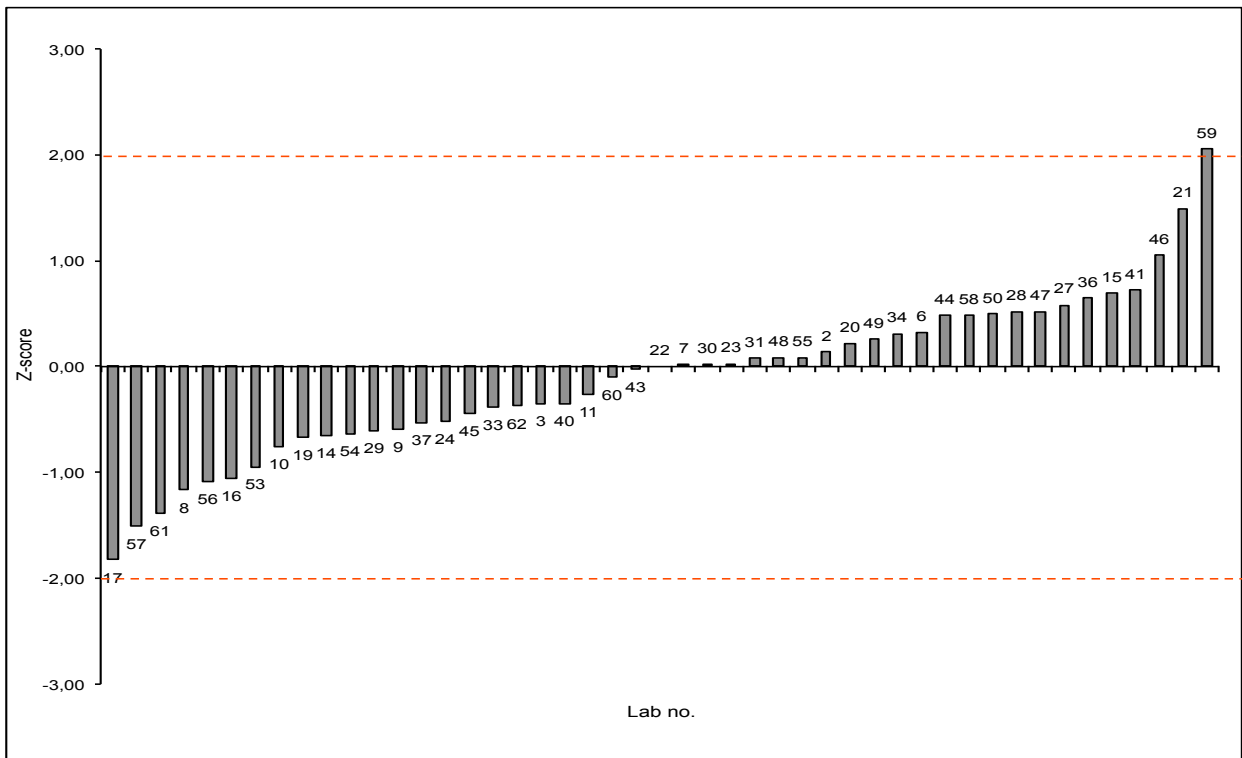
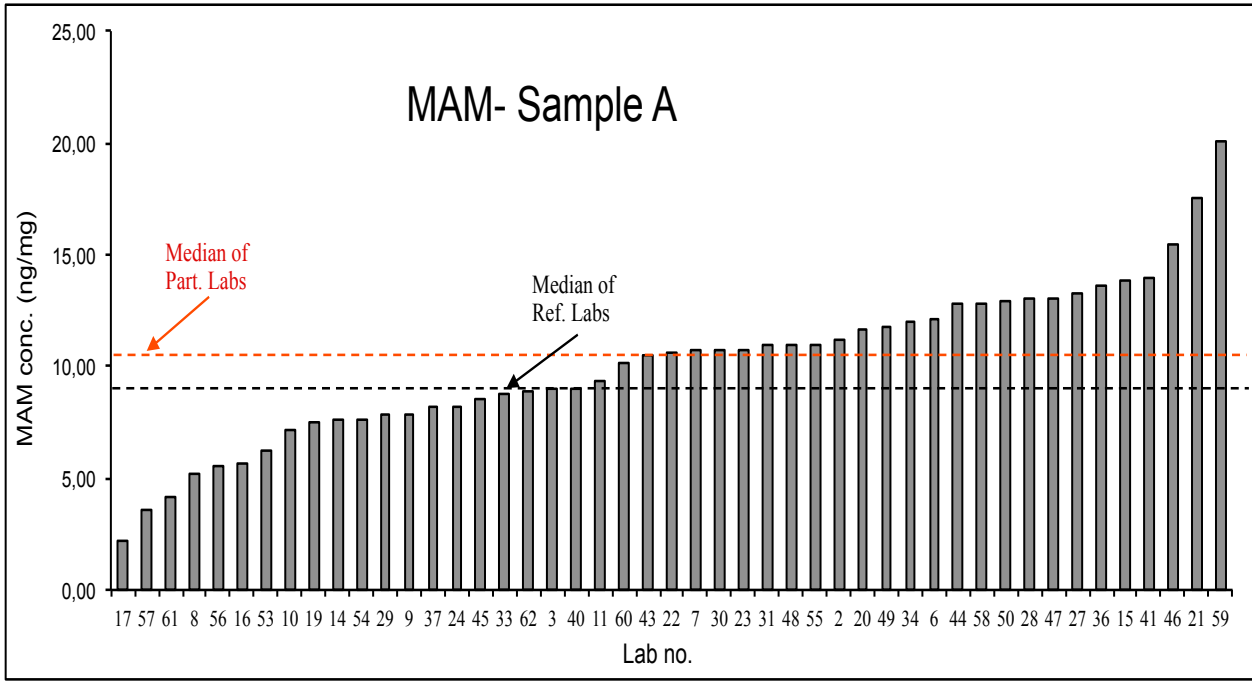
**SAMPLE A**

**6-MONOACETILMORPHINE (MAM)**

Lab	MAM (ng/mg)	Z-score	Result
1	>1.00		
2	11.24	0.14	Satisfactory
3	9.00	-0.35	Satisfactory
4	>5.00		
6	12.10	0.32	Satisfactory
7	10.70	0.02	Satisfactory
8	5.20	-1.17	Satisfactory
9	7.87	-0.59	Satisfactory
10	7.10	-0.76	Satisfactory
11	9.38	-0.26	Satisfactory
12	>2.50		
13	>5.00		
14	7.60	-0.65	Satisfactory
15	13.80	0.69	Satisfactory
16	5.70	-1.06	Satisfactory
17	2.14	-1.83	Satisfactory
18	>4.00		
19	7.50	-0.67	Satisfactory
20	11.62	0.22	Satisfactory
21	17.51	1.49	Satisfactory
22	10.60	0.00	Satisfactory
23	10.72	0.03	Satisfactory
24	8.21	-0.52	Satisfactory
25	>5.00		
26	>5.00		
27	13.30	0.58	Satisfactory
28	13.00	0.52	Satisfactory
29	7.80	-0.60	Satisfactory
30	10.70	0.02	Satisfactory
31	10.96	0.08	Satisfactory
33	8.80	-0.39	Satisfactory
34	12.06	0.31	Satisfactory
36	13.60	0.65	Satisfactory
37	8.17	-0.52	Satisfactory
38	P		
39	>2.00		
40	9.00	-0.35	Satisfactory
41	13.95	0.72	Satisfactory
43	10.50	-0.02	Satisfactory
44	12.83	0.48	Satisfactory
45	8.56	-0.44	Satisfactory
46	15.46	1.05	Satisfactory
47	13.00	0.52	Satisfactory
48	11.00	0.09	Satisfactory
49	11.80	0.26	Satisfactory
50	12.90	0.50	Satisfactory
53	6.22	-0.95	Satisfactory
54	7.66	-0.63	Satisfactory
55	11.00	0.09	Satisfactory
56	5.58	-1.08	Satisfactory
57	3.61	-1.51	Satisfactory
58	12.84	0.48	Satisfactory

Lab	MAM (ng/mg)	Z-score	Result
59	20.10	2.05	Questionable
60	10.13	-0.10	Satisfactory
61	4.18	-1.39	Satisfactory
62	8.87	-0.37	Satisfactory

Average	10.12
SD	3.47
CV%	34.29
Median	10.60
Minimum	2.14
Quartile 25	7.83
Quartile 75	12.46
Maximum	20.10
Iqr	4.63

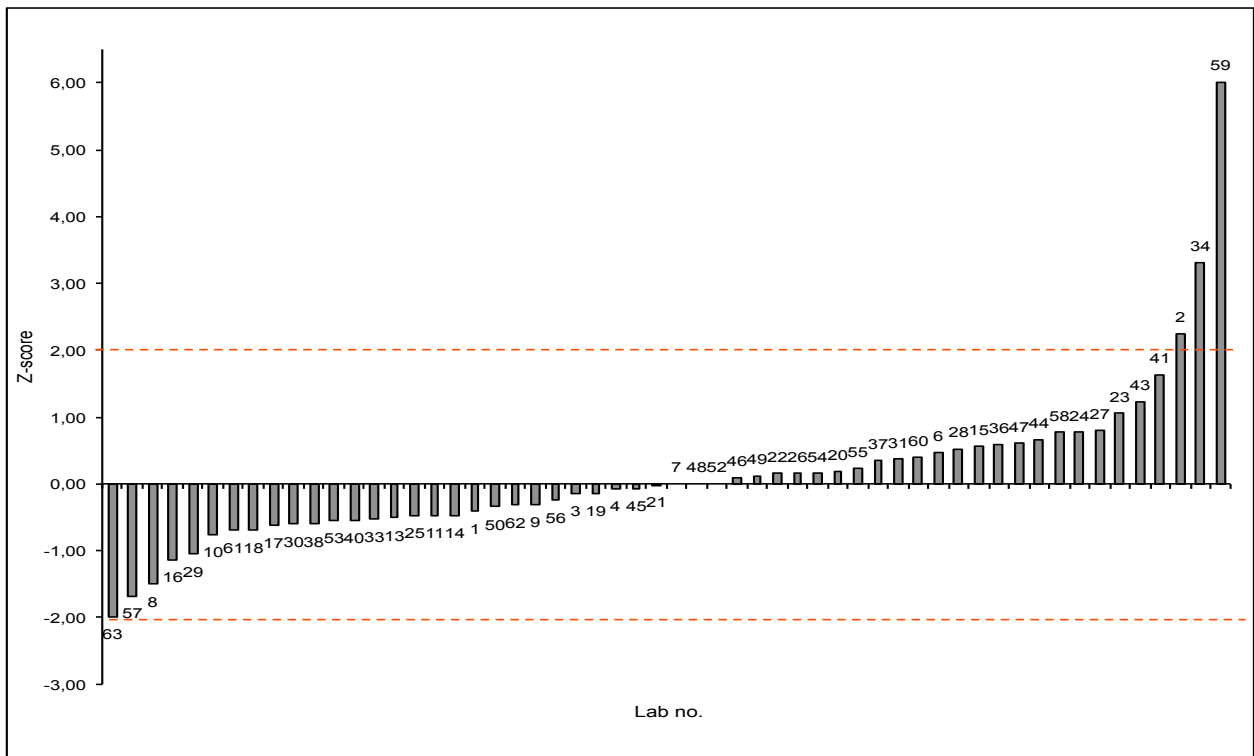
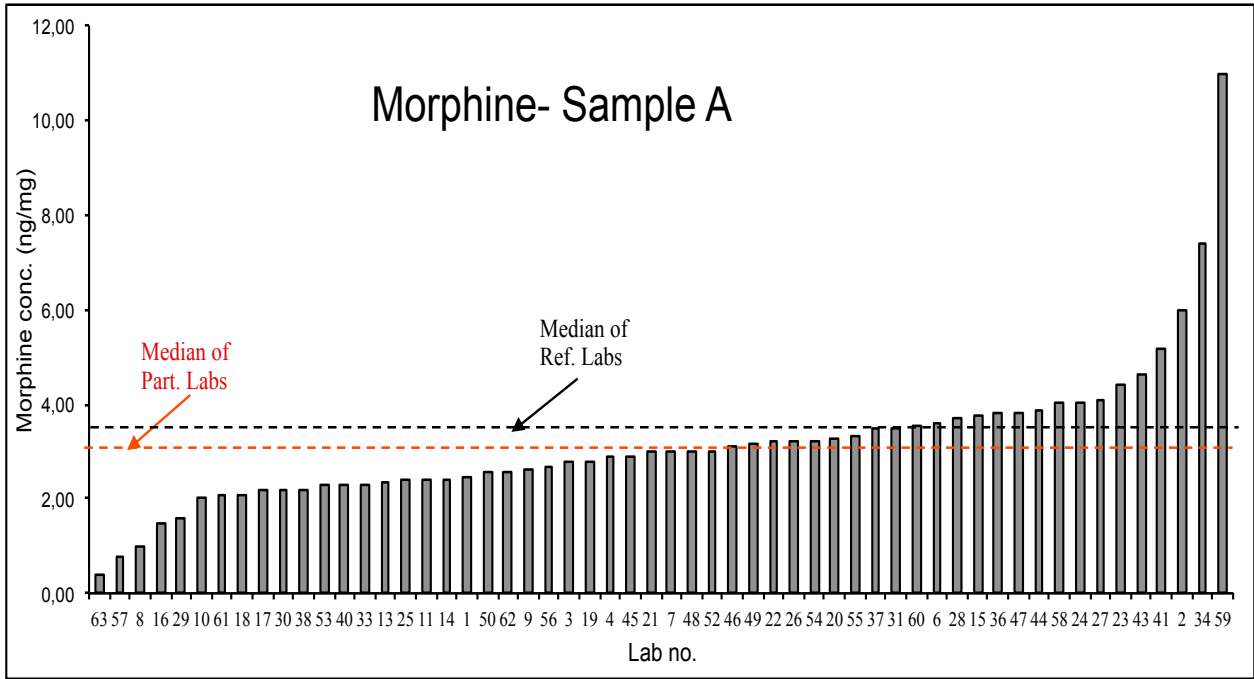


**MORPHINE**

Lab	Morphine (ng/mg)	Z-score	Result
1	2.45	-0.41	Satisfactory
2	6.00	2.25	Questionable
3	2.80	-0.15	Satisfactory
4	2.90	-0.08	Satisfactory
6	3.62	0.47	Satisfactory
7	3.00	0.00	Satisfactory
8	1.00	-1.50	Satisfactory
9	2.60	-0.30	Satisfactory
10	2.00	-0.75	Satisfactory
11	2.38	-0.47	Satisfactory
12	>2.5		
13	2.32	-0.51	Satisfactory
14	2.38	-0.47	Satisfactory
15	3.75	0.56	Satisfactory
16	1.50	-1.13	Satisfactory
17	2.17	-0.62	Satisfactory
18	2.07	-0.70	Satisfactory
19	2.80	-0.15	Satisfactory
20	3.25	0.19	Satisfactory
21	2.99	-0.01	Satisfactory
22	3.20	0.15	Satisfactory
23	4.41	1.06	Satisfactory
24	4.03	0.77	Satisfactory
25	2.38	-0.47	Satisfactory
26	3.20	0.15	Satisfactory
27	4.06	0.80	Satisfactory
28	3.70	0.53	Satisfactory
29	1.60	-1.05	Satisfactory
30	2.20	-0.60	Satisfactory
31	3.49	0.37	Satisfactory
33	2.30	-0.53	Satisfactory
34	7.40	3.30	Unsatisfactory
36	3.79	0.59	Satisfactory
37	3.47	0.35	Satisfactory
38	2.20	-0.60	Satisfactory
39	>2.0		
40	2.28	-0.54	Satisfactory
41	5.18	1.64	Satisfactory
43	4.63	1.23	Satisfactory
44	3.89	0.67	Satisfactory
45	2.90	-0.08	Satisfactory
46	3.13	0.10	Satisfactory
47	3.80	0.60	Satisfactory
48	3.00	0.00	Satisfactory
49	3.16	0.12	Satisfactory
50	2.54	-0.35	Satisfactory
52	3.00	0.00	Satisfactory
53	2.27	-0.55	Satisfactory
54	3.20	0.15	Satisfactory
55	3.30	0.23	Satisfactory
56	2.67	-0.25	Satisfactory
57	0.77	-1.68	Satisfactory

Lab	Morphine (ng/mg)	Z-score	Result
58	4.02	0.77	Satisfactory
59	11.00	6.02	Unsatisfactory
60	3.53	0.40	Satisfactory
61	2.07	-0.70	Satisfactory
62	2.57	-0.32	Satisfactory
63	0.37	-1.98	Satisfactory

Average	3.15
SD	1.57
CV%	49.61
Median	3.00
Minimum	0.37
Quartile 25	2.32
Quartile 75	3.64
Maximum	11.00
Iqr	1.33



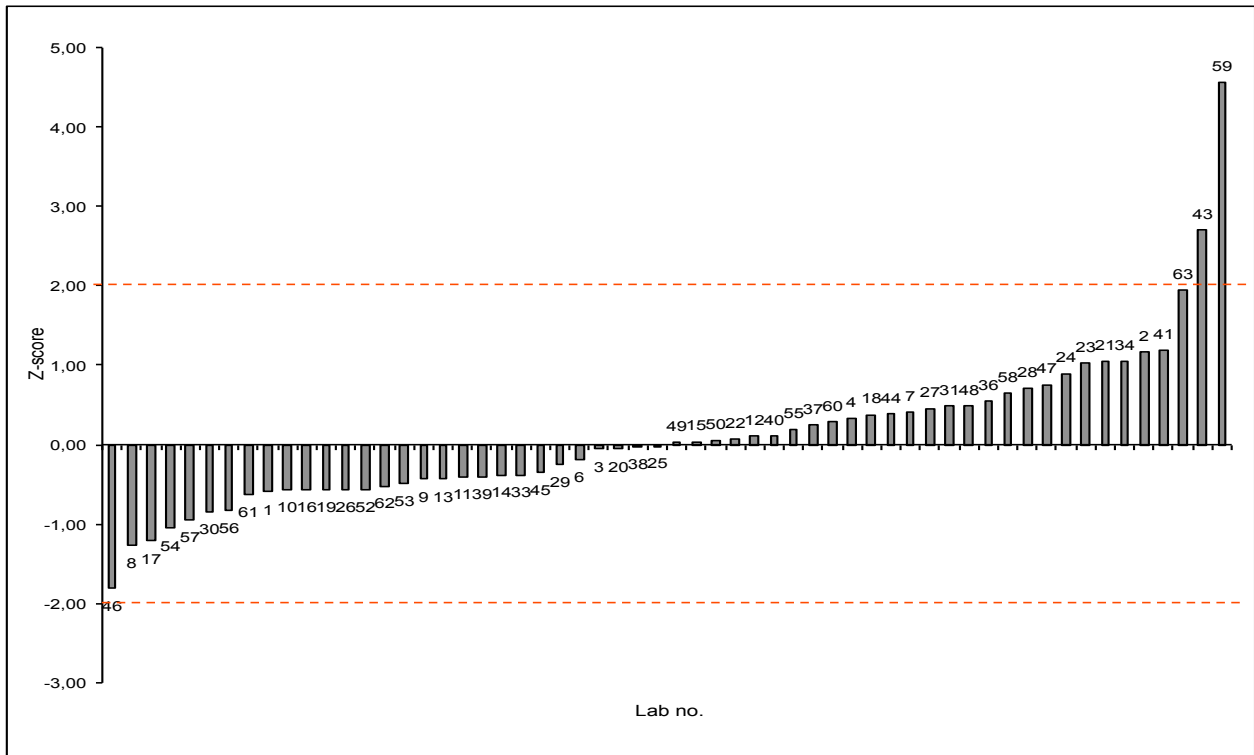
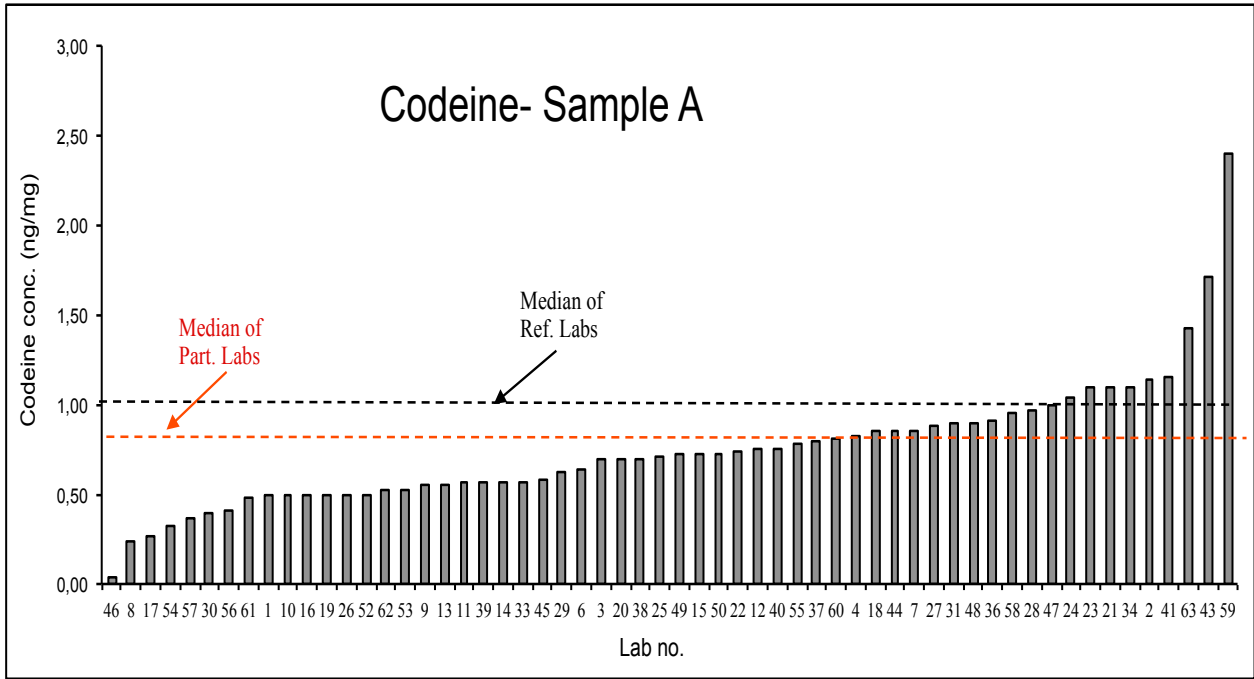


**CODEINE**

Lab	Codeine (ng/mg)	Z-score	Result
1	0.49	-0.60	Satisfactory
2	1.14	1.17	Satisfactory
3	0.69	-0.05	Satisfactory
4	0.83	0.32	Satisfactory
6	0.64	-0.19	Satisfactory
7	0.86	0.41	Satisfactory
8	0.24	-1.27	Satisfactory
9	0.55	-0.44	Satisfactory
10	0.50	-0.57	Satisfactory
11	0.56	-0.41	Satisfactory
12	0.75	0.11	Satisfactory
13	0.55	-0.43	Satisfactory
14	0.57	-0.38	Satisfactory
15	0.72	0.04	Satisfactory
16	0.50	-0.57	Satisfactory
17	0.26	-1.22	Satisfactory
18	0.85	0.38	Satisfactory
19	0.50	-0.57	Satisfactory
20	0.69	-0.05	Satisfactory
21	1.10	1.05	Satisfactory
22	0.73	0.06	Satisfactory
23	1.09	1.03	Satisfactory
24	1.04	0.90	Satisfactory
25	0.71	-0.01	Satisfactory
26	0.50	-0.57	Satisfactory
27	0.88	0.45	Satisfactory
28	0.97	0.70	Satisfactory
29	0.62	-0.24	Satisfactory
30	0.40	-0.84	Satisfactory
31	0.89	0.49	Satisfactory
33	0.57	-0.38	Satisfactory
34	1.10	1.05	Satisfactory
36	0.91	0.55	Satisfactory
37	0.80	0.24	Satisfactory
38	0.70	-0.03	Satisfactory
39	0.56	-0.41	Satisfactory
40	0.75	0.11	Satisfactory
41	1.15	1.19	Satisfactory
43	1.71	2.70	Questionable
44	0.85	0.39	Satisfactory
45	0.58	-0.35	Satisfactory
46	0.04	-1.81	Satisfactory
47	0.99	0.76	Satisfactory
48	0.89	0.49	Satisfactory
49	0.72	0.03	Satisfactory
50	0.73	0.05	Satisfactory
52	0.50	-0.57	Satisfactory
53	0.53	-0.49	Satisfactory
54	0.32	-1.05	Satisfactory
55	0.78	0.19	Satisfactory
56	0.41	-0.82	Satisfactory
57	0.36	-0.95	Satisfactory

Lab	Codeine (ng/mg)	Z-score	Result
58	0.95	0.65	Satisfactory
59	2.40	4.57	Unsatisfactory
60	0.81	0.28	Satisfactory
61	0.48	-0.63	Satisfactory
62	0.52	-0.52	Satisfactory
63	1.43	1.95	Satisfactory

