

Sevilla, August 2022

### Proficiency Test 2022-1

Laboratory Code:

Dear participants.

Enclosed you will find the report of the Proficiency Test 2022-1 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

Sets of three samples were sent to sixty-four participating laboratories. Fifty-eight of them have sent the report forms back.

This report includes quantitative evaluations of the results. This time we have also included other compounds that have been reported by more than one participating laboratory.

### **Z-score**

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**

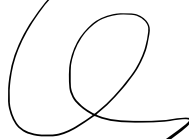
The following criteria have been adopted:

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,

A handwritten signature in black ink, consisting of a large, stylized 'C' followed by a horizontal line that extends to the right and then curves downwards.

Carmen Jurado

**SAMPLE A**



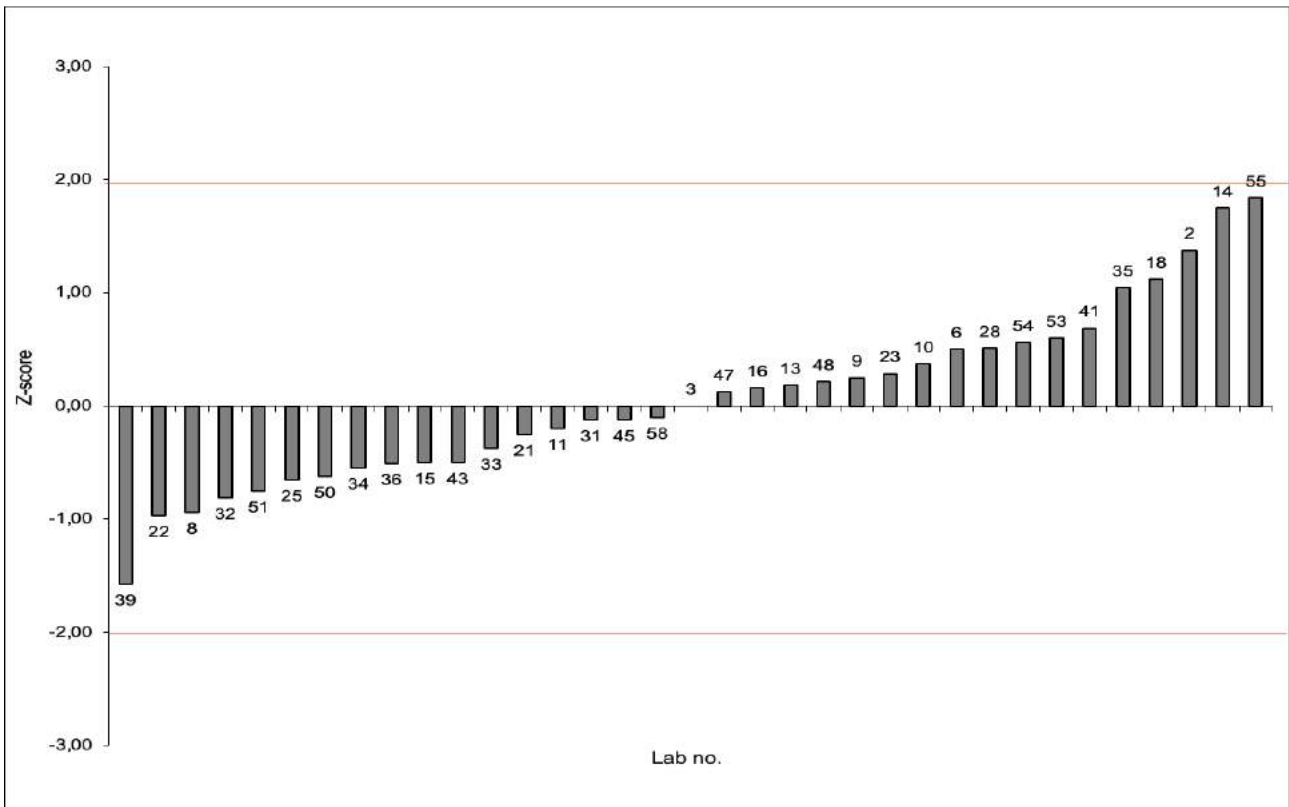
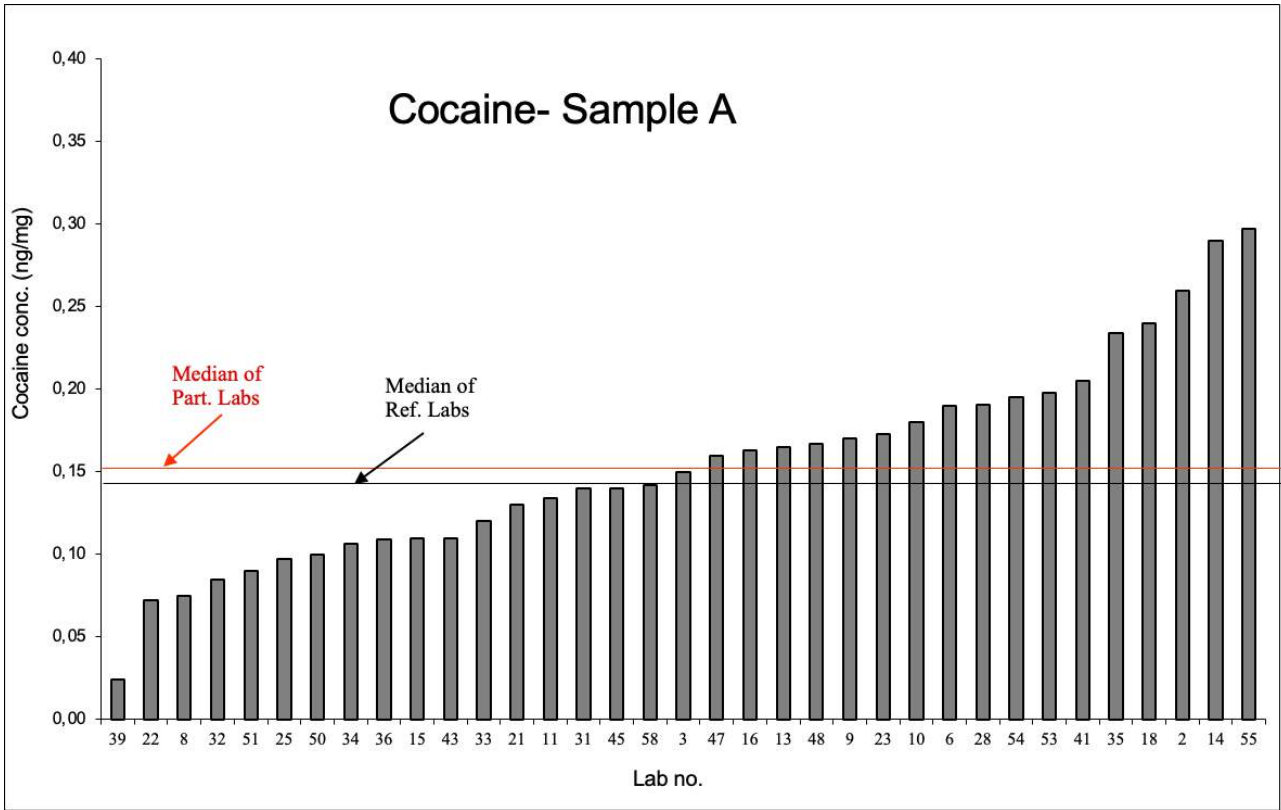
**COCAINE**