Average	0.75
SD	0.36
CV%	48.32
Median	0.71
Minimum	0.04
Quartile 25	0.52
Quartile 75	0.89
Maximum	2.40
Iqr	0.37

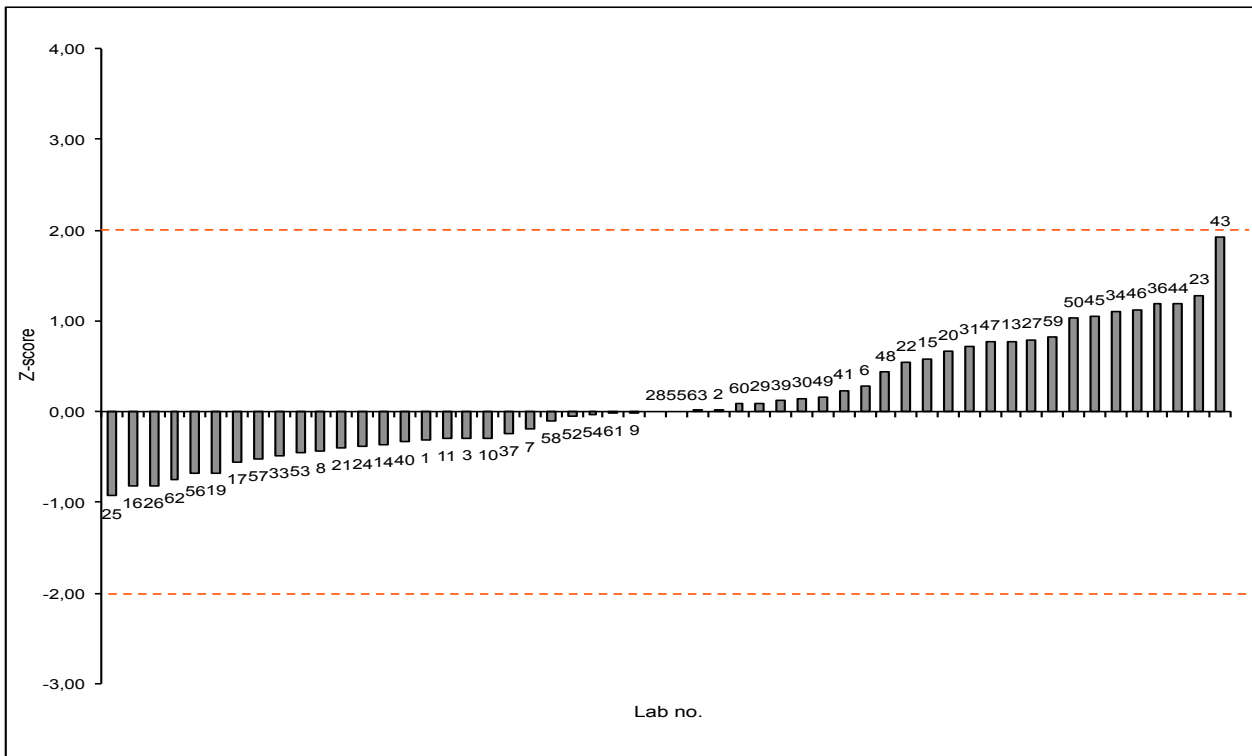
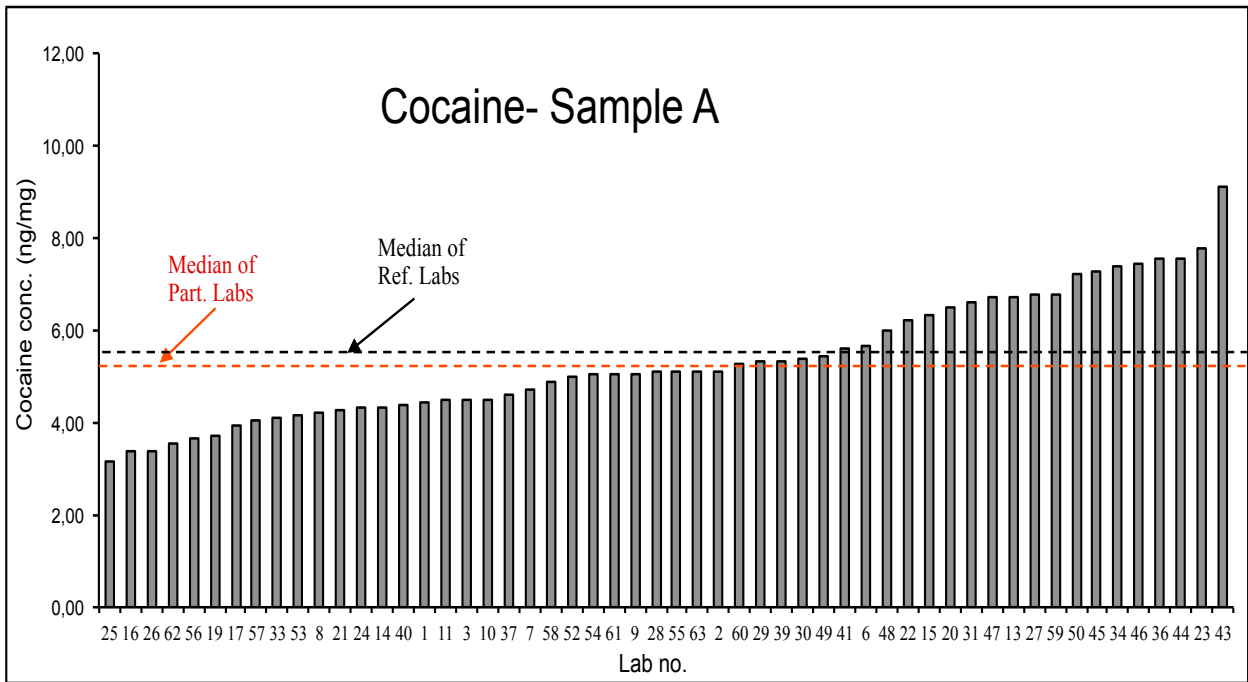


**COCAINE**

Lab	Cocaine (ng/mg)	Z-score	Result
1	4.43	-0.32	Satisfactory
2	5.13	0.01	Satisfactory
3	4.50	-0.29	Satisfactory
4	>5.0		
6	5.67	0.27	Satisfactory
7	4.70	-0.19	Satisfactory
8	4.20	-0.43	Satisfactory
9	5.07	-0.01	Satisfactory
10	4.50	-0.29	Satisfactory
11	4.48	-0.30	Satisfactory
12	>1.0		
13	6.72	0.78	Satisfactory
14	4.35	-0.36	Satisfactory
15	6.32	0.59	Satisfactory
16	3.40	-0.82	Satisfactory
17	3.95	-0.55	Satisfactory
18	>4.0		
19	3.70	-0.67	Satisfactory
20	6.48	0.66	Satisfactory
21	4.28	-0.39	Satisfactory
22	6.22	0.54	Satisfactory
23	7.77	1.28	Satisfactory
24	4.30	-0.38	Satisfactory
25	3.17	-0.93	Satisfactory
26	3.40	-0.82	Satisfactory
27	6.75	0.79	Satisfactory
28	5.10	0.00	Satisfactory
29	5.30	0.10	Satisfactory
30	5.40	0.14	Satisfactory
31	6.61	0.73	Satisfactory
33	4.10	-0.48	Satisfactory
34	7.40	1.10	Satisfactory
36	7.56	1.18	Satisfactory
37	4.61	-0.24	Satisfactory
38	P		
39	5.34	0.12	Satisfactory
40	4.40	-0.34	Satisfactory
41	5.59	0.24	Satisfactory
43	9.09	1.92	Satisfactory
44	7.57	1.19	Satisfactory
45	7.27	1.04	Satisfactory
46	7.44	1.13	Satisfactory
47	6.70	0.77	Satisfactory
48	6.00	0.43	Satisfactory
49	5.43	0.16	Satisfactory
50	7.24	1.03	Satisfactory
52	5.00	-0.05	Satisfactory
53	4.15	-0.46	Satisfactory
54	5.03	-0.03	Satisfactory
55	5.10	0.00	Satisfactory
56	3.68	-0.69	Satisfactory
57	4.03	-0.51	Satisfactory

Lab	Cocaine (ng/mg)	Z-score	Result
58	4.90	-0.10	Satisfactory
59	6.80	0.82	Satisfactory
60	5.27	0.08	Satisfactory
61	5.06	-0.02	Satisfactory
62	3.53	-0.75	Satisfactory
63	5.11	0.00	Satisfactory

Average	5.36
SD	1.34
CV%	24.96
Median	5.10
Minimum	3.17
Quartile 25	4.36
Quartile 75	6.44
Maximum	9.09
Iqr	2.08

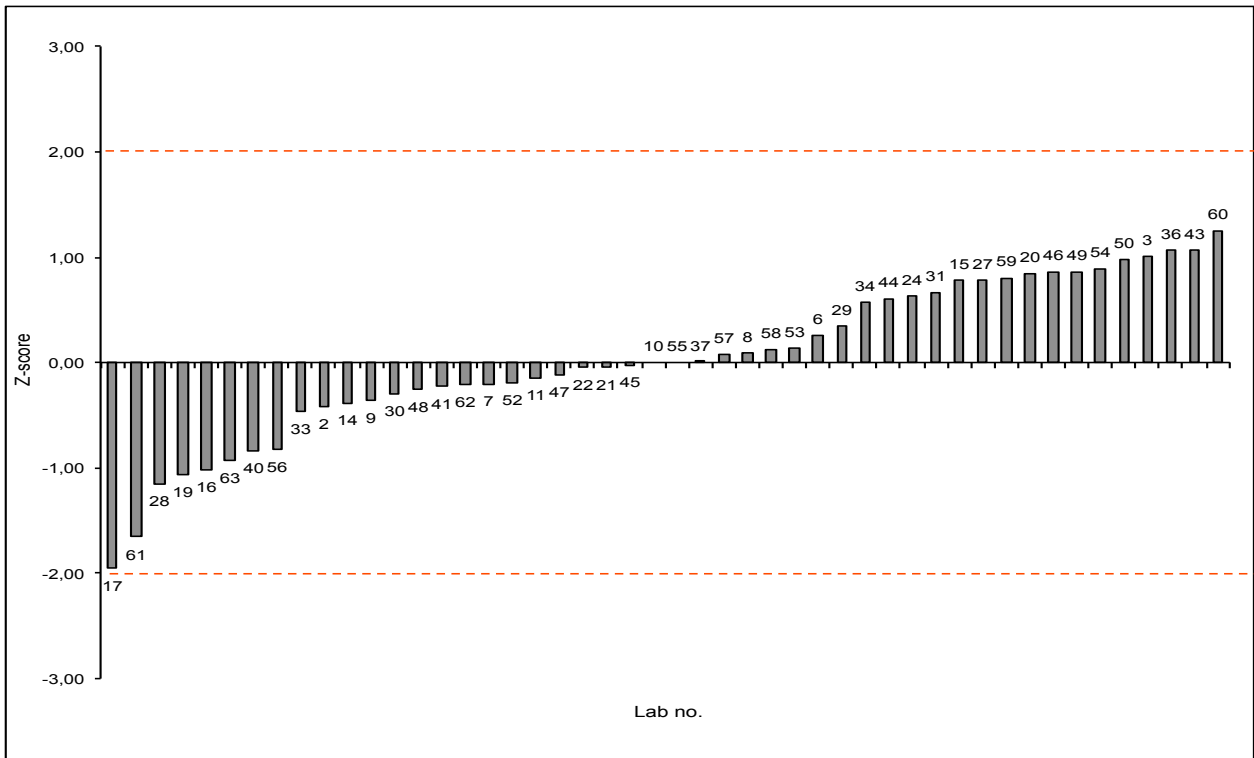
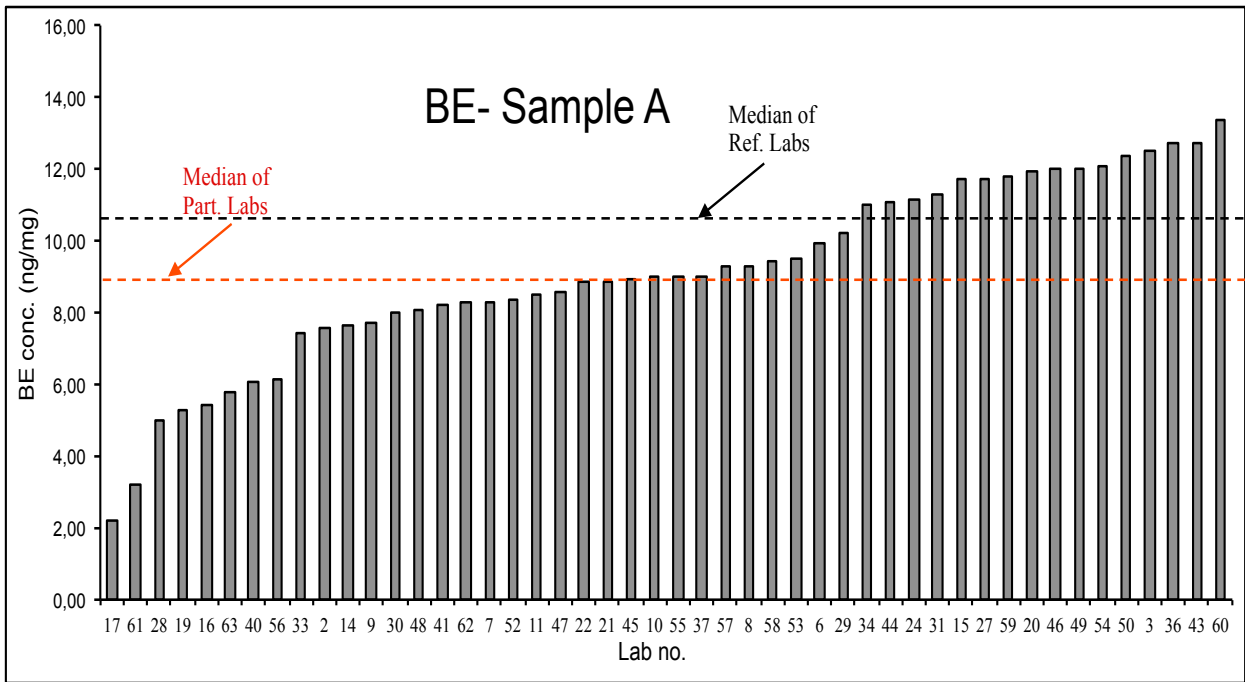


**BENZOYLECGONINE (BE)**

Lab	BE (ng/mg)	Z-score	Result
1	>5.00		
2	7.56	-0.41	Satisfactory
3	12.50	1.01	Satisfactory
4	>5.00		
6	9.91	0.26	Satisfactory
7	8.30	-0.20	Satisfactory
8	9.30	0.09	Satisfactory
9	7.75	-0.36	Satisfactory
10	9.00	0.00	Satisfactory
11	8.51	-0.14	Satisfactory
12	>1.00		
13	>1.00		
14	7.67	-0.38	Satisfactory
15	11.70	0.78	Satisfactory
16	5.46	-1.02	Satisfactory
17	2.21	-1.95	Satisfactory
18	>4.00		
19	5.30	-1.06	Satisfactory
20	11.93	0.84	Satisfactory
21	8.85	-0.04	Satisfactory
22	8.84	-0.05	Satisfactory
24	11.18	0.63	Satisfactory
25	>5.00		
26	>5.00		
27	11.70	0.78	Satisfactory
28	5.00	-1.15	Satisfactory
29	10.20	0.34	Satisfactory
30	7.98	-0.29	Satisfactory
31	11.30	0.66	Satisfactory
33	7.40	-0.46	Satisfactory
34	10.98	0.57	Satisfactory
36	12.70	1.06	Satisfactory
37	9.01	0.00	Satisfactory
38	P		
39	>5.50		
40	6.10	-0.83	Satisfactory
41	8.22	-0.22	Satisfactory
43	12.70	1.06	Satisfactory
44	11.11	0.61	Satisfactory
45	8.92	-0.02	Satisfactory
46	12.00	0.86	Satisfactory
47	8.60	-0.11	Satisfactory
48	8.10	-0.26	Satisfactory
49	12.00	0.86	Satisfactory
50	12.40	0.98	Satisfactory
52	8.35	-0.19	Satisfactory
53	9.47	0.14	Satisfactory
54	12.10	0.89	Satisfactory
55	9.00	0.00	Satisfactory
56	6.12	-0.83	Satisfactory
57	9.27	0.08	Satisfactory
58	9.44	0.13	Satisfactory

Lab	BE (ng/mg)	Z-score	Result
59	11.80	0.80	Satisfactory
60	13.35	1.25	Satisfactory
61	3.24	-1.66	Satisfactory
62	8.28	-0.21	Satisfactory
63	5.75	-0.93	Satisfactory

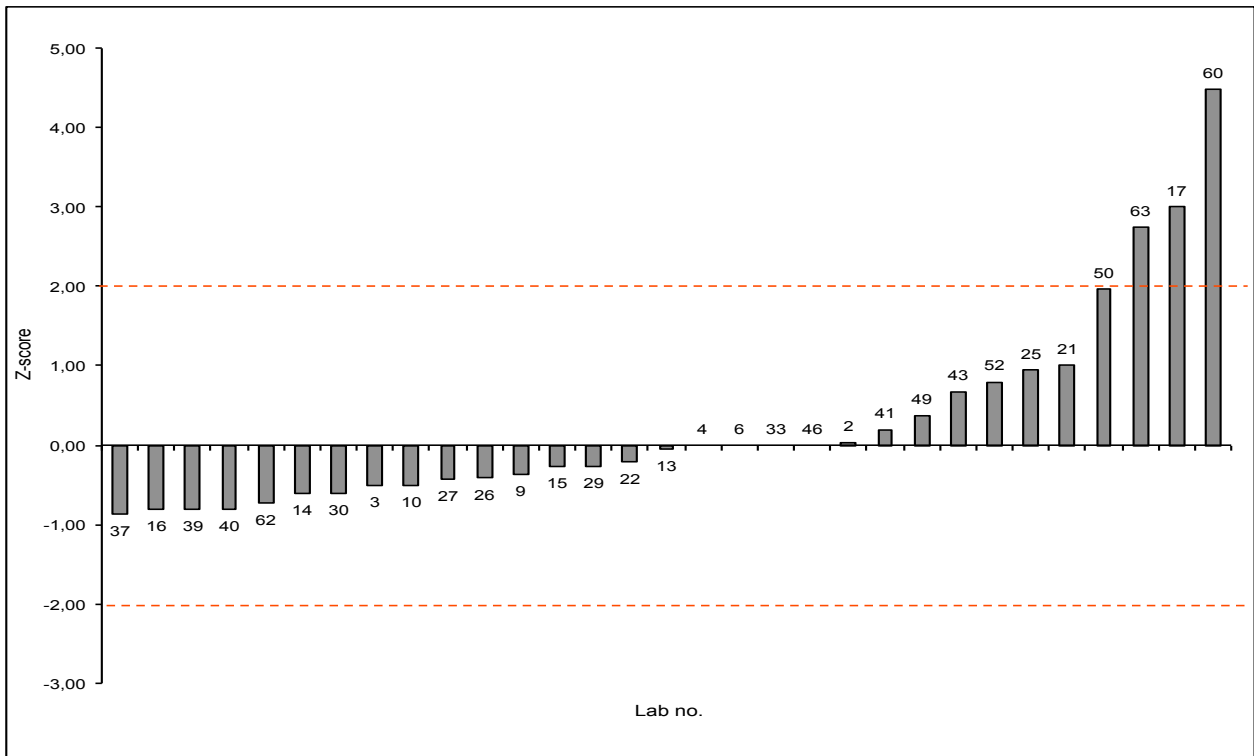
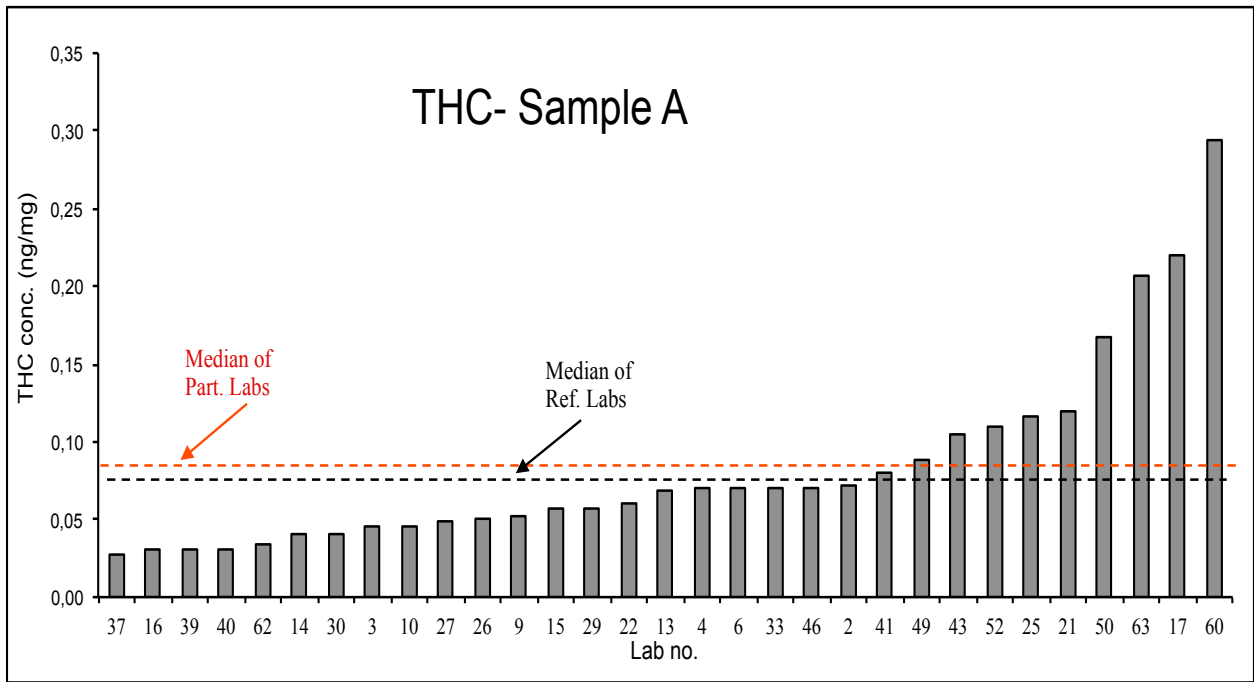
Average	9.14
SD	2.54
CV%	27.83
Median	9.00
Minimum	2.21
Quartile 25	7.92
Quartile 75	11.40
Maximum	13.35
Iqr	3.48



**$\Delta^9$ - TETRAHYDROCANNABINOL (THC)**

Lab	THC (ng/mg)	Z-score	Result
2	0.07	0.04	Satisfactory
3	0.05	-0.50	Satisfactory
4	0.07	0.00	Satisfactory
6	0.07	0.00	Satisfactory
7	<0.05		
9	0.05	-0.36	Satisfactory
10	0.05	-0.50	Satisfactory
11	<0.05		
13	0.07	-0.04	Satisfactory
14	0.04	-0.60	Satisfactory
15	0.06	-0.26	Satisfactory
16	0.03	-0.80	Satisfactory
17	0.22	3.00	Unsatisfactory
19	N		
21	0.12	1.00	Satisfactory
22	0.06	-0.20	Satisfactory
25	0.12	0.94	Satisfactory
26	0.05	-0.40	Satisfactory
27	0.05	-0.42	Satisfactory
28	<0.05		
29	0.06	-0.26	Satisfactory
30	0.04	-0.60	Satisfactory
33	0.07	0.00	Satisfactory
36	P		
37	0.03	-0.86	Satisfactory
38	N		
39	0.03	-0.80	Satisfactory
40	0.03	-0.80	Satisfactory
41	0.08	0.20	Satisfactory
43	0.10	0.68	Satisfactory
46	0.07	0.00	Satisfactory
48	N		
49	0.09	0.38	Satisfactory
50	0.17	1.96	Satisfactory
52	0.11	0.80	Satisfactory
53	N		
54	N		
56	<0.05		
57	N		
57	N		
60	0.29	4.48	Unsatisfactory
62	0.03	-0.72	Satisfactory
63	0.21	2.74	Questionable

Average	0.08
SD	0.06
CV%	73.74
Median	0.07
Minimum	0.03
Quartile 25	0.05
Quartile 75	0.10
Maximum	0.29
Iqr	0.05