Lab	Cocaine (ng/mg)	Z-score	Result
1	N		
2	0.26	1.38	Satisfactory
3	0.15	0.00	Satisfactory
5	N		
6	0.19	0.50	Satisfactory
7	N		
8	0.08	-0.94	Satisfactory
9	0.17	0.25	Satisfactory
10	0.18	0.38	Satisfactory
11	0.13	-0.20	Satisfactory
12	N		
13	0.17	0.19	Satisfactory
14	0.29	1.75	Satisfactory
15	0.11	-0.50	Satisfactory
16	0.16	0.16	Satisfactory
17	N		
18	0.24	1.13	Satisfactory
19	N		
20	N		
21	0.13	-0.25	Satisfactory
22	0.07	-0.97	Satisfactory
23	0.17	0.29	Satisfactory
24	N		
25	0.10	-0.66	Satisfactory
26	N		
28	0.19	0.51	Satisfactory
29	N		
30	N		
31	0.14	-0.13	Satisfactory
32	0.09	-0.81	Satisfactory
33	0.12	-0.38	Satisfactory
34	0.11	-0.55	Satisfactory
35	0.23	1.05	Satisfactory
36	0.11	-0.51	Satisfactory
37	N		
38	U		
39	0.02	-1.58	Satisfactory
40	N		
41	0.21	0.69	Satisfactory
42	N		
43	0.11	-0.50	Satisfactory
44	N		
45	0.14	-0.13	Satisfactory
46	N		
47	0.16	0.13	Satisfactory
48	0.17	0.21	Satisfactory
49	U		
50	0.10	-0.63	Satisfactory
51	0.09	-0.75	Satisfactory
52	N		
53	0.20	0.60	Satisfactory
54	0.20	0.56	Satisfactory