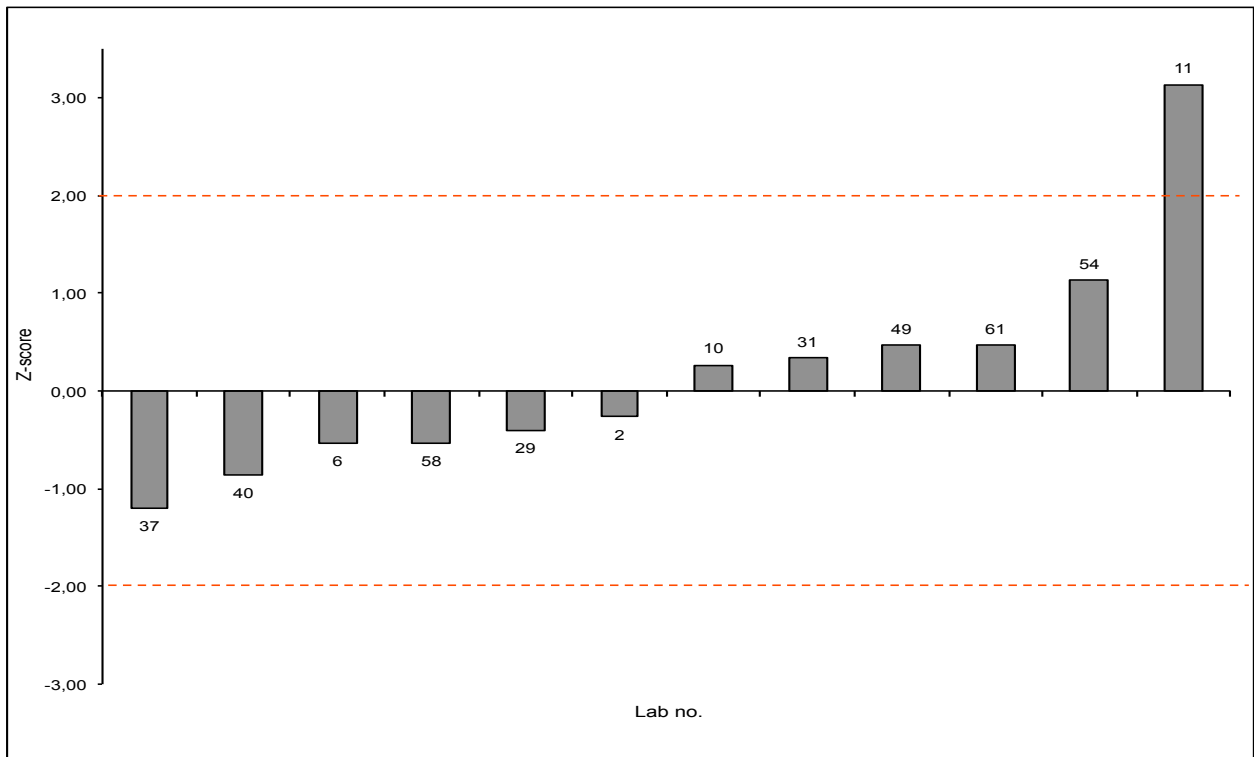
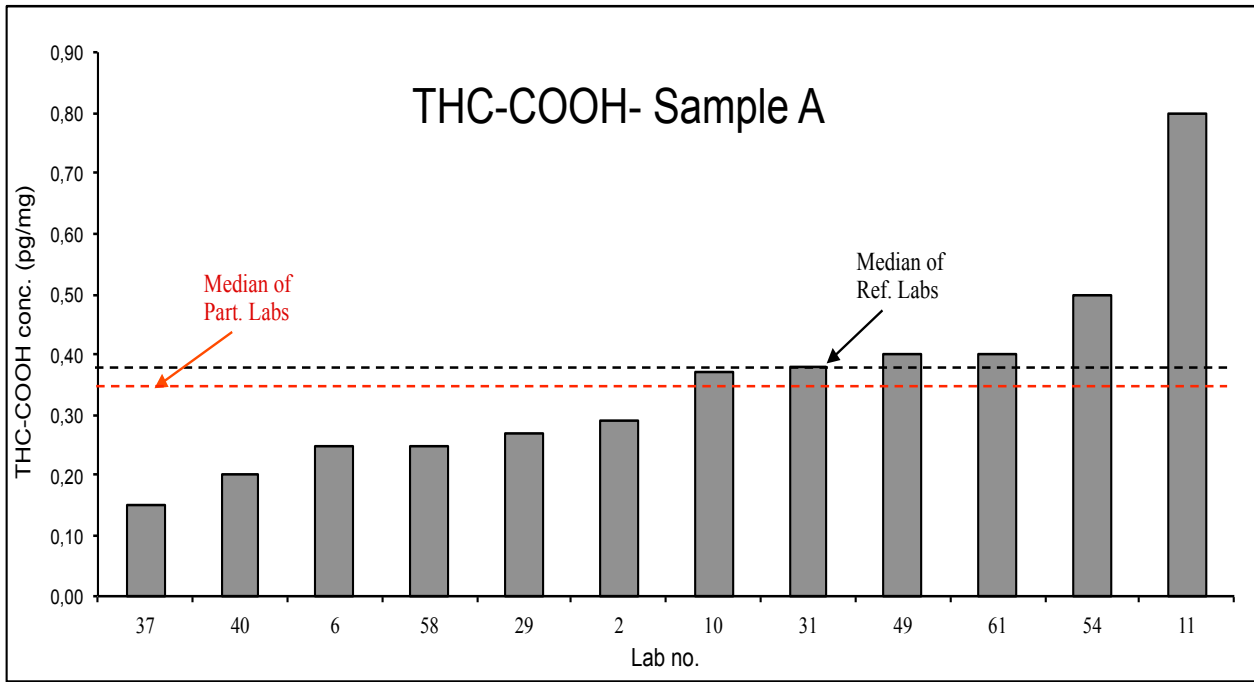




**11-nor- $\Delta^9$ -TETRAHYDROCANNABINOL-9-CARBOXYLIC ACID  
(THC-COOH)**

Lab	THC-COOH (pg/mg)	Z-score	Result
2	0.29	-0.27	Satisfactory
6	0.25	-0.53	Satisfactory
7	<1.00		
10	0.37	0.27	Satisfactory
11	0.80	3.13	Unsatisfactory
16	N		
24	N		
29	0.27	-0.40	Satisfactory
30	<0.20		
31	0.38	0.33	Satisfactory
37	0.15	-1.20	Satisfactory
38	N		
40	0.20	-0.87	Satisfactory
41	N		
49	0.40	0.47	Satisfactory
53	N		
54	0.50	1.13	Satisfactory
58	0.25	-0.53	Satisfactory
61	0.40	0.47	Satisfactory

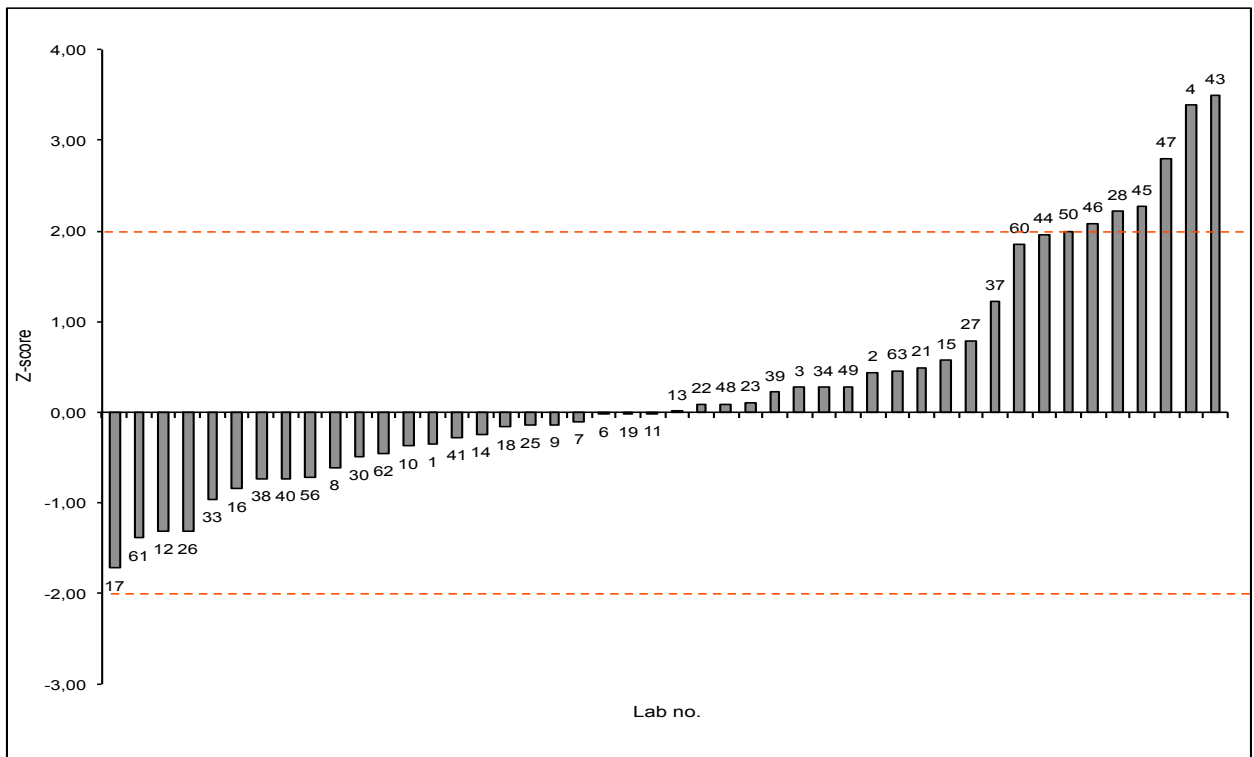
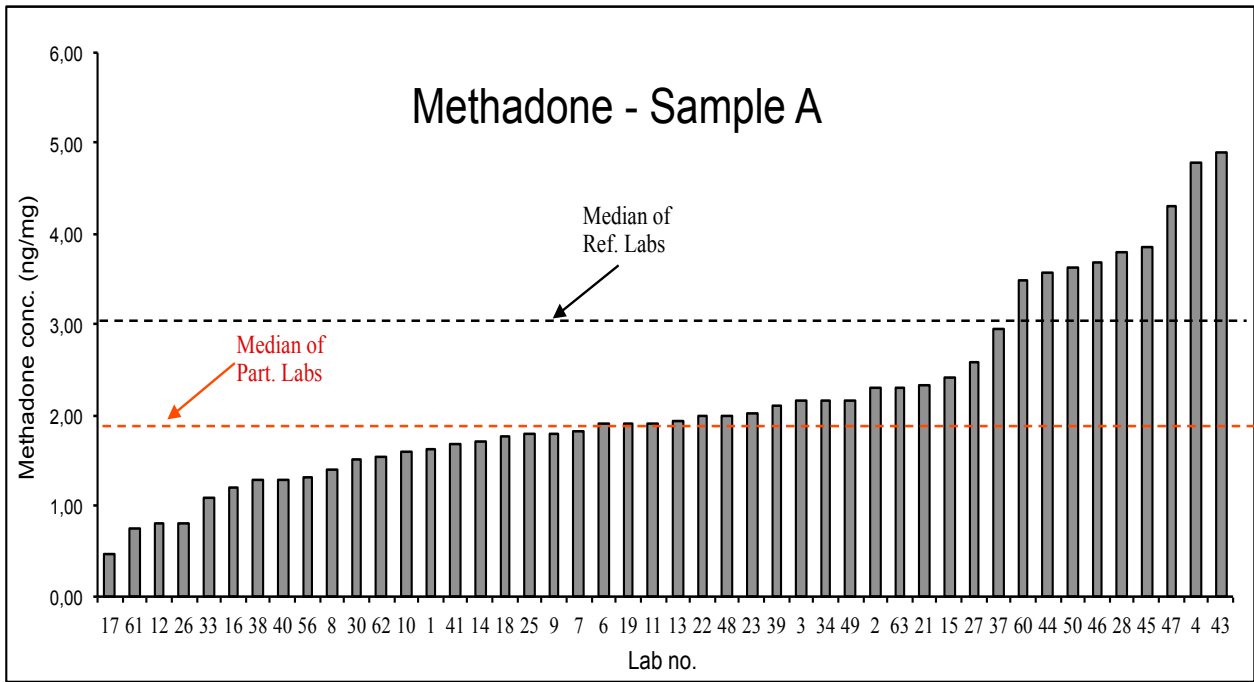
Average	0.36
SD	0.16
CV%	46.25
Median	0.33
Minimum	0.15
Quartile 25	0.25
Quartile 75	0.40
Maximum	0.80
Iqr	0.15



**METHADONE**

Lab	Methadone (ng/mg)	Z-score	Result
1	1.62	-0.35	Satisfactory
2	2.29	0.44	Satisfactory
3	2.15	0.27	Satisfactory
4	4.80	3.39	Unsatisfactory
6	1.90	-0.02	Satisfactory
7	1.83	-0.11	Satisfactory
8	1.40	-0.61	Satisfactory
9	1.81	-0.13	Satisfactory
10	1.60	-0.38	Satisfactory
11	1.91	-0.01	Satisfactory
12	0.80	-1.32	Satisfactory
13	1.93	0.01	Satisfactory
14	1.71	-0.25	Satisfactory
15	2.41	0.58	Satisfactory
16	1.20	-0.85	Satisfactory
17	0.46	-1.72	Satisfactory
18	1.78	-0.16	Satisfactory
19	1.90	-0.02	Satisfactory
21	2.34	0.49	Satisfactory
22	1.99	0.08	Satisfactory
23	2.01	0.11	Satisfactory
25	1.80	-0.14	Satisfactory
26	0.80	-1.32	Satisfactory
27	2.59	0.79	Satisfactory
28	3.80	2.21	Questionable
30	1.50	-0.49	Satisfactory
33	1.10	-0.96	Satisfactory
34	2.15	0.27	Satisfactory
37	2.96	1.22	Satisfactory
38	1.30	-0.73	Satisfactory
39	2.11	0.22	Satisfactory
40	1.30	-0.73	Satisfactory
41	1.68	-0.28	Satisfactory
43	4.89	3.49	Unsatisfactory
44	3.58	1.96	Satisfactory
45	3.85	2.27	Questionable
46	3.69	2.08	Questionable
47	4.30	2.80	Questionable
48	2.00	0.09	Satisfactory
49	2.16	0.28	Satisfactory
50	3.62	2.00	Questionable
56	1.31	-0.72	Satisfactory
59	P		
60	3.49	1.85	Satisfactory
61	0.74	-1.39	Satisfactory
62	1.53	-0.46	Satisfactory
63	2.31	0.46	Satisfactory

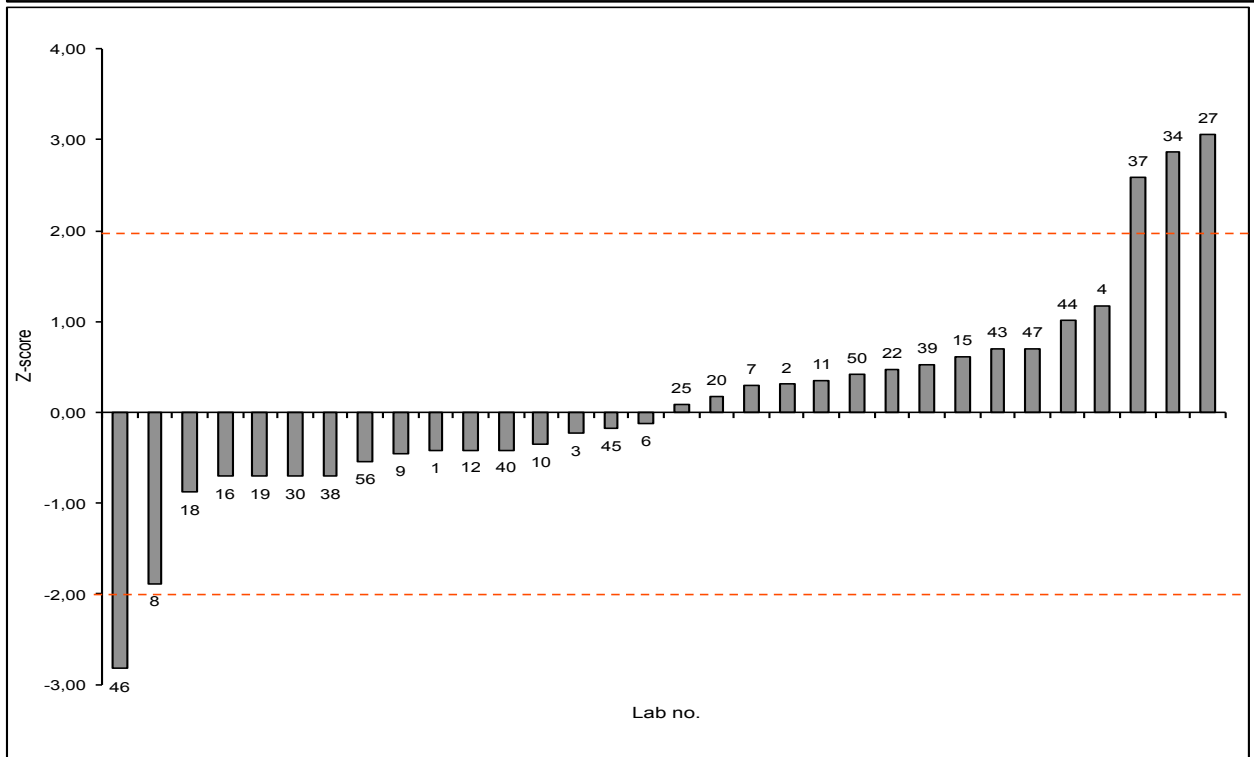
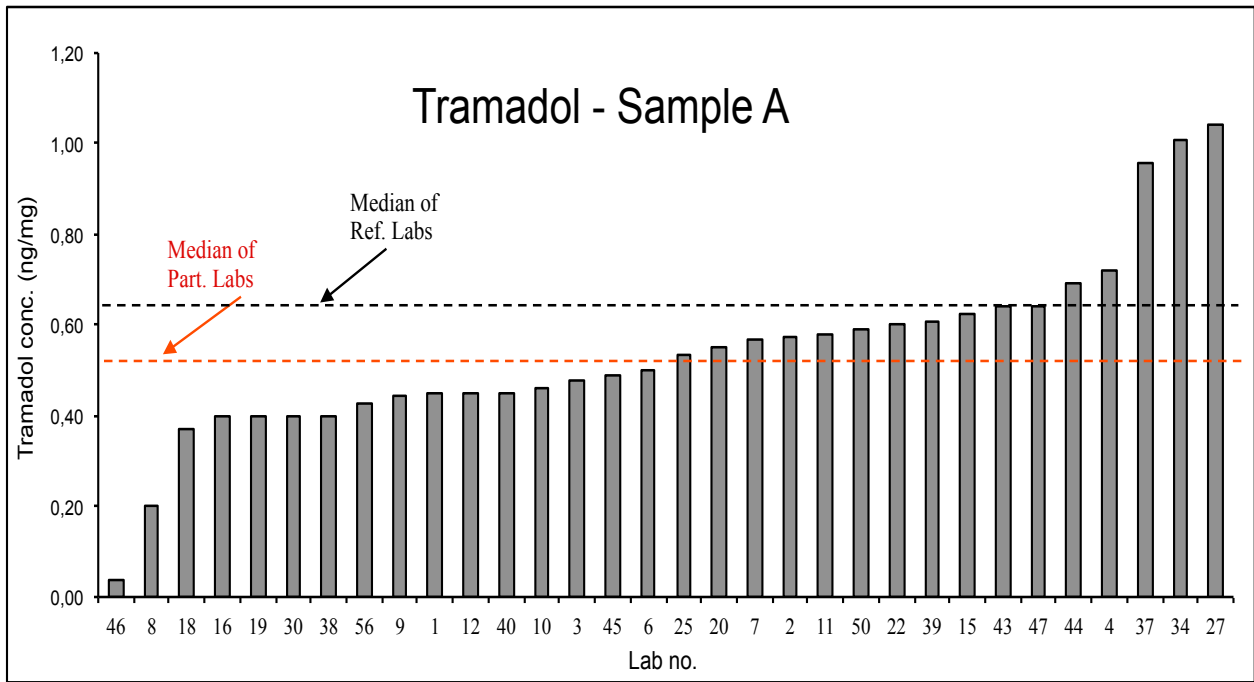
Average	2.18
SD	1.04
CV%	47.72
Median	1.92
Minimum	0.46
Quartile 25	1.55
Quartile 75	2.39
Maximum	4.89
Iqr	0.85



**TRAMADOL**

Lab	Tramadol (ng/mg)	Z-score	Result
1	0.45	-0.42	Satisfactory
2	0.57	0.31	Satisfactory
3	0.48	-0.24	Satisfactory
4	0.72	1.18	Satisfactory
6	0.50	-0.12	Satisfactory
7	0.57	0.29	Satisfactory
8	0.20	-1.88	Satisfactory
9	0.44	-0.45	Satisfactory
10	0.46	-0.35	Satisfactory
11	0.58	0.35	Satisfactory
12	0.45	-0.41	Satisfactory
15	0.63	0.62	Satisfactory
16	0.40	-0.71	Satisfactory
18	0.37	-0.88	Satisfactory
19	0.40	-0.71	Satisfactory
20	0.55	0.18	Satisfactory
22	0.60	0.47	Satisfactory
25	0.54	0.09	Satisfactory
26	P		
27	1.04	3.06	Unsatisfactory
30	0.40	-0.71	Satisfactory
34	1.01	2.86	Questionable
37	0.96	2.59	Questionable
38	0.40	-0.71	Satisfactory
39	0.61	0.53	Satisfactory
40	0.45	-0.41	Satisfactory
43	0.64	0.71	Satisfactory
44	0.69	1.01	Satisfactory
45	0.49	-0.18	Satisfactory
46	0.04	-2.82	Questionable
47	0.64	0.71	Satisfactory
50	0.59	0.41	Satisfactory
56	0.43	-0.54	Satisfactory
59	P		
60	N		

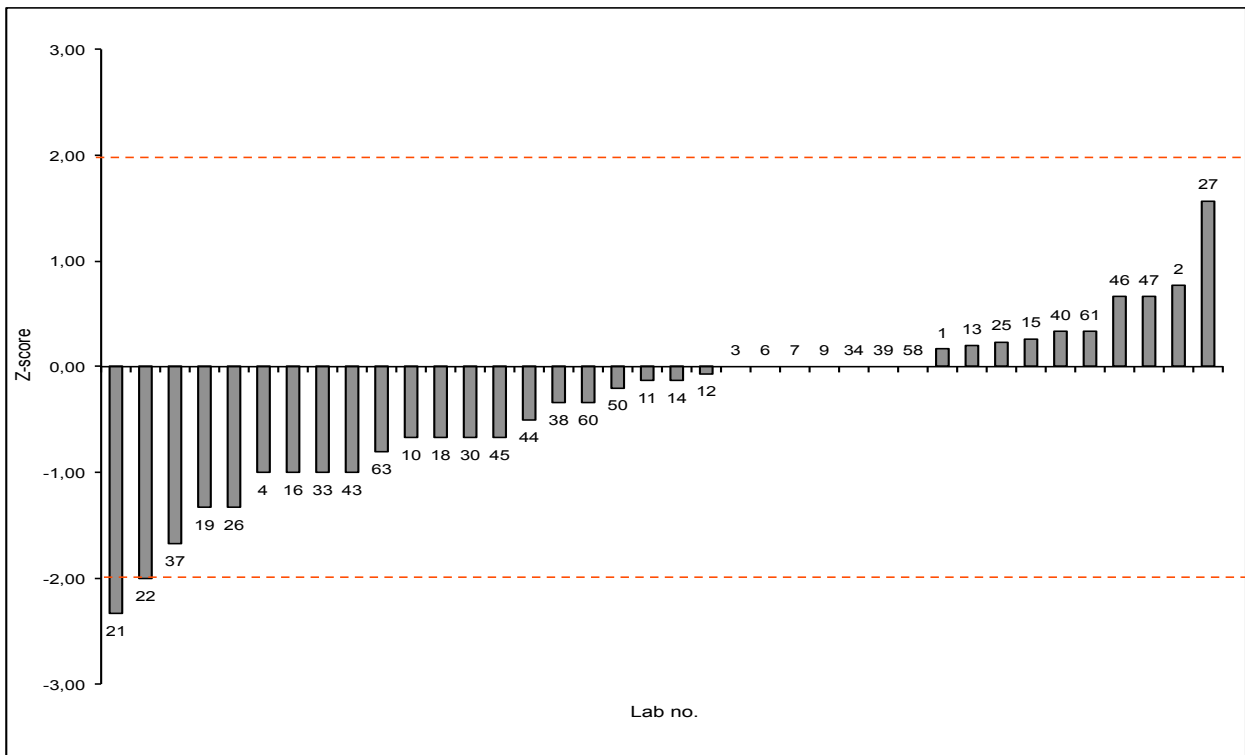
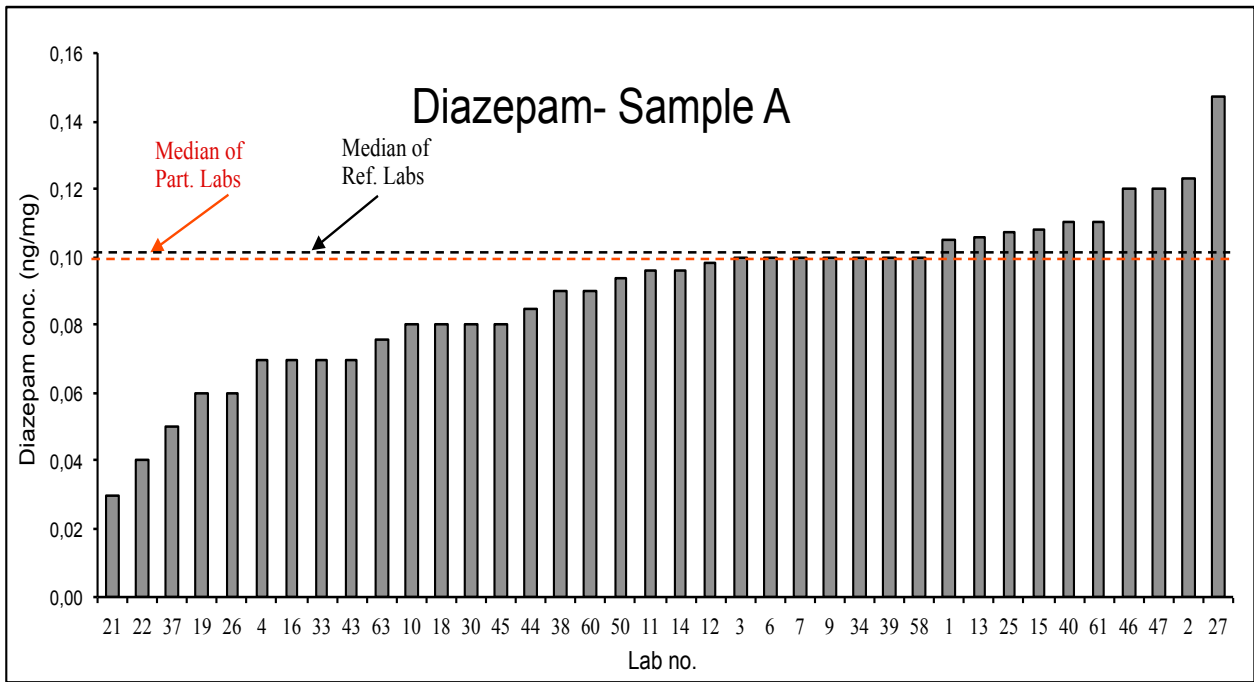
Average	0.54
SD	0.20
CV%	36.94
Median	0.52
Minimum	0.04
Quartile 25	0.44
Quartile 75	0.61
Maximum	1.04
Iqr	0.17