Lab	Cocaine (ng/mg)	Z-score	Result
55	0.30	1.84	Satisfactory
56	N		
57	N		
58	0.14	-0.10	Satisfactory

Average	0.15
SD	0.06
CV%	39.44
Median	0.15
Minimum	0.02
Quartile 25	0.11
Quartile 75	0.19
Maximum	0.30
Iqr	0.08

Cocaine median concentration is below the cut-off proposed by SoHT (0.5 ng/mg).

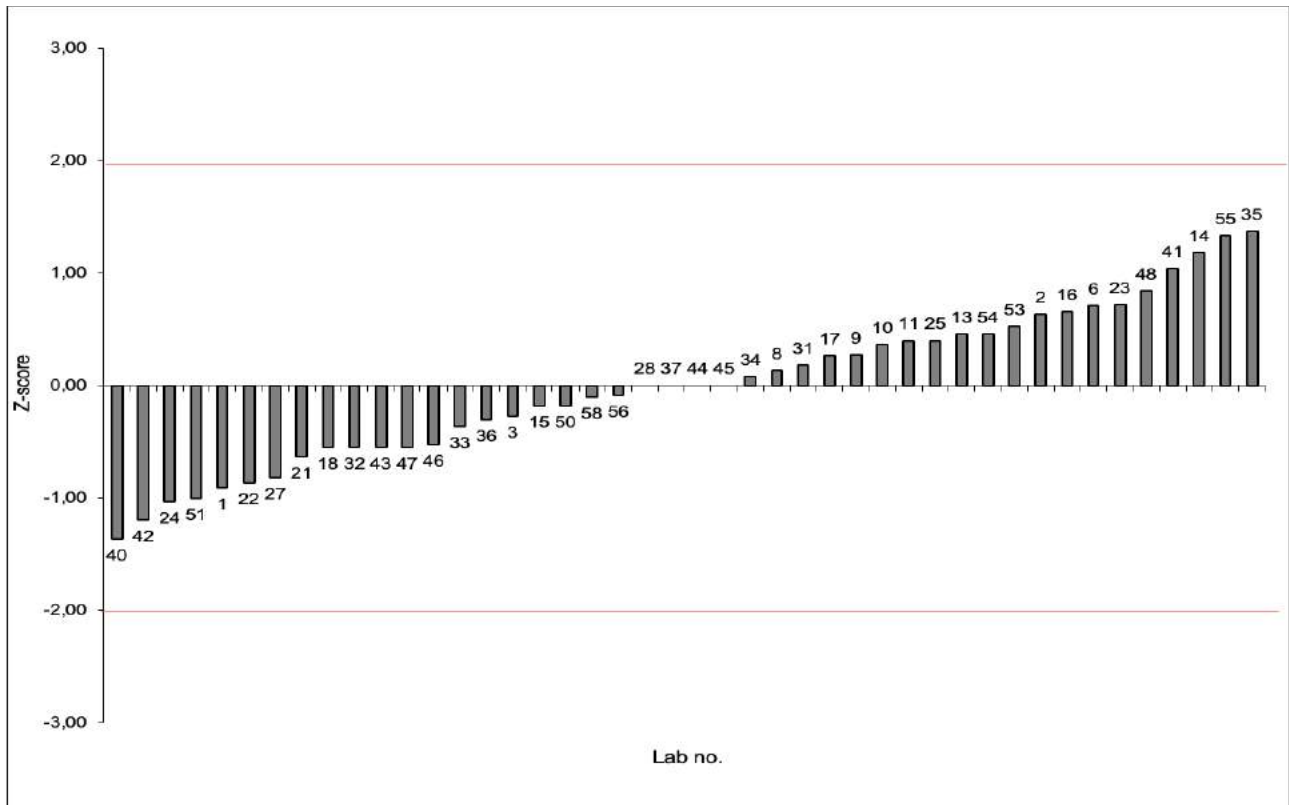
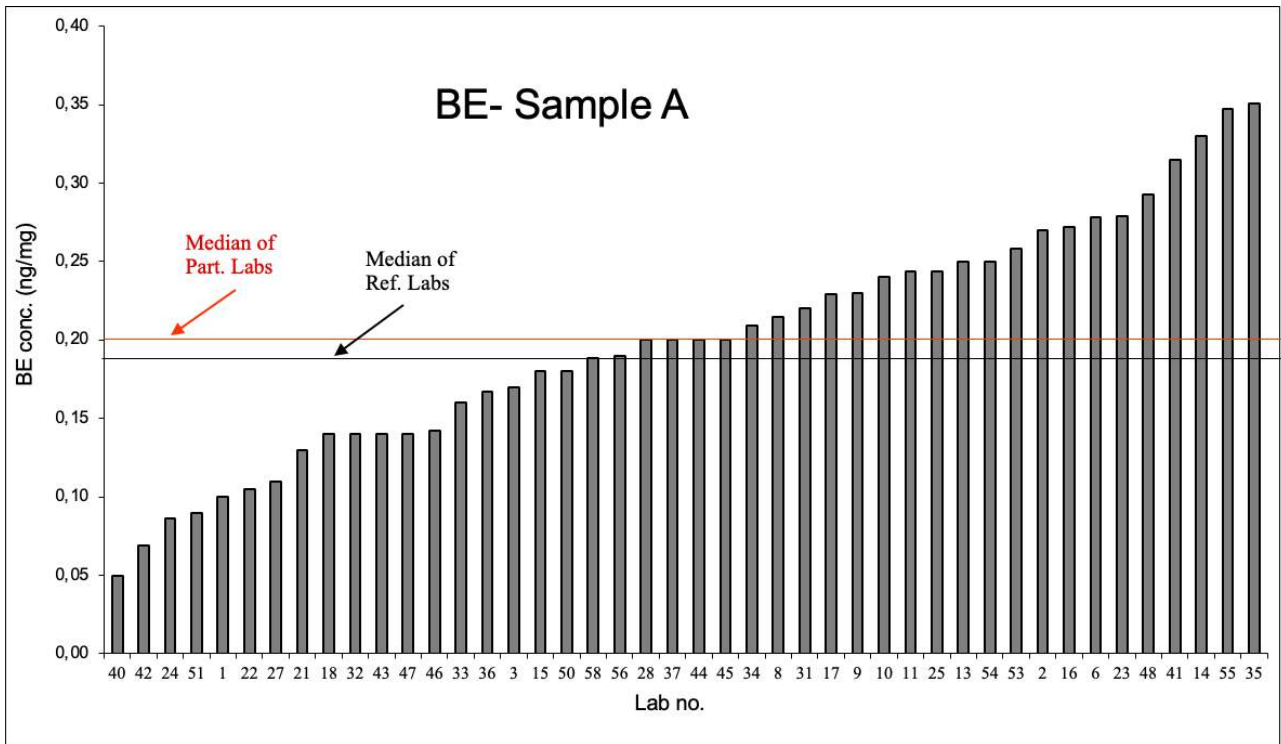