**DIAZEPAM**

Lab	Diazepam (ng/mg)	Z-score	Result
1	0.11	0.17	Satisfactory
2	0.12	0.77	Satisfactory
3	0.10	0.00	Satisfactory
4	0.07	-1.00	Satisfactory
6	0.10	0.00	Satisfactory
7	0.10	0.00	Satisfactory
9	0.10	0.00	Satisfactory
10	0.08	-0.67	Satisfactory
11	0.10	-0.13	Satisfactory
12	0.10	-0.07	Satisfactory
13	0.11	0.20	Satisfactory
14	0.10	-0.13	Satisfactory
15	0.11	0.27	Satisfactory
16	0.07	-1.00	Satisfactory
18	0.08	-0.67	Satisfactory
19	0.06	-1.33	Satisfactory
21	0.03	-2.33	Questionable
22	0.04	-2.00	Questionable
25	0.11	0.23	Satisfactory
26	0.06	-1.33	Satisfactory
27	0.15	1.57	Satisfactory
30	0.08	-0.67	Satisfactory
33	0.07	-1.00	Satisfactory
34	0.10	0.00	Satisfactory
37	0.05	-1.67	Satisfactory
38	0.09	-0.33	Satisfactory
39	0.10	0.00	Satisfactory
40	0.11	0.33	Satisfactory
43	0.07	-1.00	Satisfactory
44	0.09	-0.50	Satisfactory
45	0.08	-0.67	Satisfactory
46	0.12	0.67	Satisfactory
47	0.12	0.67	Satisfactory
50	0.09	-0.20	Satisfactory
52	N		
56	<0.125		
58	0.10	0.00	Satisfactory
59	N		
60	0.09	-0.33	Satisfactory
61	0.11	0.33	Satisfactory
63	0.08	-0.80	Satisfactory

Average	0.09
SD	0.02
CV%	25.87
Median	0.10
Minimum	0.03
Quartile 25	0.08
Quartile 75	0.10
Maximum	0.15
Iqr	0.03

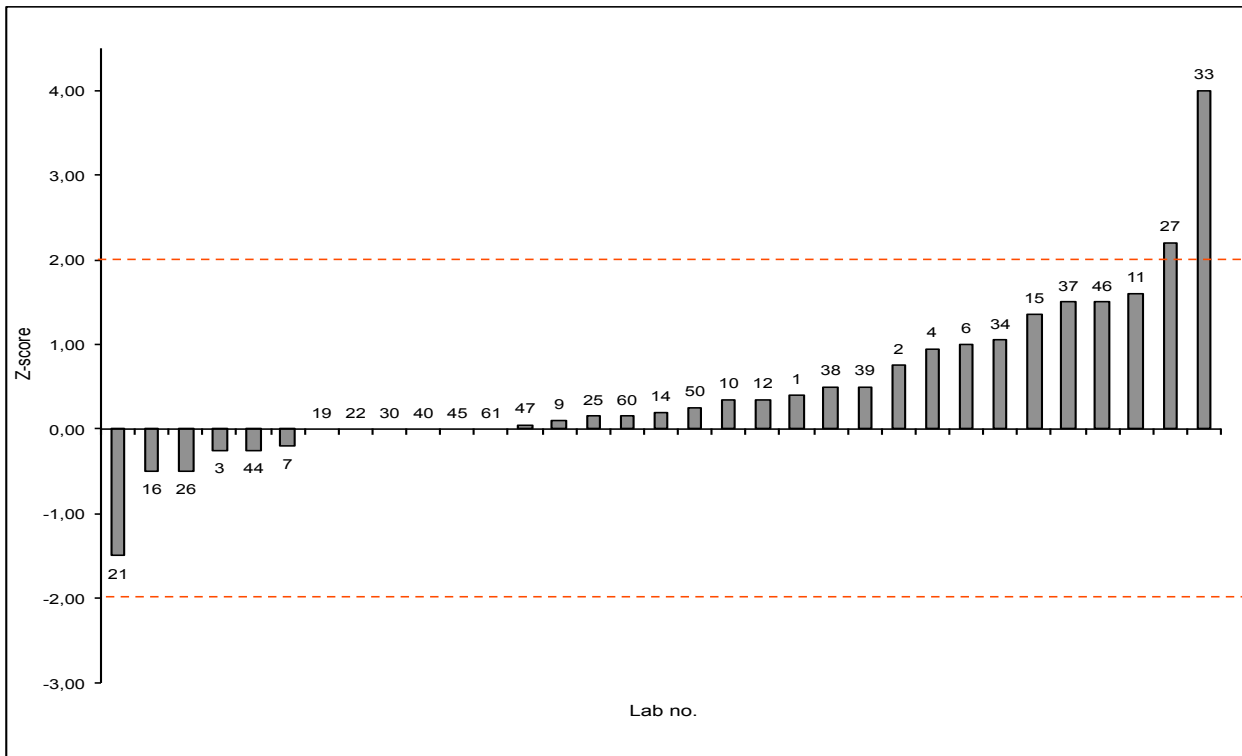
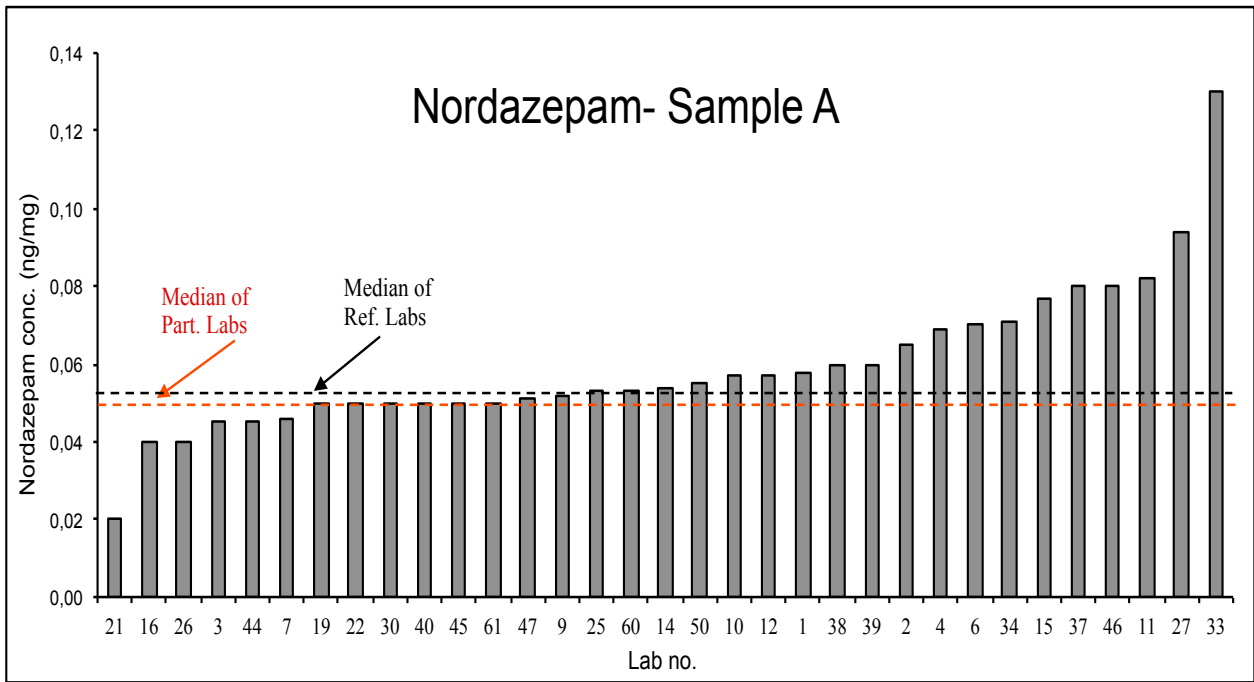




**NORDAZEPAM**

Lab	Nordazepam (ng/mg)	Z-score	Result
1	0.06	0.40	Satisfactory
2	0.07	0.75	Satisfactory
3	0.05	-0.25	Satisfactory
4	0.07	0.95	Satisfactory
6	0.07	1.00	Satisfactory
7	0.05	-0.20	Satisfactory
9	0.05	0.10	Satisfactory
10	0.06	0.35	Satisfactory
11	0.08	1.60	Satisfactory
12	0.06	0.35	Satisfactory
13	N		
14	0.05	0.20	Satisfactory
15	0.08	1.35	Satisfactory
16	0.04	-0.50	Satisfactory
18	N		
19	0.05	0.00	Satisfactory
21	0.02	-1.50	Satisfactory
22	0.05	0.00	Satisfactory
25	0.05	0.15	Satisfactory
26	0.04	-0.50	Satisfactory
27	0.09	2.20	Questionable
30	0.05	0.00	Satisfactory
33	0.13	4.00	Unsatisfactory
34	0.07	1.05	Satisfactory
37	0.08	1.50	Satisfactory
38	0.06	0.50	Satisfactory
39	0.06	0.50	Satisfactory
40	0.05	0.00	Satisfactory
43	P		
44	0.05	-0.25	Satisfactory
45	0.05	0.00	Satisfactory
46	0.08	1.50	Satisfactory
47	0.05	0.05	Satisfactory
50	0.06	0.25	Satisfactory
52	N		
56	<0.125		
58	N		
59	N		
60	0.05	0.15	Satisfactory
61	0.05	0.00	Satisfactory
63	N		

Average	0.06
SD	0.02
CV%	31.93
Median	0.05
Minimum	0.02
Quartile 25	0.05
Quartile 75	0.07
Maximum	0.13
Iqr	0.02





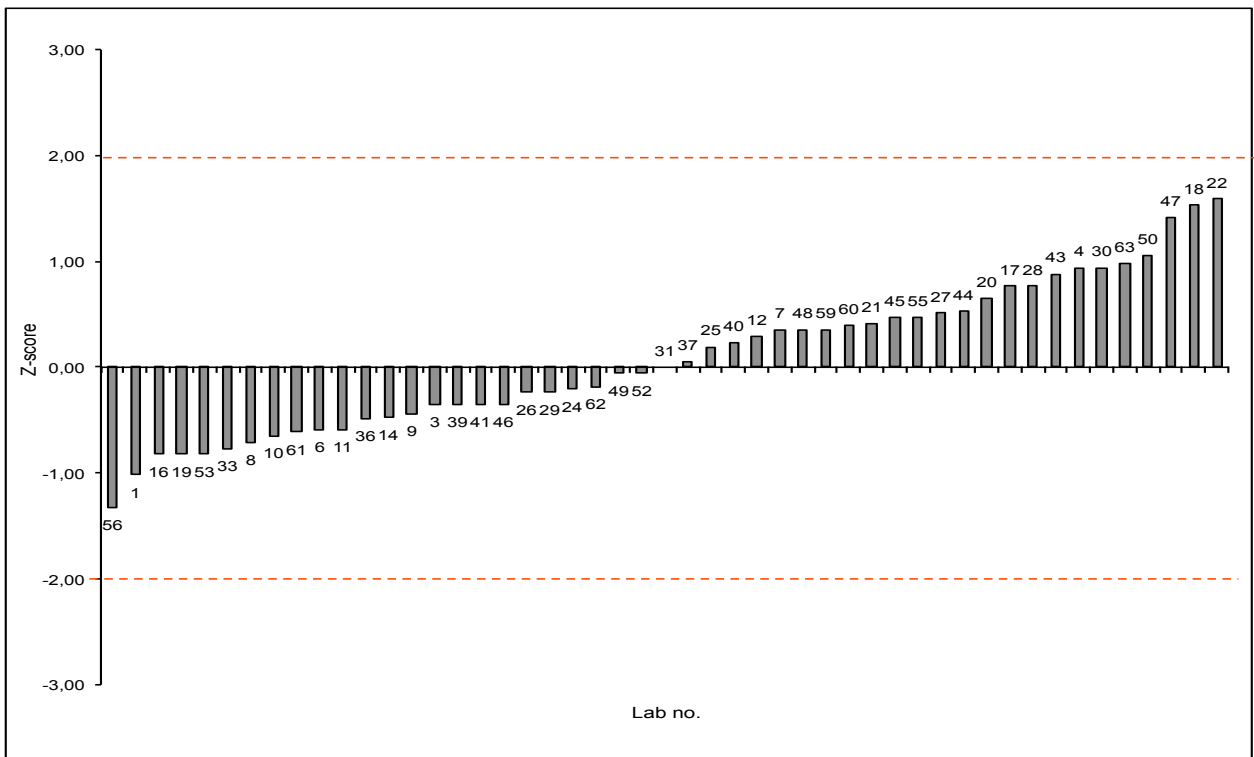
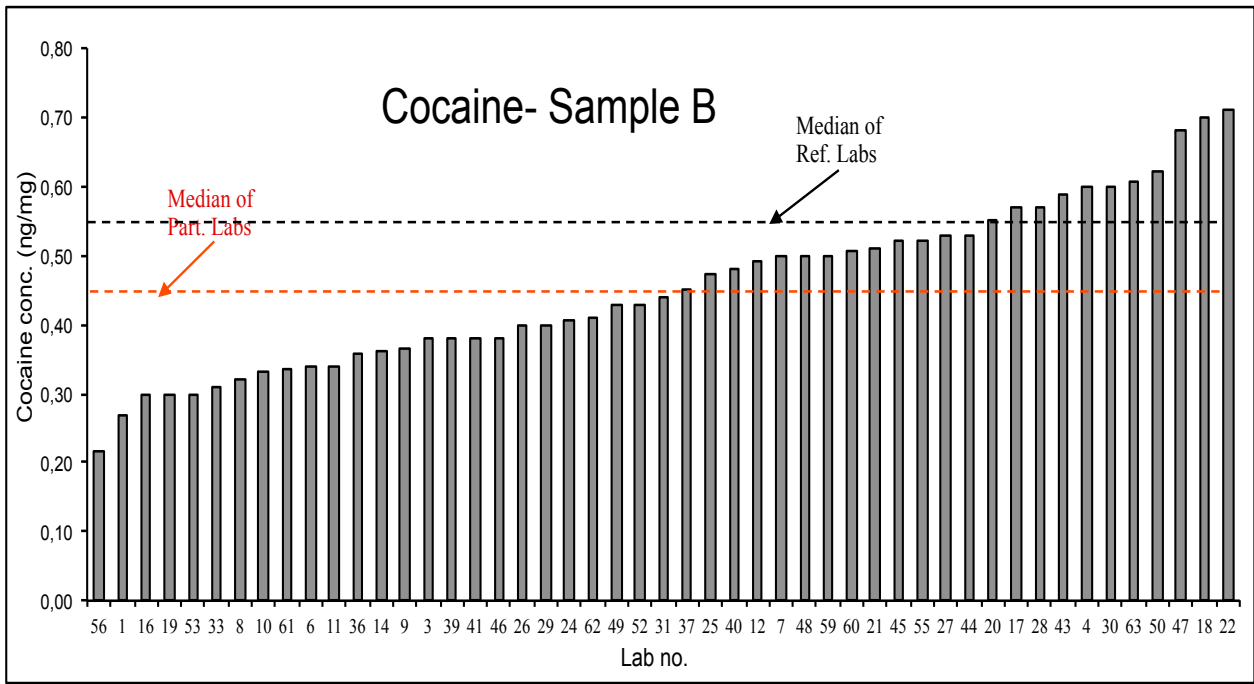
**SAMPLE B**

**COCAINE**

Lab	Cocaine (ng/mg)	Z-score	Result
1	0.27	-1.02	Satisfactory
2	N		
3	0.38	-0.35	Satisfactory
4	0.60	0.94	Satisfactory
6	0.34	-0.59	Satisfactory
7	0.50	0.35	Satisfactory
8	0.32	-0.71	Satisfactory
9	0.37	-0.44	Satisfactory
10	0.33	-0.65	Satisfactory
11	0.34	-0.59	Satisfactory
12	0.49	0.29	Satisfactory
13	N		
14	0.36	-0.47	Satisfactory
15	N		
16	0.30	-0.82	Satisfactory
17	0.57	0.76	Satisfactory
18	0.70	1.53	Satisfactory
19	0.30	-0.82	Satisfactory
20	0.55	0.65	Satisfactory
21	0.51	0.41	Satisfactory
22	0.71	1.59	Satisfactory
23	N		
24	0.41	-0.21	Satisfactory
25	0.47	0.19	Satisfactory
26	0.40	-0.24	Satisfactory
27	0.53	0.51	Satisfactory
28	0.57	0.76	Satisfactory
29	0.40	-0.24	Satisfactory
30	0.60	0.94	Satisfactory
31	0.44	0.00	Satisfactory
33	0.31	-0.76	Satisfactory
34	N		
36	0.36	-0.48	Satisfactory
37	0.45	0.06	Satisfactory
38	N		
39	0.38	-0.35	Satisfactory
40	0.48	0.24	Satisfactory
41	0.38	-0.35	Satisfactory
43	0.59	0.88	Satisfactory
44	0.53	0.53	Satisfactory
45	0.52	0.47	Satisfactory
46	0.38	-0.35	Satisfactory
47	0.68	1.41	Satisfactory
48	0.50	0.35	Satisfactory
49	0.43	-0.06	Satisfactory
50	0.62	1.06	Satisfactory
52	0.43	-0.06	Satisfactory
53	0.30	-0.82	Satisfactory
54	N		
55	0.52	0.47	Satisfactory
56	0.22	-1.32	Satisfactory
57	N		

Lab	Cocaine (ng/mg)	Z-score	Result
58	N		
59	0.50	0.35	Satisfactory
60	0.51	0.39	Satisfactory
61	0.34	-0.61	Satisfactory
62	0.41	-0.18	Satisfactory
63	0.61	0.98	Satisfactory

Average	0.45
SD	0.12
CV%	25.95
Median	0.44
Minimum	0.22
Quartile 25	0.36
Quartile 75	0.53
Maximum	0.71
Iqr	0.17

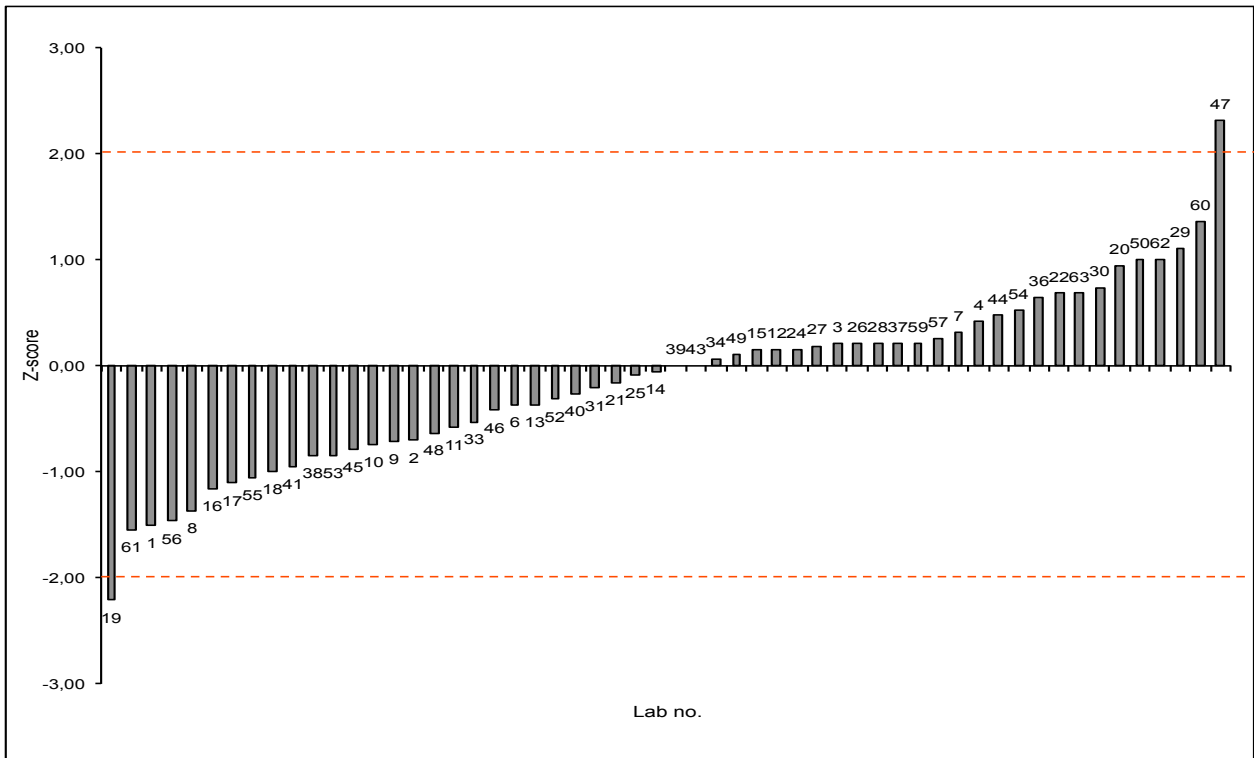
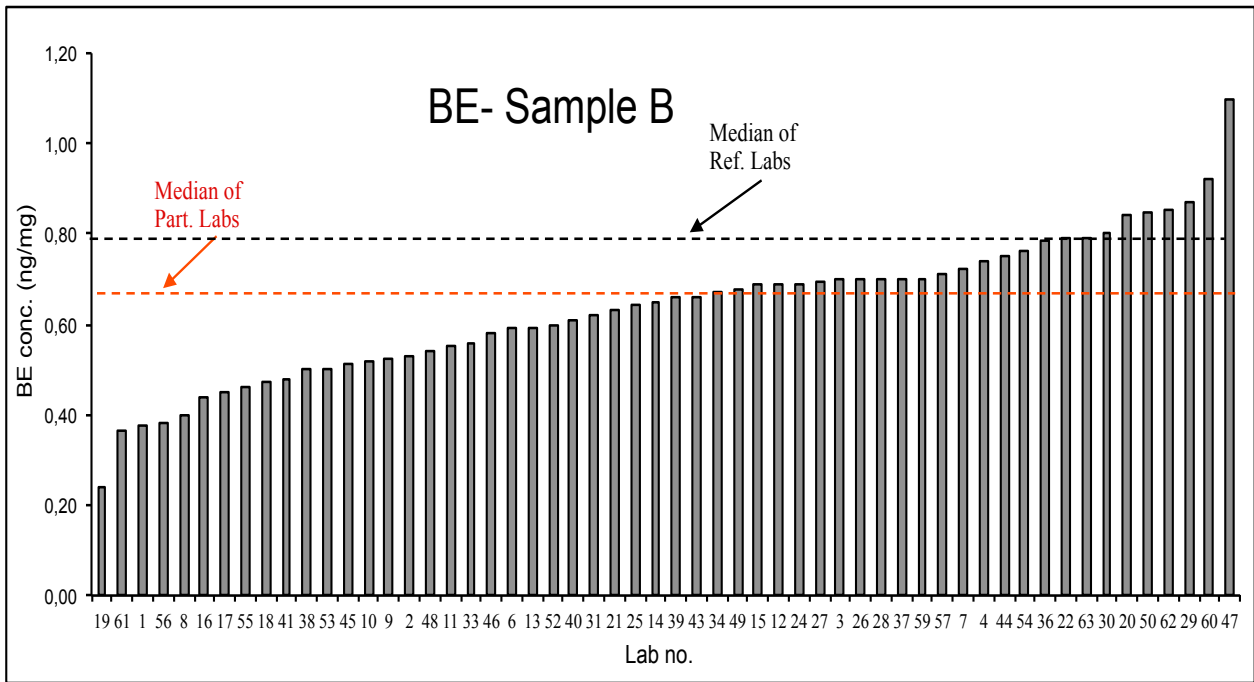