**BENZOYLECGONINE (BE)**

Lab	BE (ng/mg)	Z-score	Result
1	0.10	-0.91	Questionable
2	0.27	0.64	Questionable
3	0.17	-0.27	Satisfactory
5	N		
6	0.28	0.71	Satisfactory
7	N		
8	0.22	0.14	Satisfactory
9	0.23	0.27	Satisfactory
10	0.24	0.36	Satisfactory
11	0.24	0.40	Satisfactory
12	N		
13	0.25	0.45	Satisfactory
14	0.33	1.18	Satisfactory
15	0.18	-0.18	Satisfactory
16	0.27	0.65	Satisfactory
17	0.23	0.26	Satisfactory
18	0.14	-0.55	Satisfactory
19	N		
20	N		
21	0.13	-0.64	Satisfactory
22	0.11	-0.86	Satisfactory
23	0.28	0.72	Satisfactory
24	0.09	-1.04	Satisfactory
25	0.24	0.40	Satisfactory
26	N		
27	0.11	-0.82	Satisfactory
28	0.20	0.00	Satisfactory
29	N		
30	N		
31	0.22	0.18	Satisfactory
32	0.14	-0.55	Satisfactory
33	0.16	-0.36	Satisfactory
34	0.21	0.08	Satisfactory
35	0.35	1.37	Satisfactory
36	0.17	-0.30	Satisfactory
37	0.20	0.00	Satisfactory
38	P		
39	N		
40	0.05	-1.36	Satisfactory
41	0.32	1.05	Satisfactory
42	0.07	-1.19	Satisfactory
43	0.14	-0.55	Satisfactory
44	0.20	0.00	Satisfactory
45	0.20	0.00	Satisfactory
46	0.14	-0.53	Satisfactory
47	0.14	-0.55	Satisfactory
48	0.29	0.85	Satisfactory
49	U		
50	0.18	-0.18	Satisfactory
51	0.09	-1.00	Satisfactory
52	N		
53	0.26	0.53	Satisfactory

Lab	BE (ng/mg)	Z-score	Result
54	0.25	0.45	Satisfactory
55	0.35	1.34	Satisfactory
56	0.19	-0.09	
58	0.19	-0.10	

Average	0.20
SD	0.07
CV%	37.00
Median	0.20
Minimum	0.05
Quartile 25	0.14
Quartile 75	0.25
Maximum	0.35
Iqr	0.11



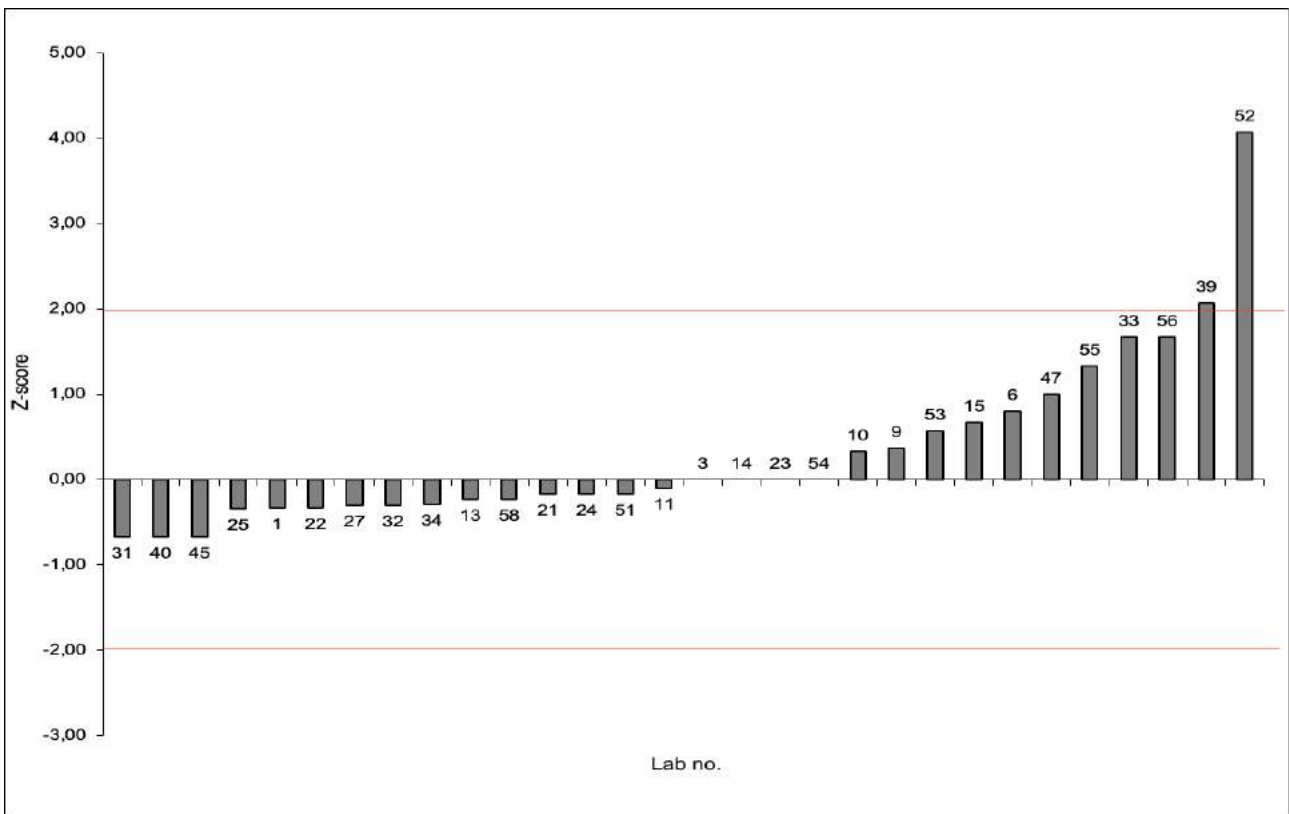
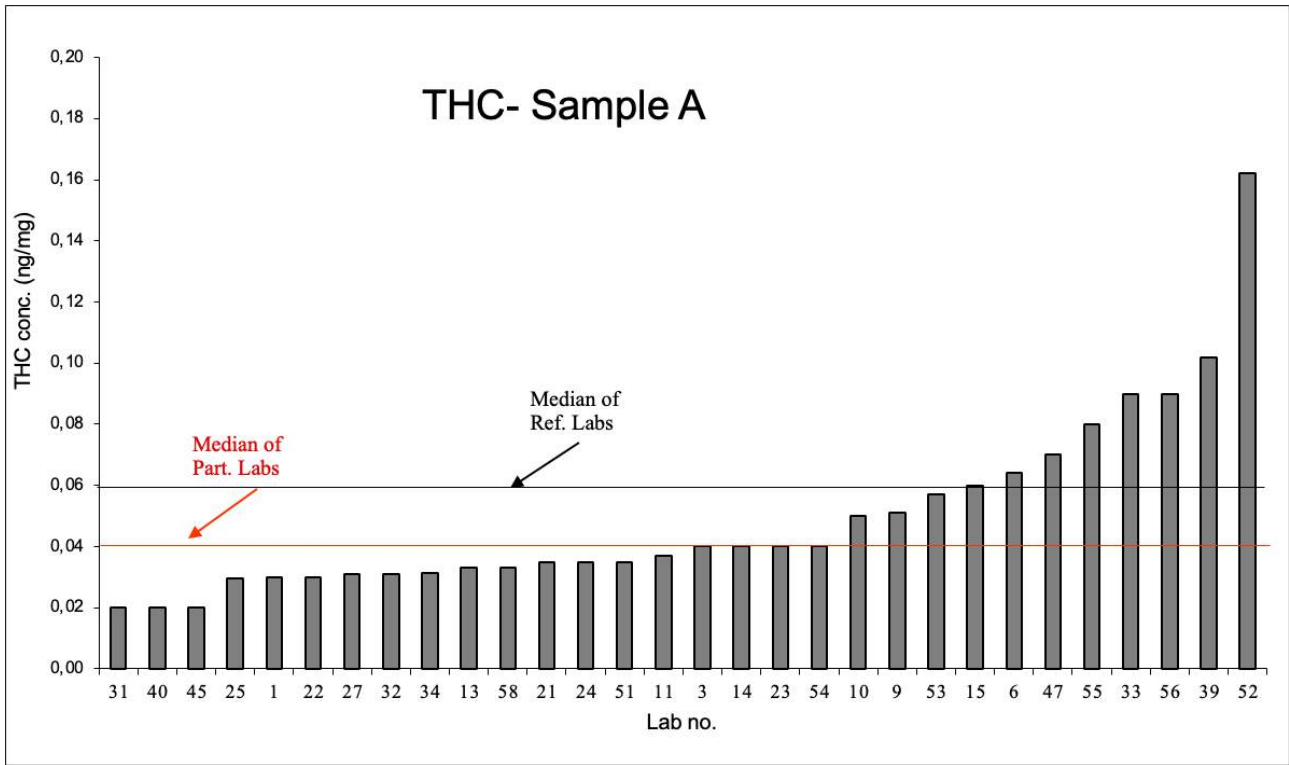


**$\Delta^9$ -TETRAHYDROCANNABINOL (THC)**

Lab	THC (ng/mg)	Z-score	Result
1	0.03	-0.33	Satisfactory
2	N		
3	0.04	0.00	Satisfactory
5	N		
6	0.06	0.80	Satisfactory
7	N		
9	0.05	0.37	Satisfactory
10	0.05	0.33	Satisfactory
11	0.04	-0.10	Satisfactory
13	0.03	-0.23	Satisfactory
14	0.04	0.00	Satisfactory
15	0.06	0.67	Satisfactory
16	P		
18	N		
20	N		
21	0.04	-0.17	Satisfactory
22	0.03	-0.33	Satisfactory
23	0.04	0.00	Satisfactory
24	0.04	-0.17	Satisfactory
25	0.03	-0.34	Satisfactory
26	P		
27	0.03	-0.30	Satisfactory
31	0.02	-0.67	Satisfactory
32	0.03	-0.30	Satisfactory
33	0.09	1.67	Satisfactory
34	0.03	-0.29	Satisfactory
36	N		
37	N		
38	U		
39	0.10	2.07	Questionable
40	0.02	-0.67	Satisfactory
42	N		
43	N		
44	N		
45	0.02	-0.67	Satisfactory
46	N		
47	0.07	1.00	Satisfactory
51	0.04	-0.17	Satisfactory
52	0.16	4.07	Unsatisfactory
53	0.06	0.57	Satisfactory
54	0.04	0.00	Satisfactory
55	0.08	1.33	Satisfactory
56	0.09	1.67	Satisfactory
58	0.03	-0.23	Satisfactory