**BENZOYLECGONINE (BE)**

Lab	BE (ng/mg)	Z-score	Result
1	0.37	-1.51	Satisfactory
2	0.53	-0.70	Satisfactory
3	0.70	0.21	Satisfactory
4	0.74	0.42	Satisfactory
6	0.59	-0.37	Satisfactory
7	0.72	0.32	Satisfactory
8	0.40	-1.37	Satisfactory
9	0.53	-0.71	Satisfactory
10	0.52	-0.74	Satisfactory
11	0.55	-0.58	Satisfactory
12	0.69	0.16	Satisfactory
13	0.59	-0.37	Satisfactory
14	0.65	-0.05	Satisfactory
15	0.69	0.15	Satisfactory
16	0.44	-1.16	Satisfactory
17	0.45	-1.11	Satisfactory
18	0.47	-1.00	Satisfactory
19	0.24	-2.21	Questionable
20	0.84	0.95	Satisfactory
21	0.63	-0.16	Satisfactory
22	0.79	0.68	Satisfactory
24	0.69	0.16	Satisfactory
25	0.64	-0.09	Satisfactory
26	0.70	0.21	Satisfactory
27	0.70	0.19	Satisfactory
28	0.70	0.21	Satisfactory
29	0.87	1.11	Satisfactory
30	0.80	0.74	Satisfactory
31	0.62	-0.21	Satisfactory
33	0.56	-0.53	Satisfactory
34	0.67	0.07	Satisfactory
36	0.78	0.65	Satisfactory
37	0.70	0.21	Satisfactory
38	0.50	-0.84	Satisfactory
39	0.66	0.00	Satisfactory
40	0.61	-0.26	Satisfactory
41	0.48	-0.95	Satisfactory
43	0.66	0.00	Satisfactory
44	0.75	0.47	Satisfactory
45	0.51	-0.79	Satisfactory
46	0.58	-0.42	Satisfactory
47	1.10	2.32	Questionable
48	0.54	-0.63	Satisfactory
49	0.68	0.11	Satisfactory
50	0.85	1.00	Satisfactory
52	0.60	-0.32	Satisfactory
53	0.50	-0.84	Satisfactory
54	0.76	0.53	Satisfactory
55	0.46	-1.05	Satisfactory
56	0.38	-1.46	Satisfactory
57	0.71	0.26	Satisfactory
58	N		

Lab	BE (ng/mg)	Z-score	Result
59	0.70	0.21	Satisfactory
60	0.92	1.36	Satisfactory
61	0.37	-1.54	Satisfactory
62	0.85	1.01	Satisfactory
63	0.79	0.68	Satisfactory

Average	0.63
SD	0.16
CV%	24.62
Median	0.66
Minimum	0.24
Quartile 25	0.52
Quartile 75	0.71
Maximum	1.10
Iqr	0.19





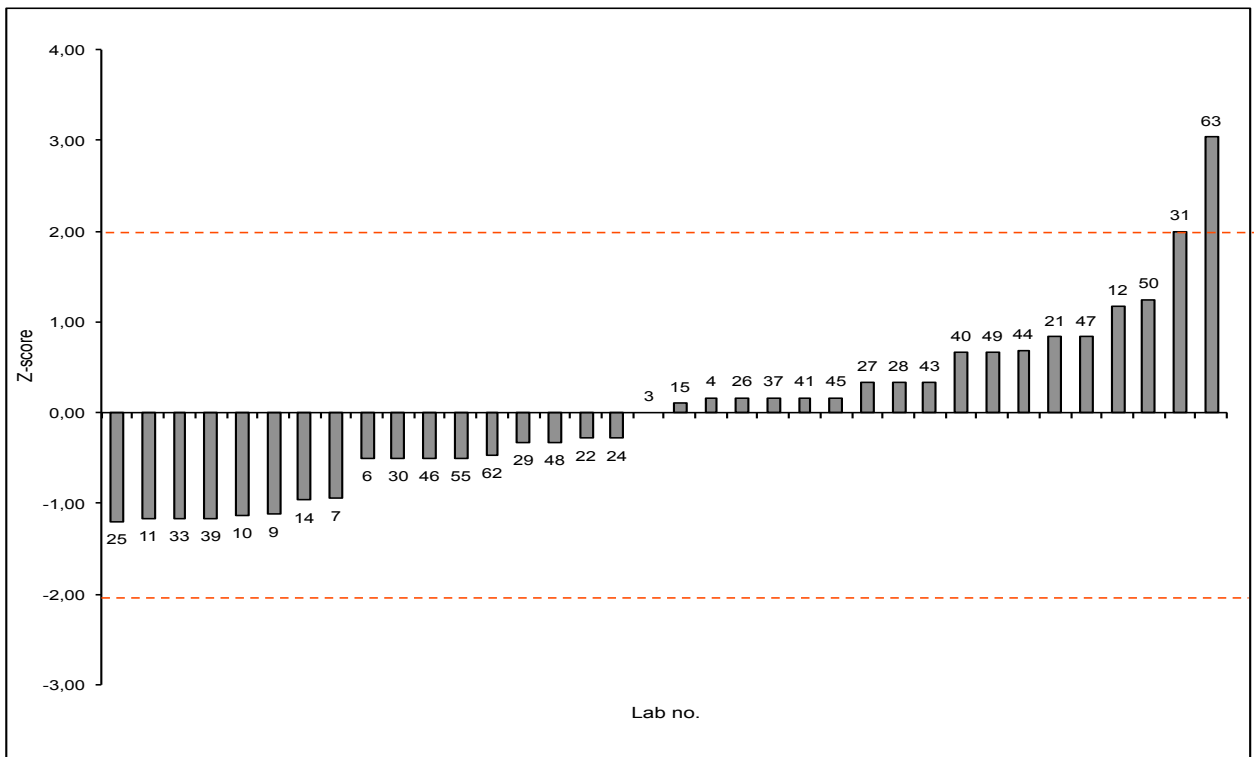
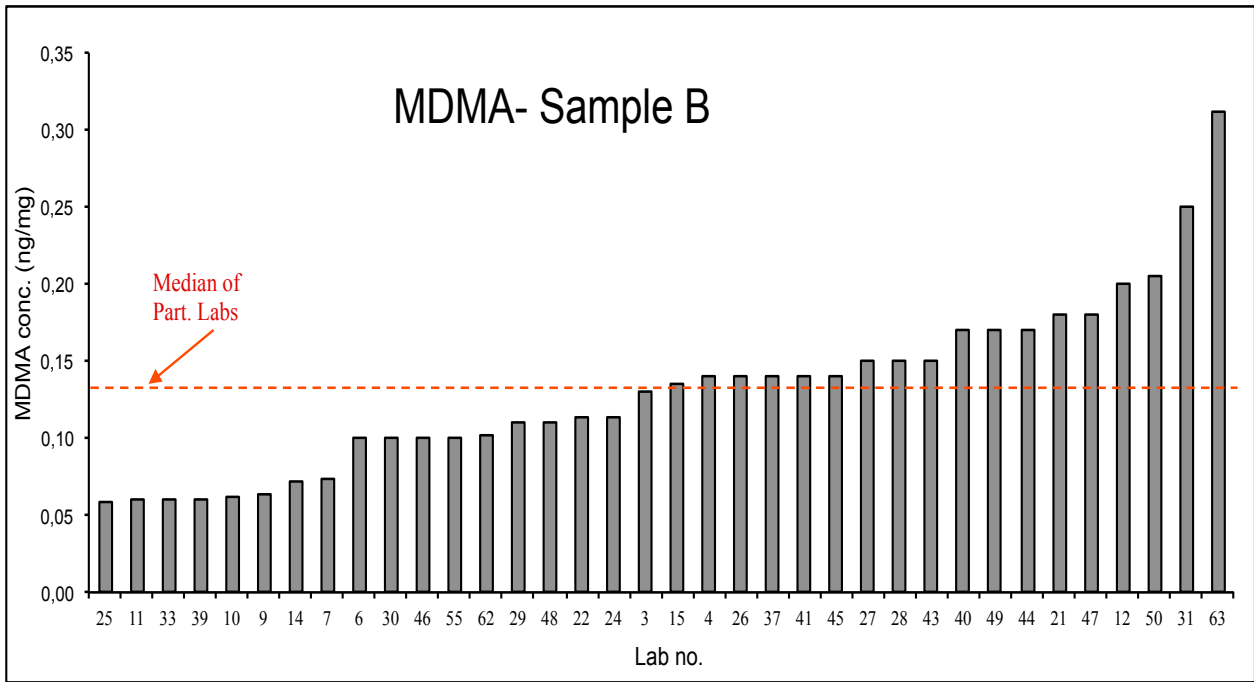
**3.4-METHYLENDIOXYMETHAMPHETAMINE (MDMA)**

Lab	MDMA (ng/mg)	Z-score	Result
1	N		
2	N		
3	0.13	0.00	Satisfactory
4	0.14	0.17	Satisfactory
6	0.10	-0.50	Satisfactory
7	0.07	-0.95	Satisfactory
9	0.06	-1.12	Satisfactory
10	0.06	-1.13	Satisfactory
11	0.06	-1.17	Satisfactory
12	0.20	1.17	Satisfactory
13	N		
14	0.07	-0.97	Satisfactory
15	0.14	0.10	Satisfactory
16	N		
17	N		
18	N		
19	N		
21	0.18	0.83	Satisfactory
22	0.11	-0.28	Satisfactory
23	N		
24	0.11	-0.28	Satisfactory
25	0.06	-1.20	Satisfactory
26	0.14	0.17	Satisfactory
27	0.15	0.33	Satisfactory
28	0.15	0.33	Satisfactory
29	0.11	-0.33	Satisfactory
30	0.10	-0.50	Satisfactory
31	0.25	2.00	Questionable
33	0.06	-1.17	Satisfactory
34	N		
36	P		
37	0.14	0.17	Satisfactory
38	N		
39	0.06	-1.17	Satisfactory
40	0.17	0.67	Satisfactory
41	0.14	0.17	Satisfactory
43	0.15	0.33	Satisfactory
44	0.17	0.68	Satisfactory
45	0.14	0.17	Satisfactory
46	0.10	-0.50	Satisfactory
47	0.18	0.83	Satisfactory
48	0.11	-0.33	Satisfactory
49	0.17	0.67	Satisfactory
50	0.21	1.25	Satisfactory
52	N		
53	N		
54	N		
55	0.10	-0.50	Satisfactory
56	<0.2		
57	N		
58	N		
59	N		

Lab	MDMA (ng/mg)	Z-score	Result
60	N		
61	N		
62	0.10	-0.47	Satisfactory
63	0.31	3.03	Unsatisfactory

Average	0.13
SD	0.06
CV%	42.44
Median	0.13
Minimum	0.06
Quartile 25	0.10
Quartile 75	0.16
Maximum	0.31
Iqr	0.06

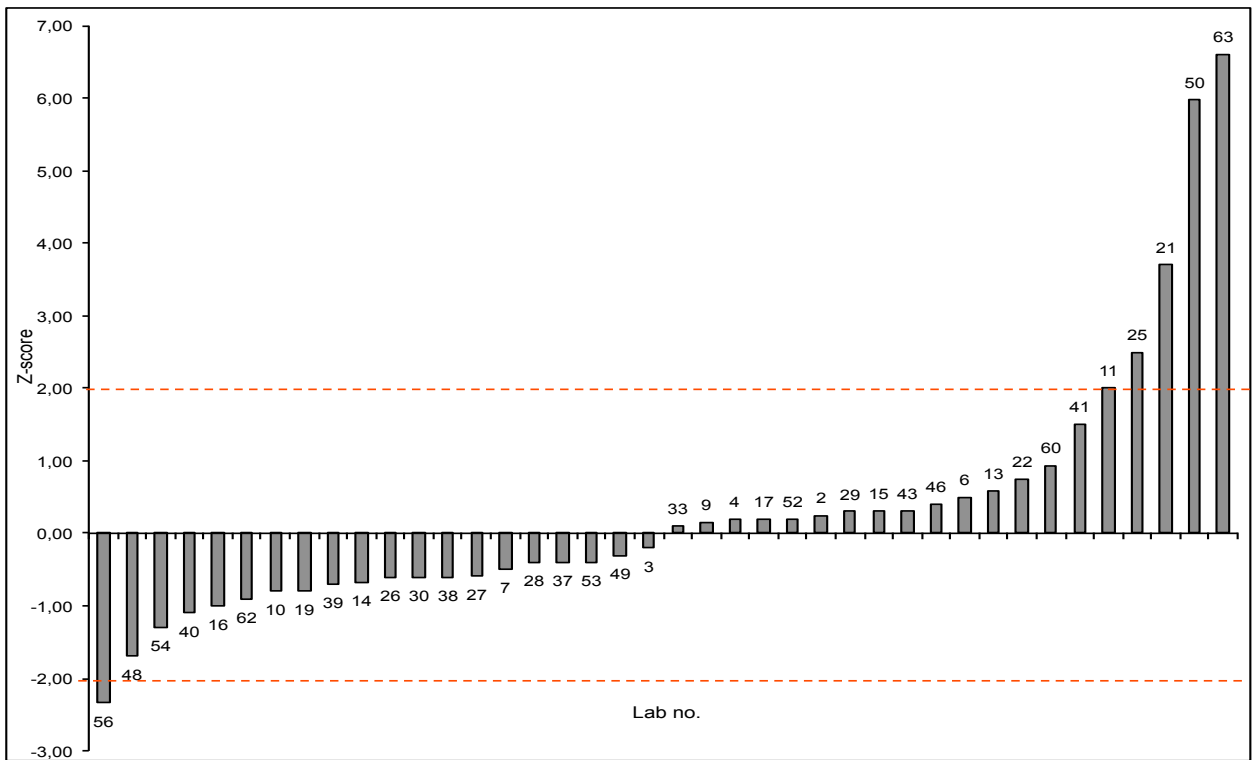
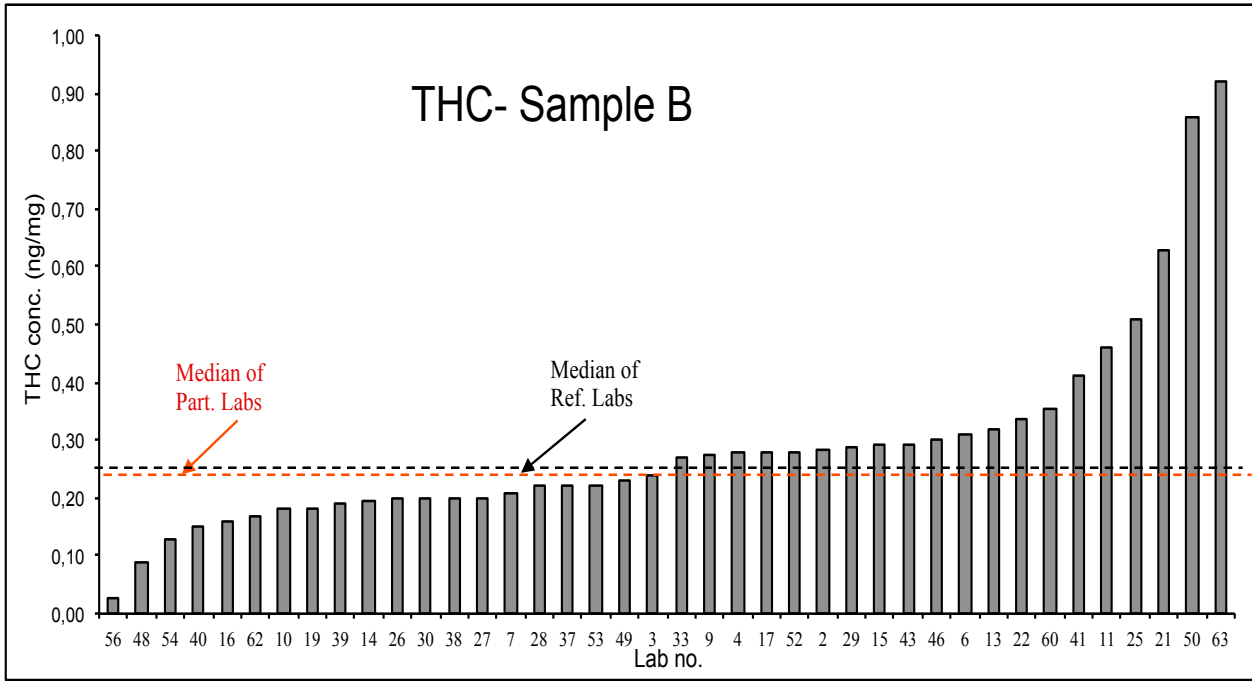
The median MDMA concentration is below the cut-off proposed by SoHT (0.20 ng/mg)



**$\Delta^9$ - TETRAHYDROCANNABINOL (THC)**

Lab	THC (ng/mg)	Z-score	Result
2	0.29	0.25	Satisfactory
3	0.24	-0.20	Satisfactory
4	0.28	0.20	Satisfactory
6	0.31	0.50	Satisfactory
7	0.21	-0.50	Satisfactory
9	0.28	0.15	Satisfactory
10	0.18	-0.80	Satisfactory
11	0.46	2.00	Questionable
13	0.32	0.58	Satisfactory
14	0.19	-0.67	Satisfactory
15	0.29	0.31	Satisfactory
16	0.16	-1.00	Satisfactory
17	0.28	0.20	Satisfactory
19	0.18	-0.80	Satisfactory
21	0.63	3.70	Unsatisfactory
22	0.34	0.75	Satisfactory
25	0.51	2.50	Questionable
26	0.20	-0.60	Satisfactory
27	0.20	-0.59	Satisfactory
28	0.22	-0.40	Satisfactory
29	0.29	0.30	Satisfactory
30	0.20	-0.60	Satisfactory
33	0.27	0.10	Satisfactory
36	P		
37	0.22	-0.40	Satisfactory
38	0.20	-0.60	Satisfactory
39	0.19	-0.70	Satisfactory
40	0.15	-1.10	Satisfactory
41	0.41	1.50	Satisfactory
43	0.29	0.31	Satisfactory
46	0.30	0.40	Satisfactory
48	0.09	-1.70	Satisfactory
49	0.23	-0.30	Satisfactory
50	0.86	5.98	Unsatisfactory
52	0.28	0.20	Satisfactory
53	0.22	-0.40	Satisfactory
54	0.13	-1.30	Satisfactory
56	0.03	-2.34	Questionable
57	N		
60	0.35	0.94	Satisfactory
62	0.17	-0.91	Satisfactory
63	0.92	6.61	Unsatisfactory

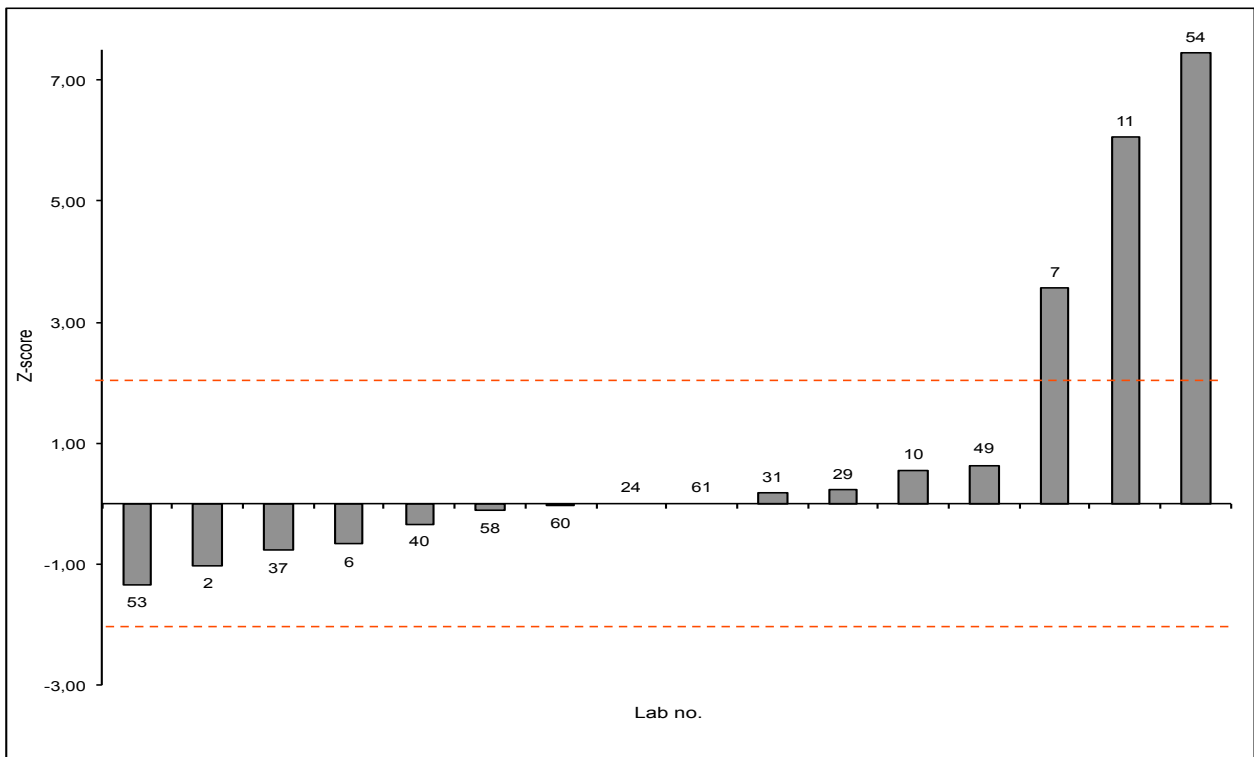
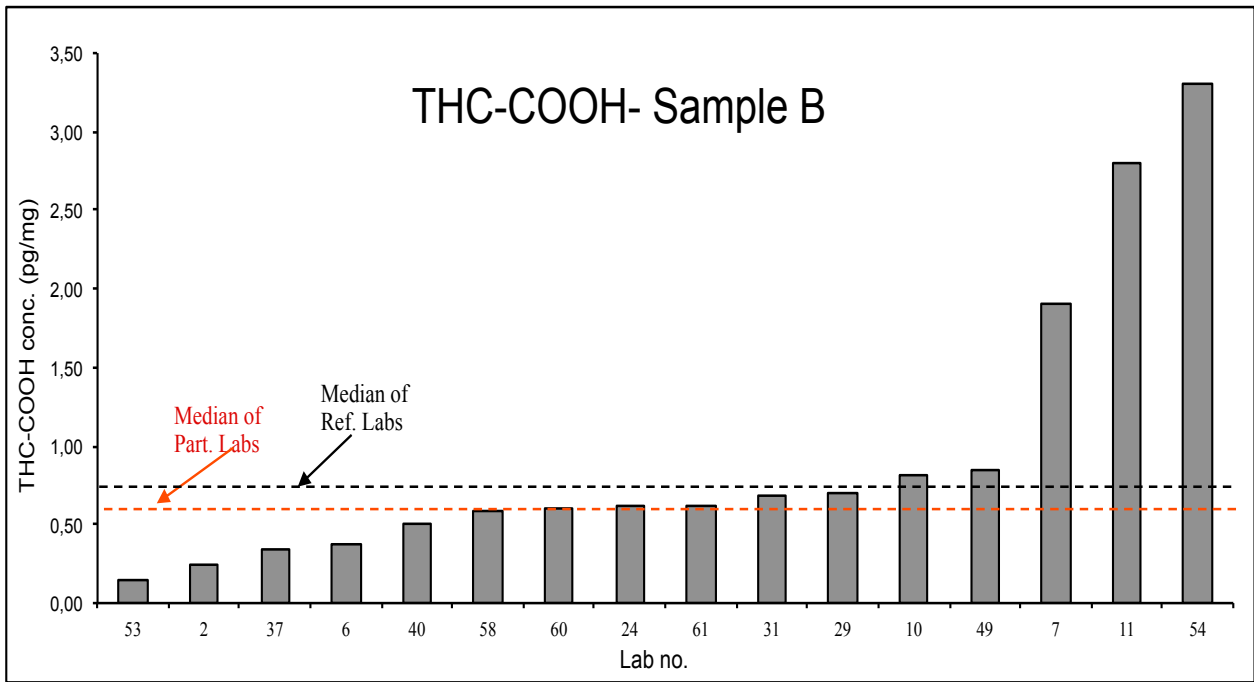
Average	0.29
SD	0.18
CV%	60.59
Median	0.26
Minimum	0.03
Quartile 25	0.20
Quartile 75	0.30
Maximum	0.92
Iqr	0.10



## 11-nor- $\Delta^9$ -TETRAHYDROCANNABINOL-9-CARBOXYLIC ACID (THC-COOH)

Lab	THC-COOH (pg/mg)	Z-score	Result
2	0.25	-1.03	Satisfactory
6	0.38	-0.67	Satisfactory
7	1.90	3.56	Unsatisfactory
10	0.82	0.56	Satisfactory
11	2.80	6.06	Unsatisfactory
16	N		
19	N		
24	0.62	0.00	Satisfactory
29	0.70	0.22	Satisfactory
30	<0.2		
31	0.68	0.17	Satisfactory
37	0.34	-0.78	Satisfactory
38	N		
40	0.50	-0.33	Satisfactory
41	N		
49	0.85	0.64	Satisfactory
53	0.14	-1.33	Satisfactory
54	3.30	7.44	Unsatisfactory
58	0.58	-0.11	Satisfactory
60	0.61	-0.03	Satisfactory
61	0.62	0.00	Satisfactory

Average	0.94
SD	0.88
CV%	93.81
Median	0.62
Minimum	0.14
Quartile 25	0.47
Quartile 75	0.83
Maximum	3.30
Iqr	0.36





**SAMPLE C**



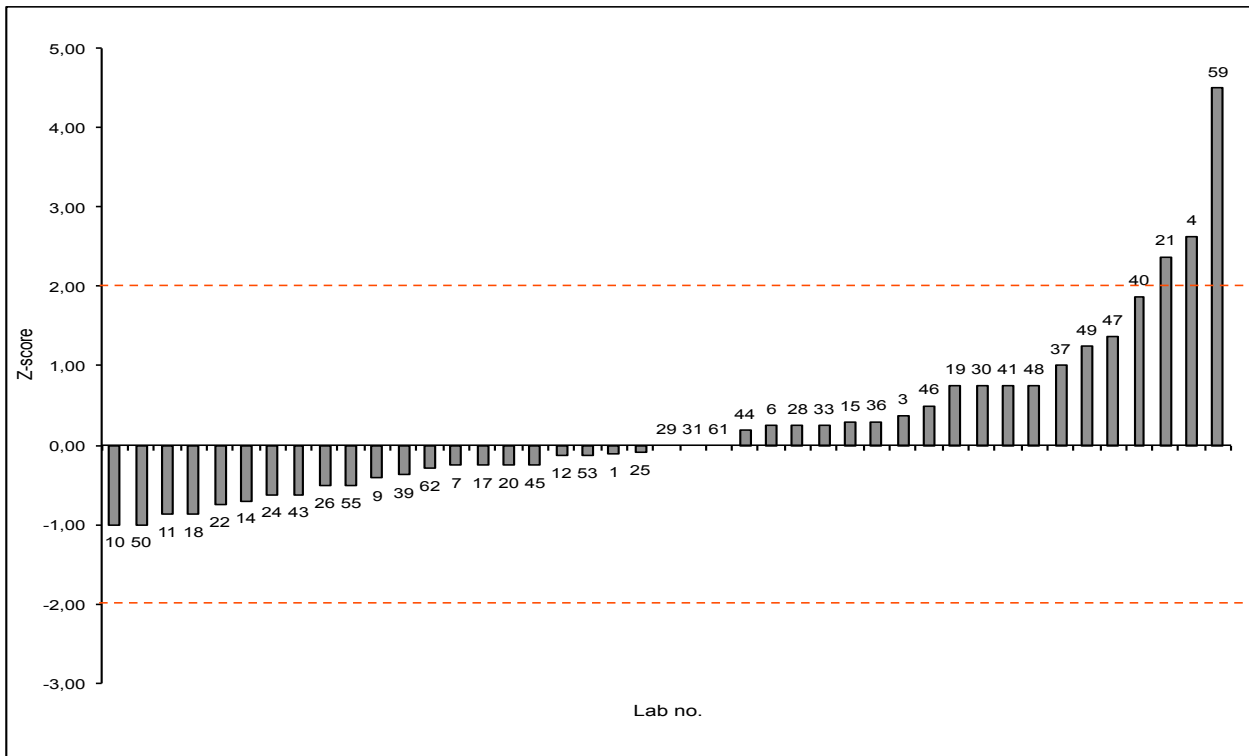
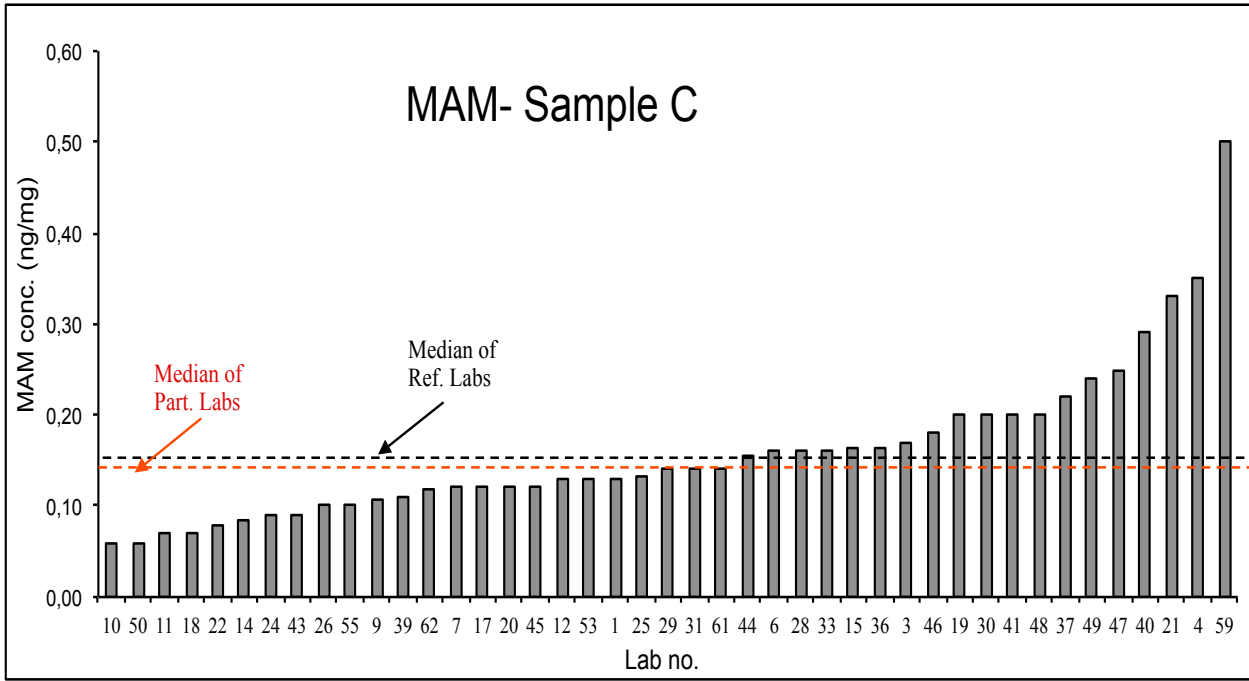
**6-MONOACETYLMORPHINE (MAM)**

Lab	MAM (ng/mg)	Z-score	Result
1	0.13	-0.11	Satisfactory
2	N		
3	0.17	0.38	Satisfactory
4	0.35	2.63	Questionable
6	0.16	0.25	Satisfactory
7	0.12	-0.25	Satisfactory
9	0.11	-0.41	Satisfactory
10	0.06	-1.00	Satisfactory
11	0.07	-0.88	Satisfactory
12	0.13	-0.13	Satisfactory
13	N		
14	0.08	-0.70	Satisfactory
15	0.16	0.29	Satisfactory
16	N		
17	0.12	-0.25	Satisfactory
18	0.07	-0.88	Satisfactory
19	0.20	0.75	Satisfactory
20	0.12	-0.25	Satisfactory
21	0.33	2.38	Questionable
22	0.08	-0.75	Satisfactory
23	N		
24	0.09	-0.63	Satisfactory
25	0.13	-0.09	Satisfactory
26	0.10	-0.50	Satisfactory
27	N		
28	0.16	0.25	Satisfactory
29	0.14	0.00	Satisfactory
30	0.20	0.75	Satisfactory
31	0.14	0.00	Satisfactory
33	0.16	0.25	Satisfactory
34	N		
36	0.16	0.30	Satisfactory
37	0.22	1.00	Satisfactory
38	N		
39	0.11	-0.38	Satisfactory
40	0.29	1.88	Satisfactory
41	0.20	0.75	Satisfactory
43	0.09	-0.63	Satisfactory
44	0.16	0.19	Satisfactory
45	0.12	-0.25	Satisfactory
46	0.18	0.50	Satisfactory
47	0.25	1.38	Satisfactory
48	0.20	0.75	Satisfactory
49	0.24	1.25	Satisfactory
50	0.06	-1.00	Satisfactory
53	0.13	-0.13	Satisfactory
54	N		
55	0.10	-0.50	Satisfactory
56	<0.2		
57	N		
58	N		
59	0.50	4.50	Unsatisfactory

Lab	MAM (ng/mg)	Z-score	Result
60	N		
61	0.14	0.00	Satisfactory
62	0.12	-0.29	Satisfactory

Average	0.16
SD	0.08
CV%	52.93
Median	0.14
Minimum	0.06
Quartile 25	0.11
Quartile 75	0.19
Maximum	0.50
Iqr	0.08

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

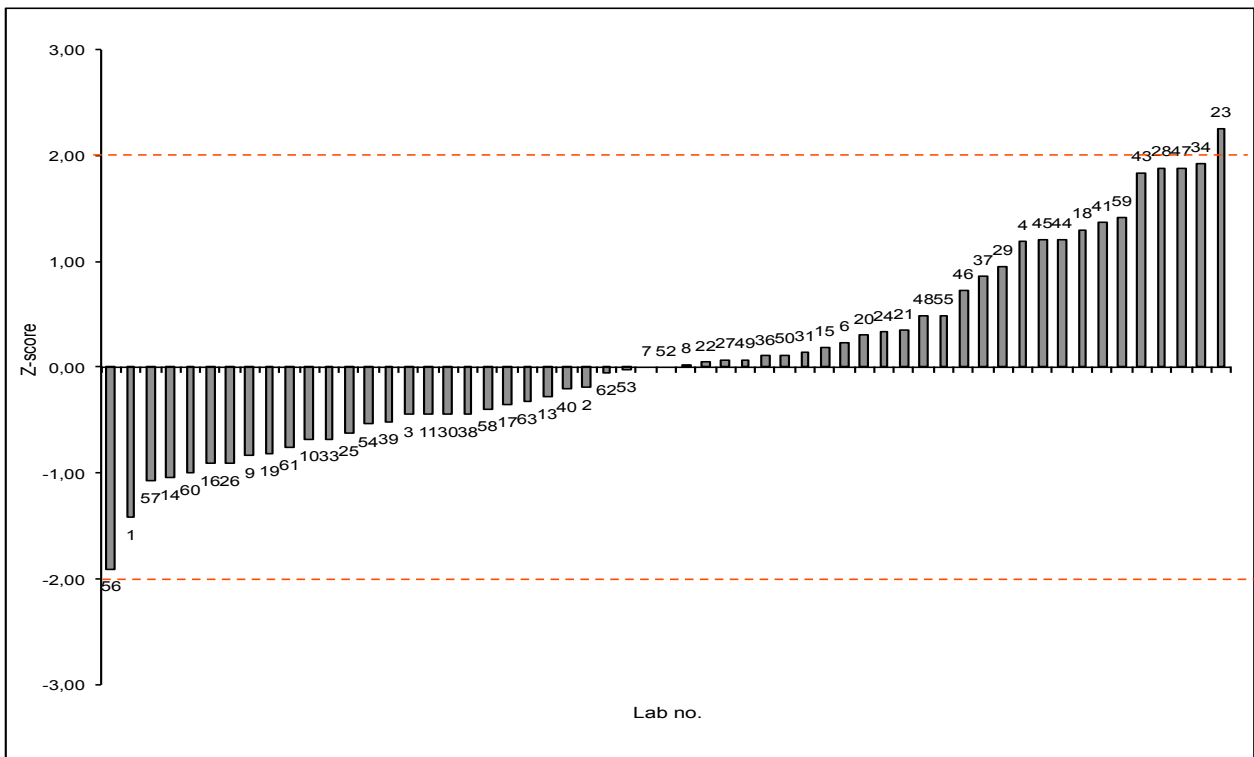
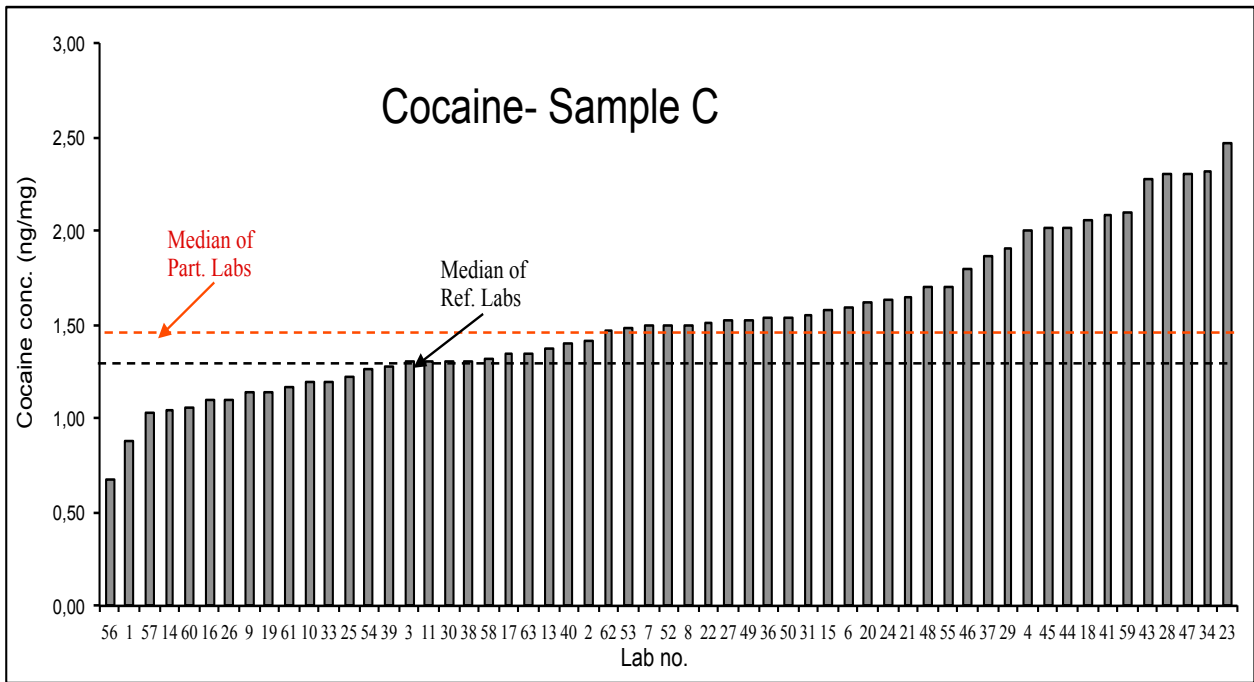


**COCAINE**

Lab	Cocaine (ng/mg)	Z-score	Result
1	0.88	-1.42	Satisfactory
2	1.41	-0.19	Satisfactory
3	1.30	-0.44	Satisfactory
4	2.00	1.19	Satisfactory
6	1.59	0.23	Satisfactory
7	1.49	0.00	Satisfactory
8	1.50	0.02	Satisfactory
9	1.13	-0.83	Satisfactory
10	1.20	-0.67	Satisfactory
11	1.30	-0.44	Satisfactory
12	>1.0		
13	1.37	-0.28	Satisfactory
14	1.04	-1.04	Satisfactory
15	1.57	0.19	Satisfactory
16	1.10	-0.91	Satisfactory
17	1.34	-0.35	Satisfactory
18	2.05	1.30	Satisfactory
19	1.14	-0.81	Satisfactory
20	1.62	0.30	Satisfactory
21	1.64	0.35	Satisfactory
22	1.51	0.05	Satisfactory
23	2.46	2.26	Questionable
24	1.63	0.33	Satisfactory
25	1.22	-0.62	Satisfactory
26	1.10	-0.91	Satisfactory
27	1.52	0.07	Satisfactory
28	2.30	1.88	Satisfactory
29	1.90	0.95	Satisfactory
30	1.30	-0.44	Satisfactory
31	1.55	0.14	Satisfactory
33	1.20	-0.67	Satisfactory
34	2.32	1.92	Satisfactory
36	1.54	0.10	Satisfactory
37	1.86	0.86	Satisfactory
38	1.30	-0.44	Satisfactory
39	1.27	-0.51	Satisfactory
40	1.40	-0.21	Satisfactory
41	2.08	1.37	Satisfactory
43	2.28	1.84	Satisfactory
44	2.01	1.21	Satisfactory
45	2.01	1.21	Satisfactory
46	1.80	0.72	Satisfactory
47	2.30	1.88	Satisfactory
48	1.70	0.49	Satisfactory
49	1.52	0.07	Satisfactory
50	1.54	0.12	Satisfactory
52	1.49	0.00	Satisfactory
53	1.48	-0.02	Satisfactory
54	1.26	-0.53	Satisfactory
55	1.70	0.49	Satisfactory
56	0.67	-1.90	Satisfactory
57	1.03	-1.07	Satisfactory

Lab	Cocaine (ng/mg)	Z-score	Result
58	1.32	-0.39	Satisfactory
59	2.10	1.42	Satisfactory
60	1.06	-1.00	Satisfactory
61	1.17	-0.76	Satisfactory
62	1.47	-0.05	Satisfactory
63	1.35	-0.33	Satisfactory

Average	1.53
SD	0.39
CV%	25.55
Median	1.49
Minimum	0.67
Quartile 25	1.27
Quartile 75	1.70
Maximum	2.46
Iqr	0.43

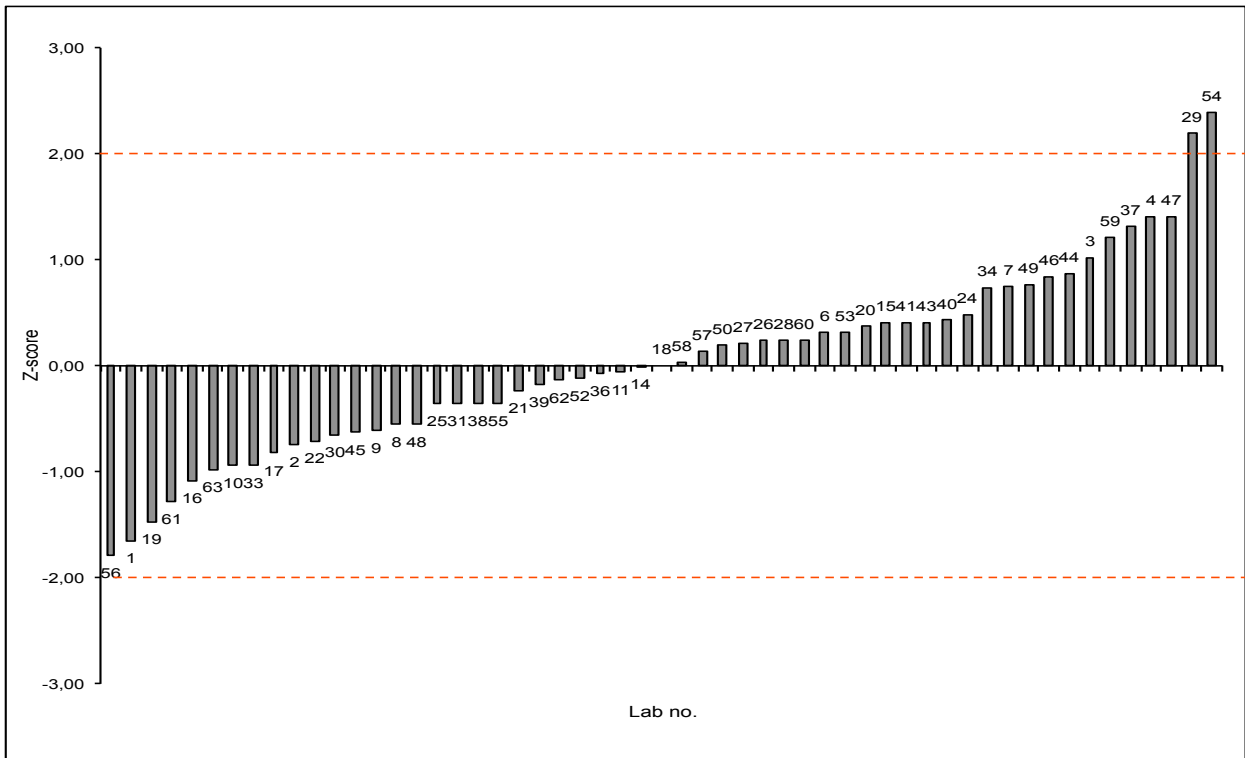
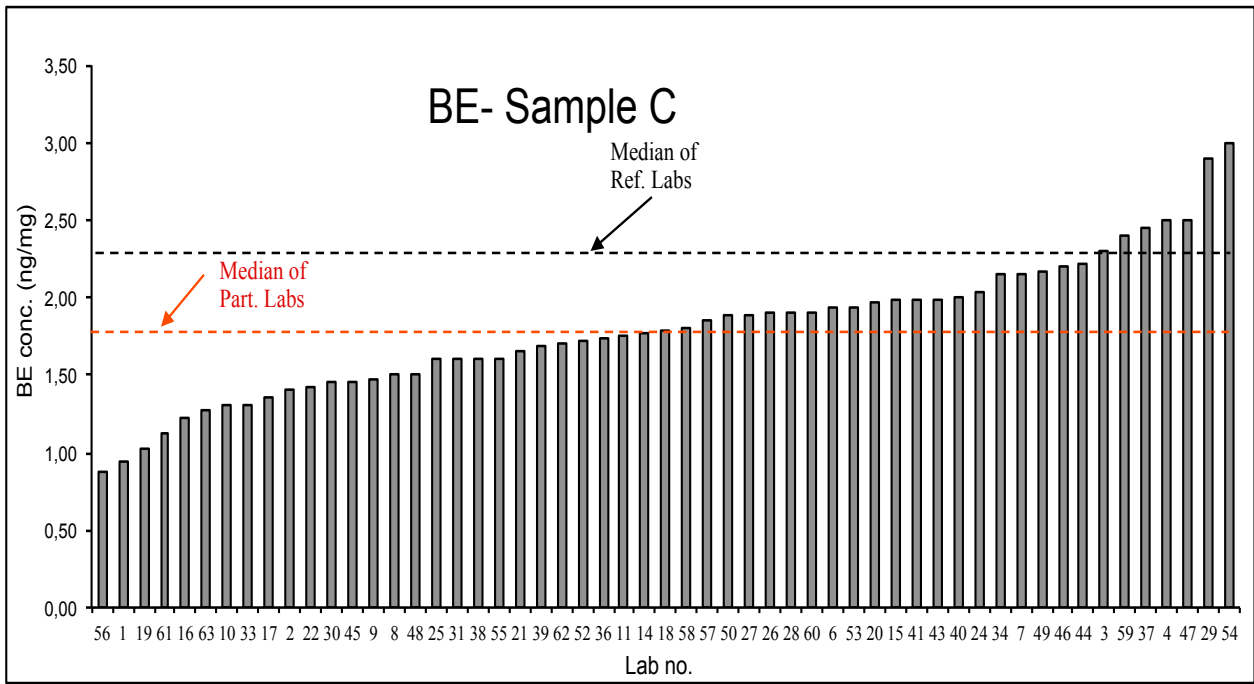


**BENZOYLECGONINE (BE)**

Lab	BE (ng/mg)	Z-score	Result
1	0.94	-1.65	Satisfactory
2	1.40	-0.74	Satisfactory
3	2.30	1.02	Satisfactory
4	2.50	1.41	Satisfactory
6	1.94	0.31	Satisfactory
7	2.16	0.75	Satisfactory
8	1.50	-0.55	Satisfactory
9	1.47	-0.61	Satisfactory
10	1.30	-0.94	Satisfactory
11	1.75	-0.06	Satisfactory
12	>1.0		
13	>1.0		
14	1.78	0.00	Satisfactory
15	1.99	0.41	Satisfactory
16	1.23	-1.08	Satisfactory
17	1.36	-0.82	Satisfactory
18	1.78	0.00	Satisfactory
19	1.03	-1.47	Satisfactory
20	1.97	0.37	Satisfactory
21	1.66	-0.24	Satisfactory
22	1.42	-0.71	Satisfactory
24	2.03	0.49	Satisfactory
25	1.60	-0.35	Satisfactory
26	1.90	0.24	Satisfactory
27	1.89	0.22	Satisfactory
28	1.90	0.24	Satisfactory
29	2.90	2.20	Questionable
30	1.45	-0.65	Satisfactory
31	1.60	-0.35	Satisfactory
33	1.30	-0.94	Satisfactory
34	2.16	0.74	Satisfactory
36	1.75	-0.07	Satisfactory
37	2.45	1.31	Satisfactory
38	1.60	-0.35	Satisfactory
39	1.69	-0.18	Satisfactory
40	2.00	0.43	Satisfactory
41	1.99	0.41	Satisfactory
43	1.99	0.41	Satisfactory
44	2.23	0.87	Satisfactory
45	1.46	-0.63	Satisfactory
46	2.21	0.84	Satisfactory
47	2.50	1.41	Satisfactory
48	1.50	-0.55	Satisfactory
49	2.17	0.76	Satisfactory
50	1.88	0.20	Satisfactory
52	1.72	-0.12	Satisfactory
53	1.94	0.31	Satisfactory
54	3.00	2.39	Questionable
55	1.60	-0.35	Satisfactory
56	0.87	-1.79	Satisfactory
57	1.85	0.14	Satisfactory
58	1.80	0.03	Satisfactory

Lab	BE (ng/mg)	Z-score	Result
59	2.40	1.22	Satisfactory
60	1.90	0.24	Satisfactory
61	1.13	-1.28	Satisfactory
62	1.71	-0.14	Satisfactory
63	1.28	-0.98	Satisfactory

Average	1.80
SD	0.44
CV%	24.56
Median	1.78
Minimum	0.87
Quartile 25	1.49
Quartile 75	2.00
Maximum	3.00
Iqr	0.51

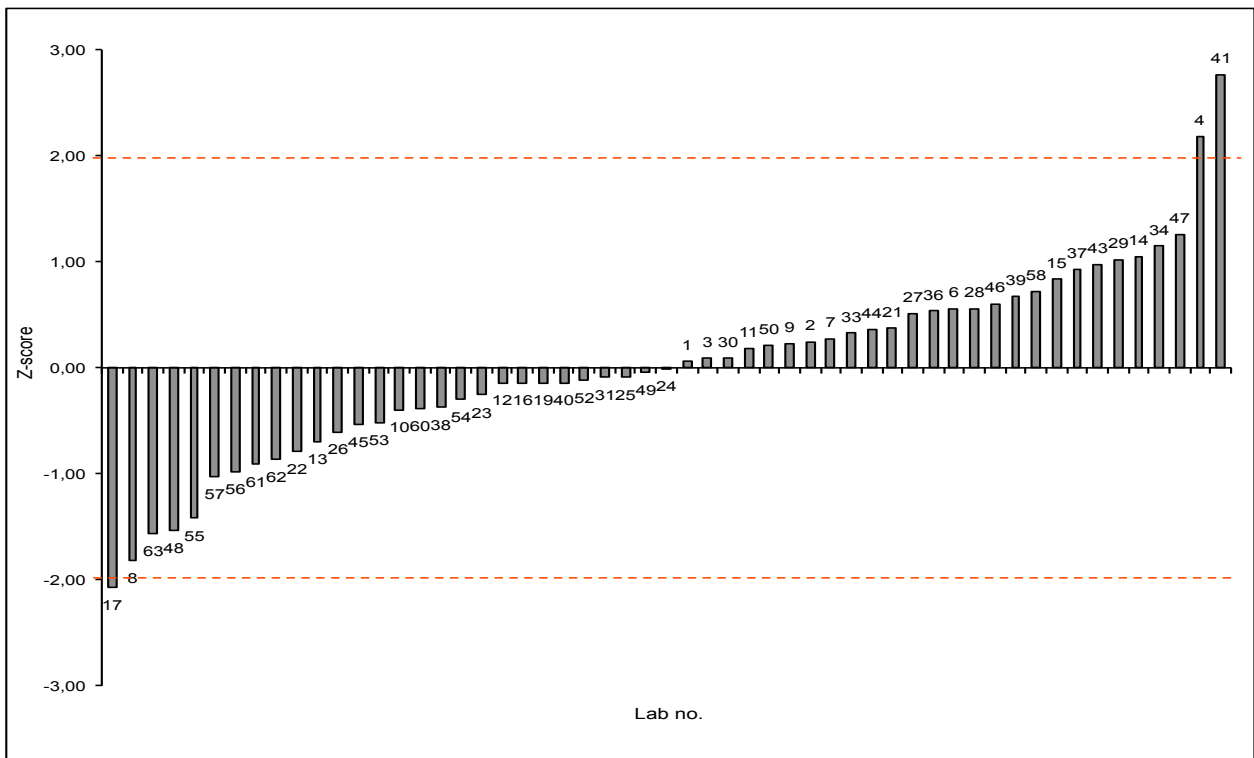
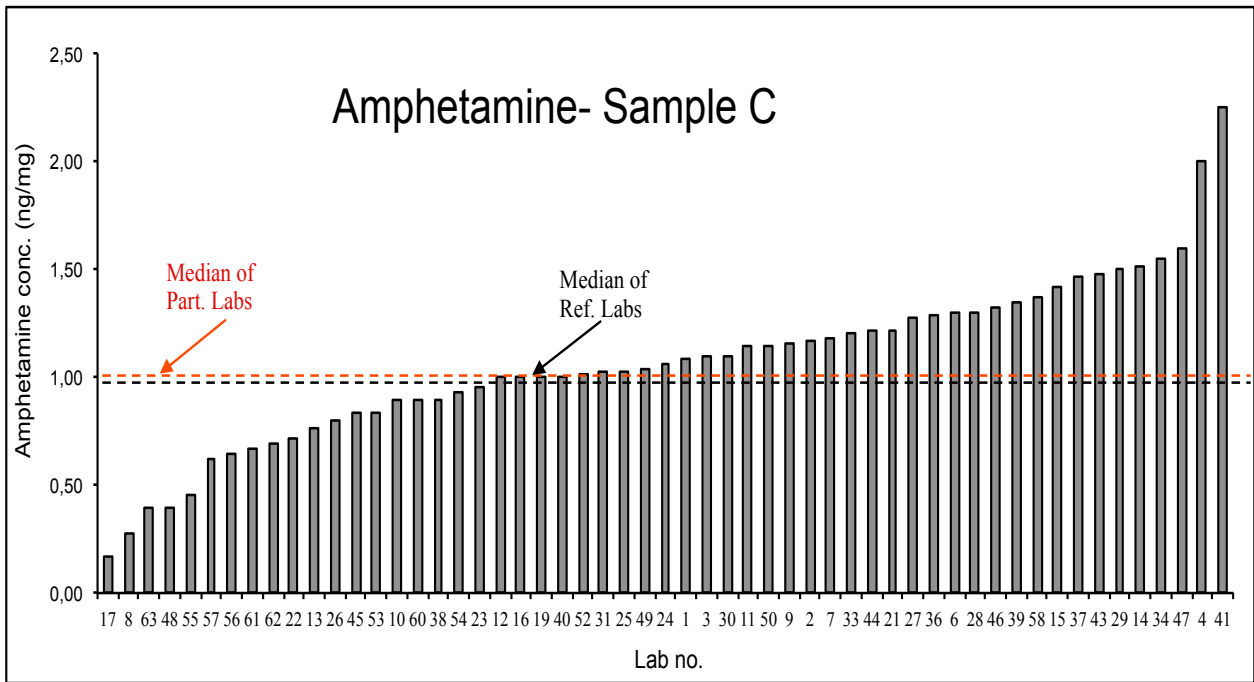


**AMPHETAMINE**

Lab	Amphetamine (ng/mg)	Z-score	Result
1	1.09	0.06	Satisfactory
2	1.17	0.25	Satisfactory
3	1.10	0.09	Satisfactory
4	2.00	2.19	Questionable
6	1.30	0.56	Satisfactory
7	1.18	0.28	Satisfactory
8	0.28	-1.81	Satisfactory
9	1.16	0.23	Satisfactory
10	0.89	-0.40	Satisfactory
11	1.14	0.19	Satisfactory
12	1.00	-0.14	Satisfactory
13	0.76	-0.70	Satisfactory
14	1.51	1.05	Satisfactory
15	1.42	0.84	Satisfactory
16	1.00	-0.14	Satisfactory
17	0.17	-2.07	Questionable
18	N		
19	1.00	-0.14	Satisfactory
21	1.22	0.37	Satisfactory
22	0.72	-0.79	Satisfactory
23	0.95	-0.26	Satisfactory
24	1.06	-0.01	Satisfactory
25	1.02	-0.09	Satisfactory
26	0.80	-0.60	Satisfactory
27	1.28	0.51	Satisfactory
28	1.30	0.56	Satisfactory
29	1.50	1.02	Satisfactory
30	1.10	0.09	Satisfactory
31	1.02	-0.09	Satisfactory
33	1.20	0.33	Satisfactory
34	1.55	1.15	Satisfactory
36	1.29	0.53	Satisfactory
37	1.46	0.93	Satisfactory
38	0.90	-0.37	Satisfactory
39	1.35	0.67	Satisfactory
40	1.00	-0.14	Satisfactory
41	2.25	2.77	Questionable
43	1.48	0.98	Satisfactory
44	1.22	0.36	Satisfactory
45	0.83	-0.53	Satisfactory
46	1.32	0.60	Satisfactory
47	1.60	1.26	Satisfactory
48	0.40	-1.53	Satisfactory
49	1.04	-0.05	Satisfactory
50	1.15	0.21	Satisfactory
52	1.01	-0.12	Satisfactory
53	0.84	-0.51	Satisfactory
54	0.93	-0.30	Satisfactory
55	0.45	-1.42	Satisfactory
56	0.64	-0.98	Satisfactory
57	0.62	-1.02	Satisfactory
58	1.37	0.72	Satisfactory

Lab	Amphetamine (ng/mg)	Z-score	Result
59	P		
60	0.90	-0.38	Satisfactory
61	0.67	-0.91	Satisfactory
62	0.69	-0.87	Satisfactory
63	0.39	-1.56	Satisfactory

Average	1.07
SD	0.38
CV%	35.99
Median	1.06
Minimum	0.17
Quartile 25	0.87
Quartile 75	1.30
Maximum	2.25
Iqr	0.43



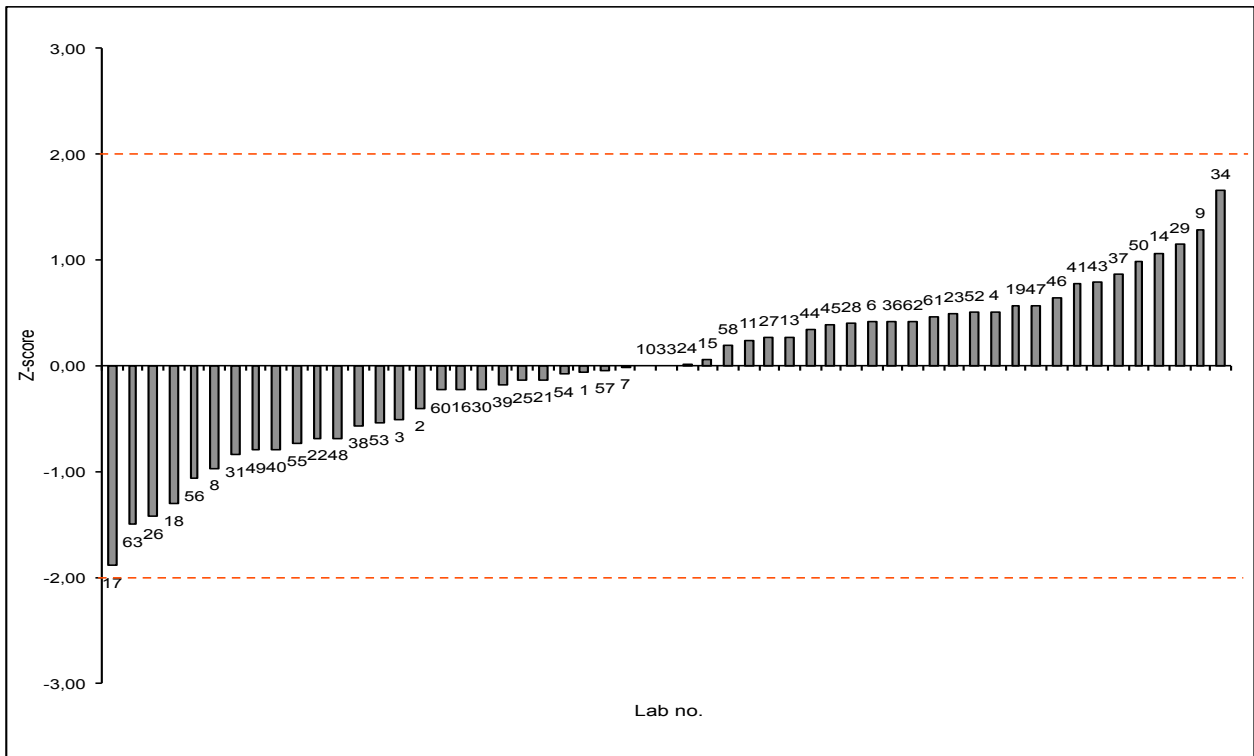
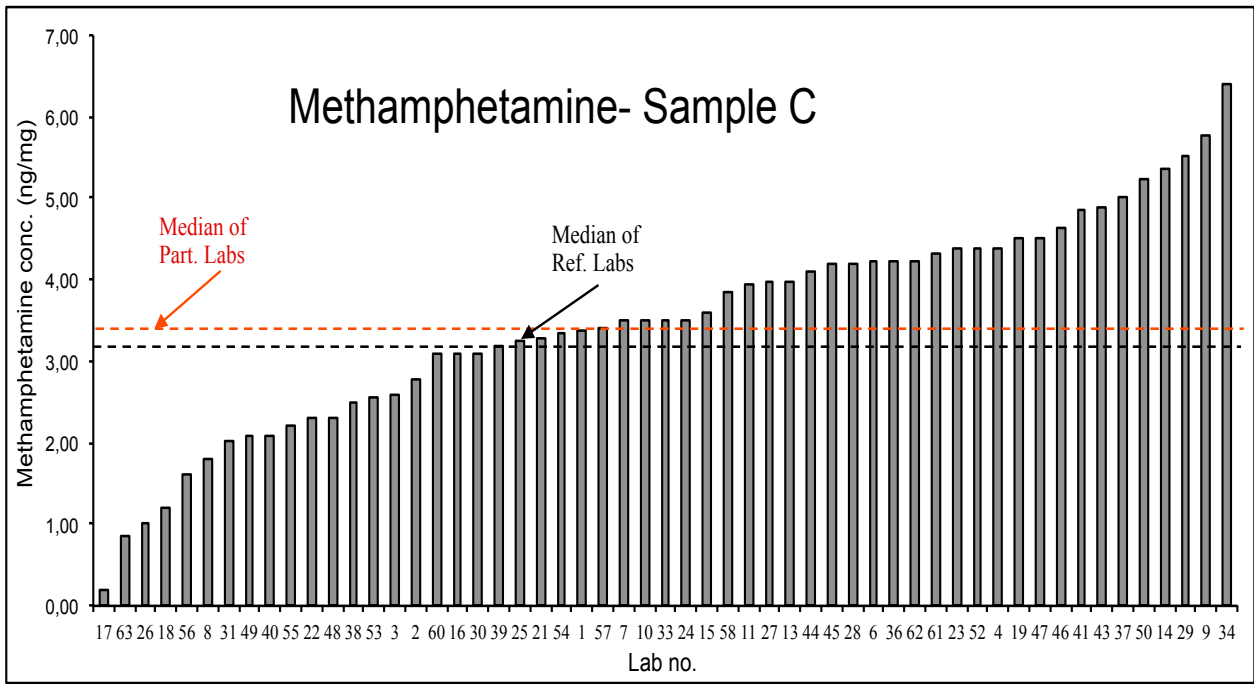


**METHAMPHETAMINE**

Lab	Methamphetamine (ng/mg)	Z-score	Result
1	3.39	-0.06	Satisfactory
2	2.78	-0.41	Satisfactory
3	2.60	-0.51	Satisfactory
4	4.40	0.51	Satisfactory
6	4.24	0.42	Satisfactory
7	3.49	-0.01	Satisfactory
8	1.80	-0.97	Satisfactory
9	5.76	1.28	Satisfactory
10	3.50	0.00	Satisfactory
11	3.93	0.24	Satisfactory
12	>1.0		
13	3.98	0.27	Satisfactory
14	5.38	1.07	Satisfactory
15	3.60	0.06	Satisfactory
16	3.10	-0.23	Satisfactory
17	0.18	-1.89	Satisfactory
18	1.21	-1.30	Satisfactory
19	4.50	0.57	Satisfactory
21	3.27	-0.13	Satisfactory
22	2.30	-0.68	Satisfactory
23	4.37	0.49	Satisfactory
24	3.52	0.01	Satisfactory
25	3.25	-0.14	Satisfactory
26	1.00	-1.42	Satisfactory
27	3.97	0.27	Satisfactory
28	4.20	0.40	Satisfactory
29	5.51	1.14	Satisfactory
30	3.10	-0.23	Satisfactory
31	2.03	-0.84	Satisfactory
33	3.50	0.00	Satisfactory
34	6.42	1.66	Satisfactory
36	4.24	0.42	Satisfactory
37	5.02	0.86	Satisfactory
38	2.50	-0.57	Satisfactory
39	3.19	-0.18	Satisfactory
40	2.10	-0.80	Satisfactory
41	4.86	0.77	Satisfactory
43	4.88	0.78	Satisfactory
44	4.10	0.34	Satisfactory
45	4.19	0.39	Satisfactory
46	4.64	0.65	Satisfactory
47	4.50	0.57	Satisfactory
48	2.30	-0.68	Satisfactory
49	2.09	-0.80	Satisfactory
50	5.24	0.99	Satisfactory
52	4.39	0.51	Satisfactory
53	2.56	-0.53	Satisfactory
54	3.36	-0.08	Satisfactory
55	2.20	-0.74	Satisfactory
56	1.62	-1.07	Satisfactory
57	3.42	-0.05	Satisfactory
58	3.84	0.19	Satisfactory

Lab	Methamphetamine (ng/mg)	Z-score	Result
59	P		
60	3.10	-0.23	Satisfactory
61	4.31	0.46	Satisfactory
62	4.24	0.42	Satisfactory
63	0.86	-1.50	Satisfactory

Average	3.49
SD	1.29
CV%	36.81
Median	3.50
Minimum	0.18
Quartile 25	2.58
Quartile 75	4.34
Maximum	6.42
Iqr	1.76

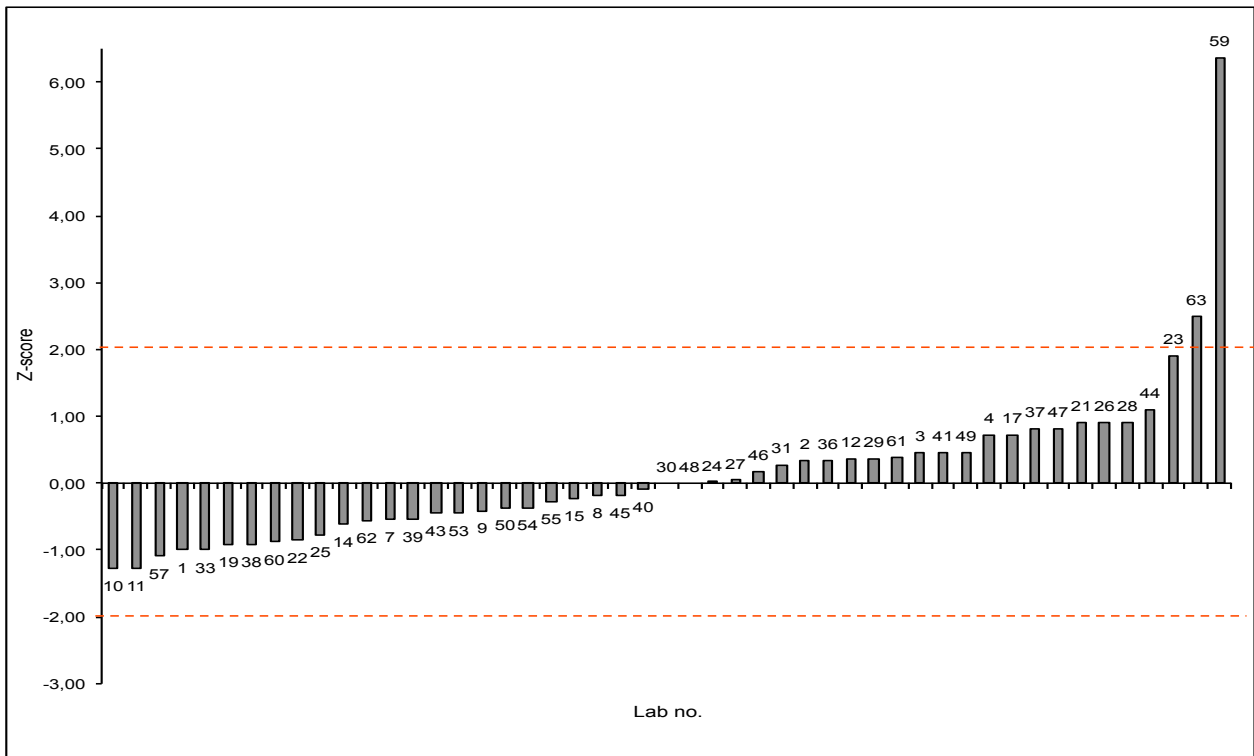
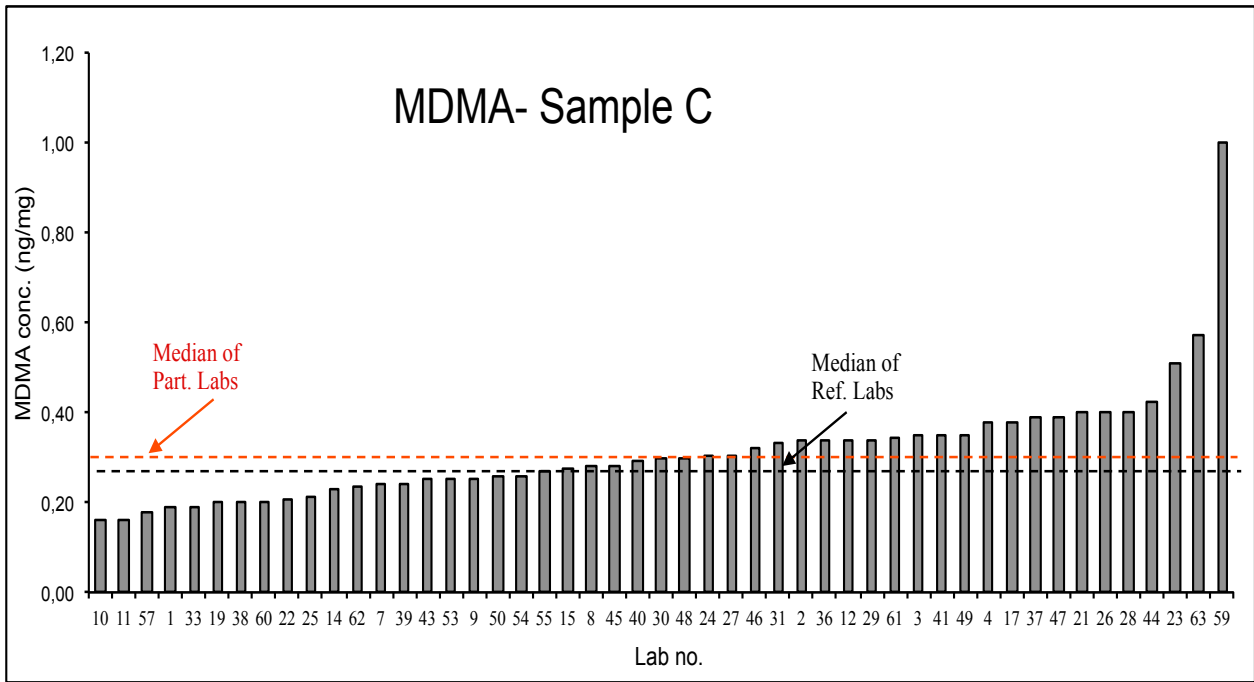


**3.4-METHYLENDIOXYMETHAMPHETAMINE (MDMA)**

Lab	MDMA (ng/mg)	Z-score	Result
1	0.19	-1.00	Satisfactory
2	0.34	0.34	Satisfactory
3	0.35	0.45	Satisfactory
4	0.38	0.73	Satisfactory
6	N		
7	0.24	-0.55	Satisfactory
8	0.28	-0.18	Satisfactory
9	0.26	-0.41	Satisfactory
10	0.16	-1.27	Satisfactory
11	0.16	-1.27	Satisfactory
12	0.34	0.36	Satisfactory
13	N		
14	0.23	-0.62	Satisfactory
15	0.28	-0.23	Satisfactory
16	N		
17	0.38	0.73	Satisfactory
18	N		
19	0.20	-0.91	Satisfactory
21	0.40	0.91	Satisfactory
22	0.21	-0.85	Satisfactory
23	0.51	1.91	Satisfactory
24	0.30	0.02	Satisfactory
25	0.22	-0.77	Satisfactory
26	0.40	0.91	Satisfactory
27	0.31	0.05	Satisfactory
28	0.40	0.91	Satisfactory
29	0.34	0.36	Satisfactory
30	0.30	0.00	Satisfactory
31	0.33	0.27	Satisfactory
33	0.19	-1.00	Satisfactory
34	N		
36	0.34	0.34	Satisfactory
37	0.39	0.82	Satisfactory
38	0.20	-0.91	Satisfactory
39	0.24	-0.55	Satisfactory
40	0.29	-0.09	Satisfactory
41	0.35	0.45	Satisfactory
43	0.25	-0.45	Satisfactory
44	0.42	1.10	Satisfactory
45	0.28	-0.18	Satisfactory
46	0.32	0.18	Satisfactory
47	0.39	0.82	Satisfactory
48	0.30	0.00	Satisfactory
49	0.35	0.45	Satisfactory
50	0.26	-0.36	Satisfactory
52	N		
53	0.25	-0.45	Satisfactory
54	0.26	-0.36	Satisfactory
55	0.27	-0.27	Satisfactory
56	<0.2		
57	0.18	-1.09	Satisfactory
58	N		

Lab	MDMA (ng/mg)	Z-score	Result
59	1.00	6.36	Unsatisfactory
60	0.20	-0.88	Satisfactory
61	0.34	0.39	Satisfactory
62	0.24	-0.56	Satisfactory
63	0.57	2.49	Questionable

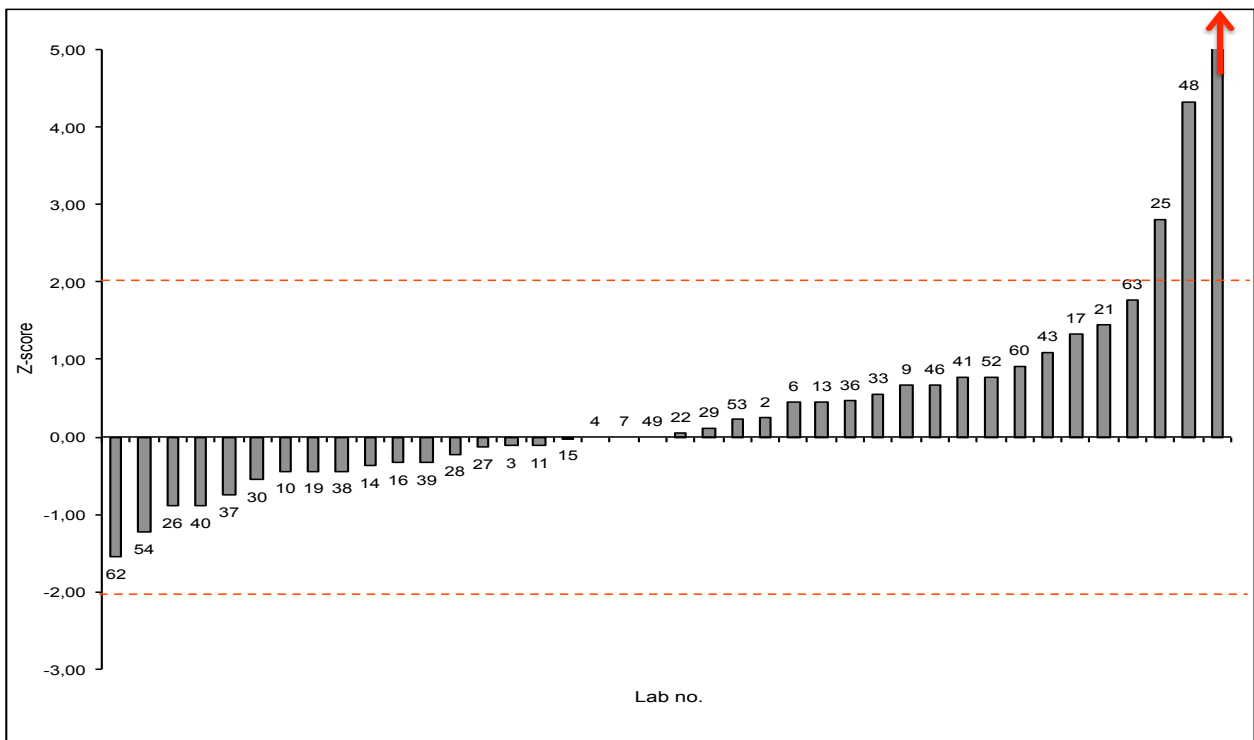
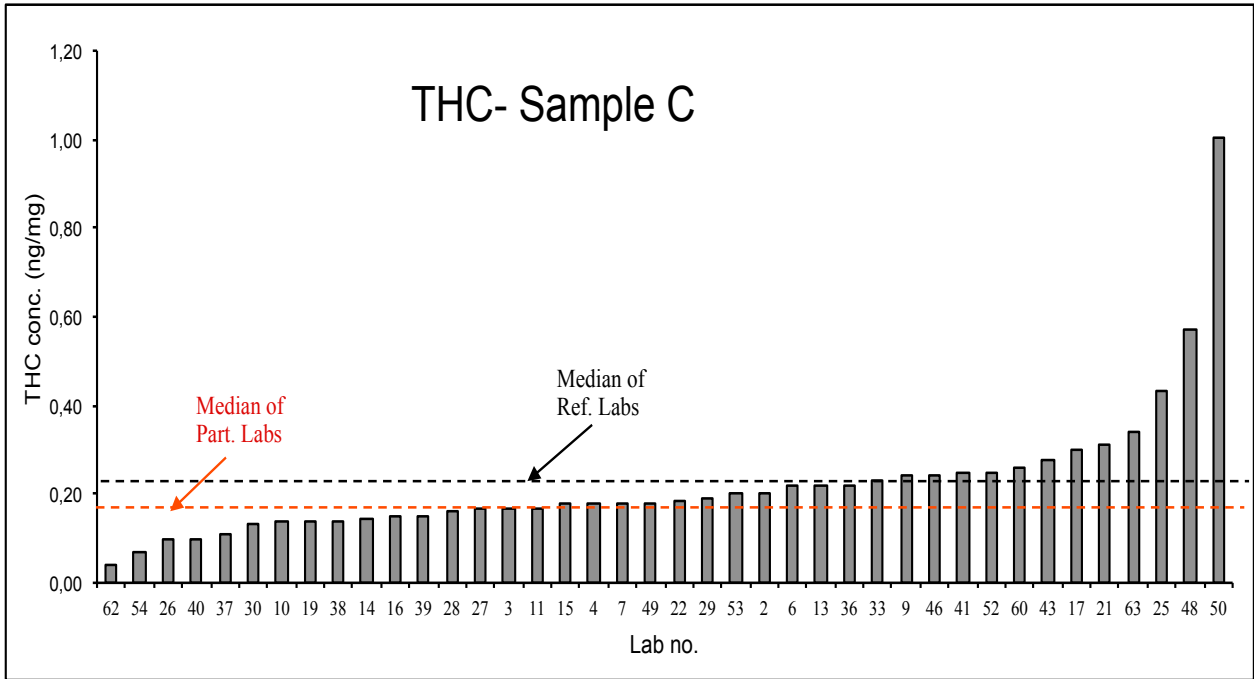
Average	0.31
SD	0.13
CV%	41.78
Median	0.30
Minimum	0.16
Quartile 25	0.24
Quartile 75	0.35
Maximum	1.00
Iqr	0.11



**$\Delta^9$ -TETRAHYDROCANNABINOL (THC)**

Lab	THC (ng/mg)	Z-score	Result
2	0.20	0.24	Satisfactory
3	0.17	-0.11	Satisfactory
4	0.18	0.00	Satisfactory
6	0.22	0.44	Satisfactory
7	0.18	0.00	Satisfactory
9	0.24	0.67	Satisfactory
10	0.14	-0.44	Satisfactory
11	0.17	-0.11	Satisfactory
13	0.22	0.44	Satisfactory
14	0.15	-0.38	Satisfactory
15	0.18	-0.01	Satisfactory
16	0.15	-0.33	Satisfactory
17	0.30	1.33	Satisfactory
19	0.14	-0.44	Satisfactory
21	0.31	1.44	Satisfactory
22	0.18	0.04	Satisfactory
25	0.43	2.81	Questionable
26	0.10	-0.89	Satisfactory
27	0.17	-0.13	Satisfactory
28	0.16	-0.22	Satisfactory
29	0.19	0.11	Satisfactory
30	0.13	-0.56	Satisfactory
33	0.23	0.56	Satisfactory
36	0.22	0.47	Satisfactory
37	0.11	-0.76	Satisfactory
38	0.14	-0.44	Satisfactory
39	0.15	-0.33	Satisfactory
40	0.10	-0.89	Satisfactory
41	0.25	0.78	Satisfactory
43	0.28	1.09	Satisfactory
46	0.24	0.67	Satisfactory
48	0.57	4.33	Unsatisfactory
49	0.18	0.00	Satisfactory
50	1.00	9.16	Unsatisfactory
52	0.25	0.78	Satisfactory
53	0.20	0.22	Satisfactory
54	0.07	-1.22	Satisfactory
56	<0.05		
57	N		
60	0.26	0.91	Satisfactory
62	0.04	-1.56	Satisfactory
63	0.34	1.77	Satisfactory

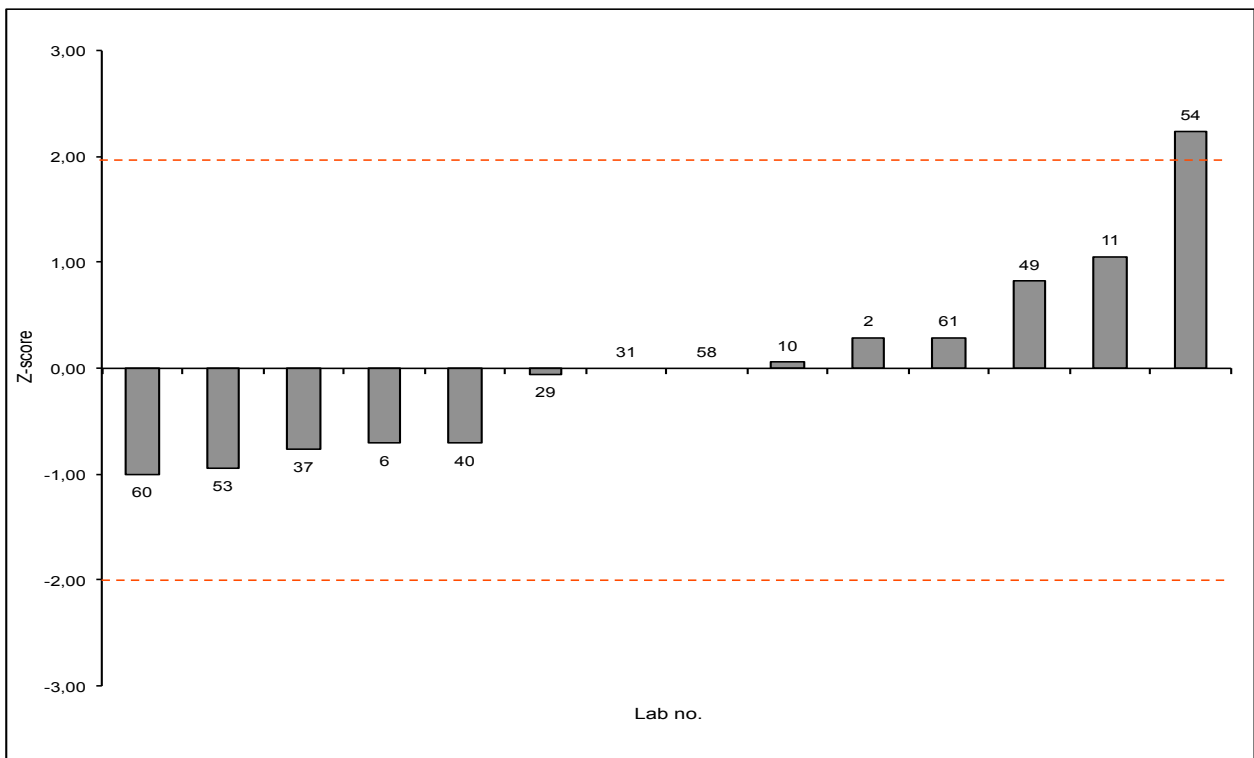
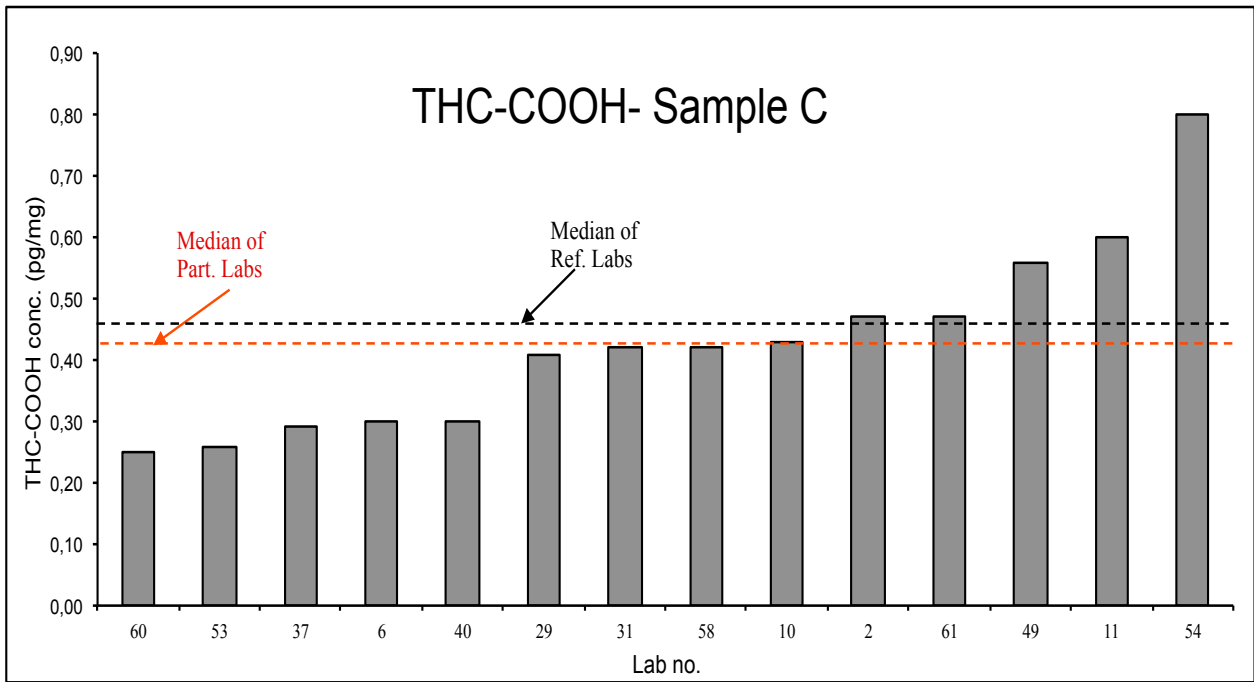
Average	0.22
SD	0.16
CV%	69.86
Median	0.18
Minimum	0.04
Quartile 25	0.15
Quartile 75	0.24
Maximum	1.00
Iqr	0.09



## 11-nor- $\Delta^9$ -TETRAHYDROCANNABINOL-9-CARBOXYLIC ACID (THC-COOH)

Lab	THC-COOH (pg/mg)	Z-score	Result
2	0.47	0.29	Satisfactory
6	0.30	-0.71	Satisfactory
7	<1		
10	0.43	0.06	Satisfactory
11	0.60	1.06	Satisfactory
16	N		
19	N		
24	N		
29	0.41	-0.06	Satisfactory
30	<0.2		
31	0.42	0.00	Satisfactory
37	0.29	-0.76	Satisfactory
38	N		
40	0.30	-0.71	Satisfactory
41	N		
49	0.56	0.82	Satisfactory
53	0.26	-0.94	Satisfactory
54	0.80	2.24	Questionable
58	0.42	0.00	Satisfactory
60	0.25	-1.00	Satisfactory
61	0.47	0.29	Satisfactory

Average	0.43
SD	0.15
CV%	34.33
Median	0.42
Minimum	0.25
Quartile 25	0.30
Quartile 75	0.47
Maximum	0.80
Iqr	0.17



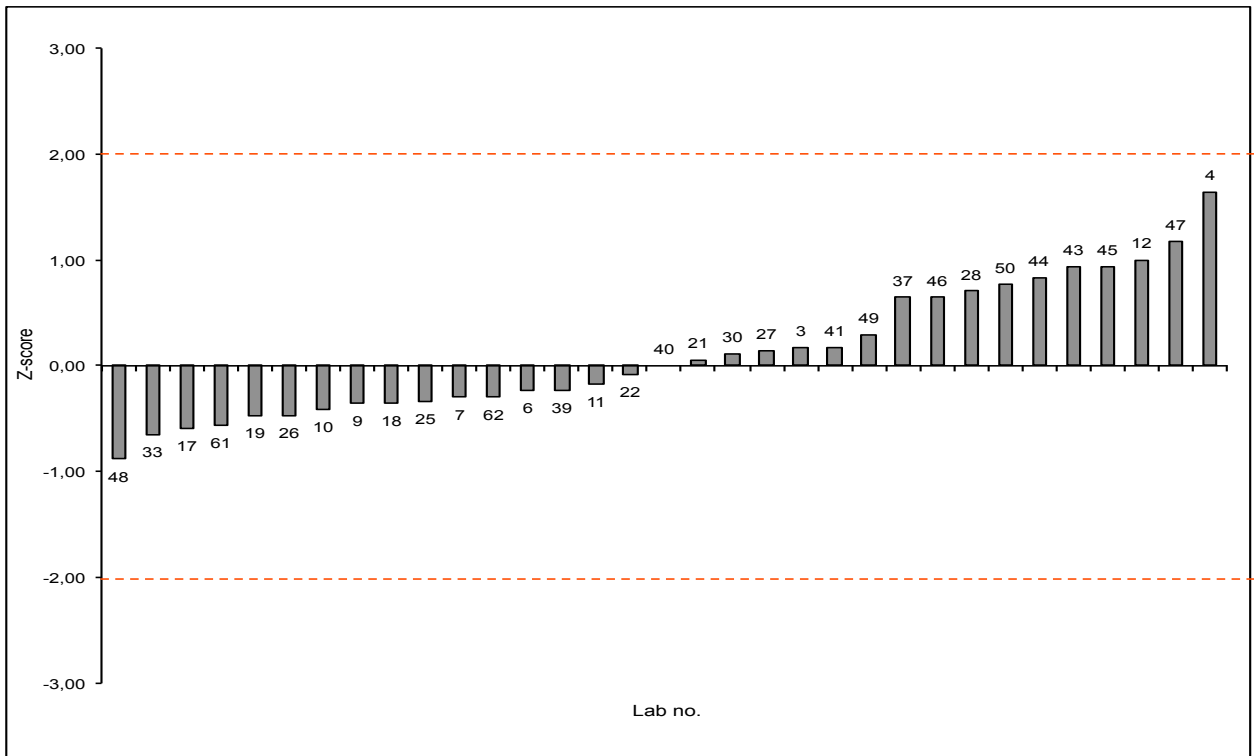
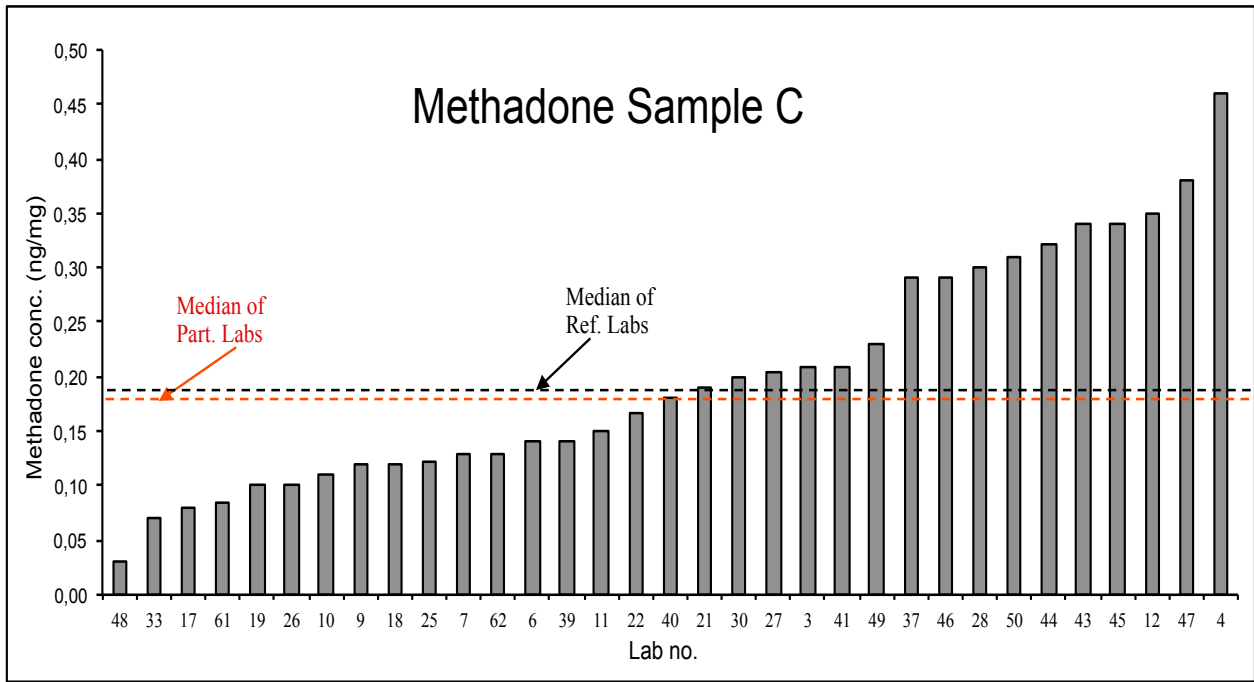


**METHADONE**

Lab	Methadone (ng/mg)	Z-score	Result
1	N		
2	N		
3	0.21	0.18	Satisfactory
4	0.46	1.65	Satisfactory
6	0.14	-0.24	Satisfactory
7	0.13	-0.29	Satisfactory
9	0.12	-0.35	Satisfactory
10	0.11	-0.41	Satisfactory
11	0.15	-0.18	Satisfactory
12	0.35	1.00	Satisfactory
13	N		
14	N		
15	N		
16	N		
17	0.08	-0.59	Satisfactory
18	0.12	-0.35	Satisfactory
19	0.10	-0.47	Satisfactory
21	0.19	0.06	Satisfactory
22	0.17	-0.08	Satisfactory
25	0.12	-0.34	Satisfactory
26	0.10	-0.47	Satisfactory
27	0.21	0.15	Satisfactory
28	0.30	0.71	Satisfactory
30	0.20	0.12	Satisfactory
33	0.07	-0.65	Satisfactory
34	N		
37	0.29	0.65	Satisfactory
38	N		
39	0.14	-0.24	Satisfactory
40	0.18	0.00	Satisfactory
41	0.21	0.18	Satisfactory
43	0.34	0.94	Satisfactory
44	0.32	0.84	Satisfactory
45	0.34	0.94	Satisfactory
46	0.29	0.65	Satisfactory
47	0.38	1.18	Satisfactory
48	0.03	-0.88	Satisfactory
49	0.23	0.29	Satisfactory
50	0.31	0.76	Satisfactory
56	<0.2		
59	U		
60	N		
61	0.09	-0.56	Satisfactory
62	0.13	-0.29	Satisfactory
63	N		

Average	0.20
SD	0.10
CV%	52.03
Median	0.18
Minimum	0.03
Quartile 25	0.12
Quartile 75	0.29
Maximum	0.46
Iqr	0.17

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



**TRAMADOL**

Lab	Tramadol (ng/mg)	Z-score	Result
1	0.23	-0.69	Satisfactory
2	0.35	0.10	Satisfactory
3	0.32	-0.07	Satisfactory
4	0.58	1.67	Satisfactory
6	0.30	-0.20	Satisfactory
7	0.33	0.00	Satisfactory
9	0.32	-0.07	Satisfactory
10	0.27	-0.40	Satisfactory
11	0.32	-0.07	Satisfactory
12	0.43	0.67	Satisfactory
15	0.40	0.49	Satisfactory
16	0.30	-0.20	Satisfactory
18	N		
19	0.10	-1.53	Satisfactory
20	0.33	0.00	Satisfactory
22	0.22	-0.75	Satisfactory
25	0.25	-0.51	Satisfactory
26	N		
27	N		
30	0.20	-0.87	Satisfactory
34	N		
37	0.48	1.00	Satisfactory
38	0.30	-0.20	Satisfactory
39	0.38	0.33	Satisfactory
40	0.41	0.53	Satisfactory
43	0.49	1.07	Satisfactory
44	0.47	0.96	Satisfactory
45	0.34	0.07	Satisfactory
46	0.04	-1.93	Satisfactory
47	0.60	1.80	Satisfactory
50	0.47	0.93	Satisfactory
56	0.18	-1.01	Satisfactory
59	P		
60	N		

Average	0.34
SD	0.13
CV%	38.17
Median	0.33
Minimum	0.04
Quartile 25	0.27
Quartile 75	0.42
Maximum	0.60
Iqr	0.15