Average	0.05
SD	0.03
CV%	60.38
Median	0.04
Minimum	0.02
Quartile 25	0.03
Quartile 75	0.06
Maximum	0.16
Iqr	0.03

THC median concentration is below the cut-off proposed by SoHT (0.05 ng/mg).

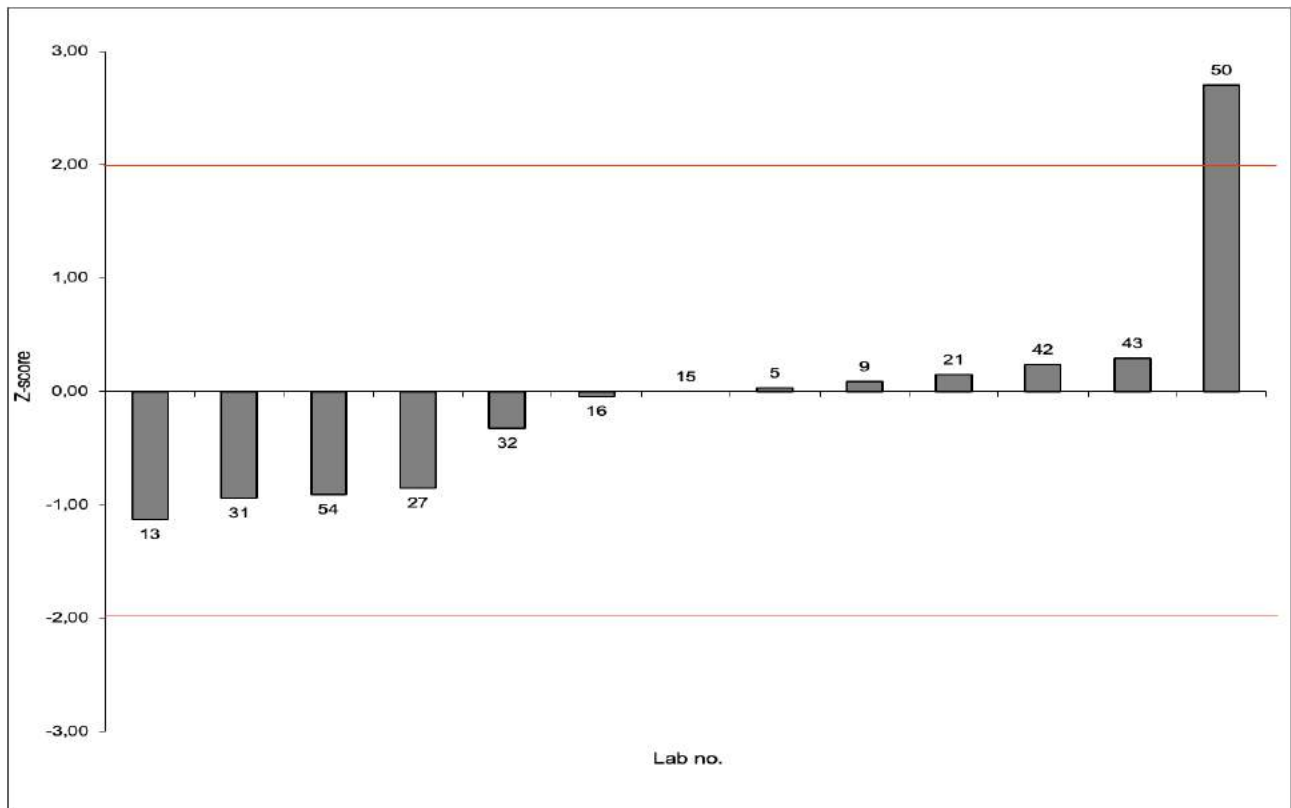
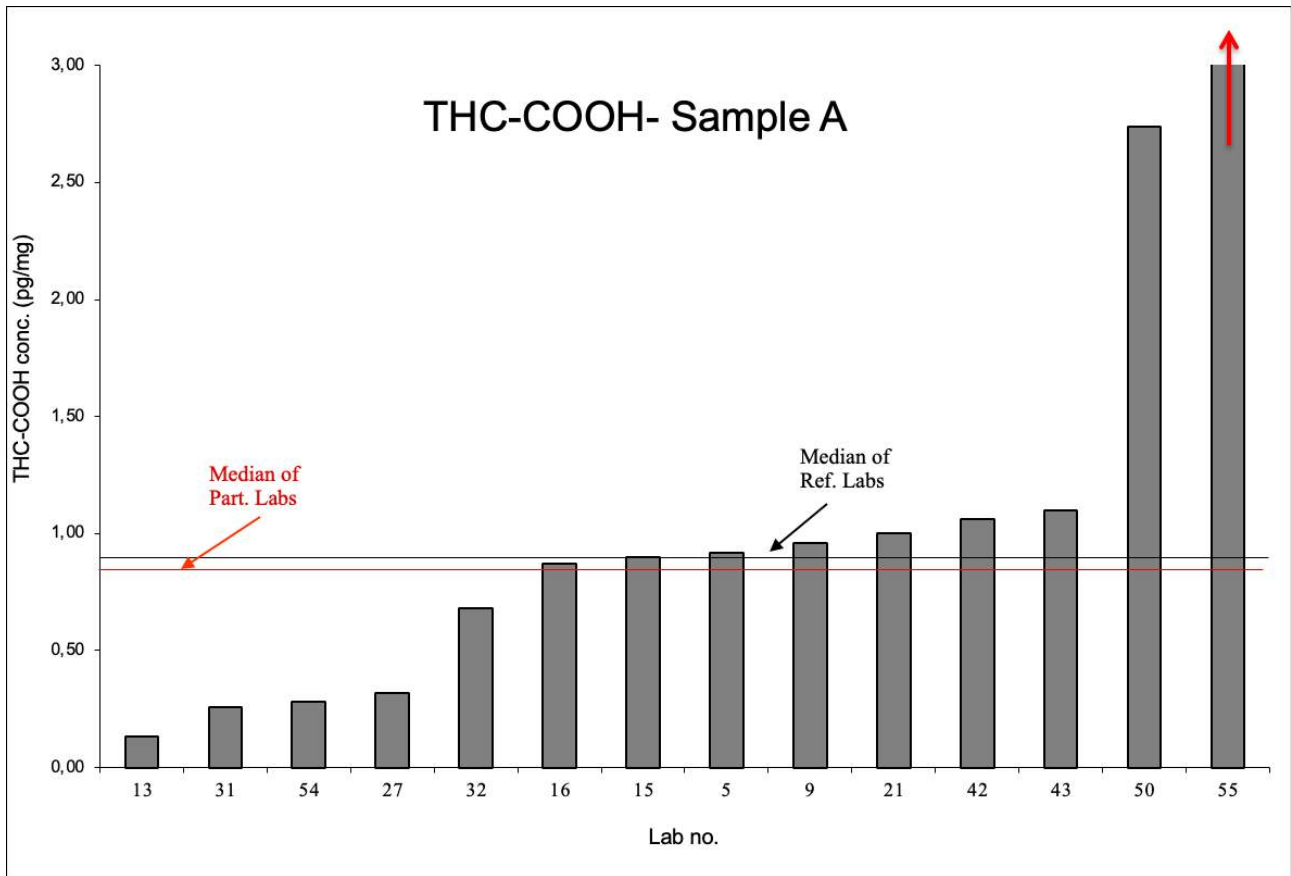


## 11-nor- $\Delta^9$ -TETRAHYDROCANNABINOL-9-CARBOXYLIC ACID (THC-COOH)

Lab	THC-COOH (pg/mg)	Z-score	Result
1	N		
5	0.92	0.03	Satisfactory
7	N		
9	0.96	0.09	Satisfactory
12	N		
13	0.14	-1.13	Satisfactory
15	0.90	0.00	Satisfactory
16	0.87	-0.04	Satisfactory
18	N		
21	1.00	0.15	Satisfactory
27	0.32	-0.85	Satisfactory
31	0.26	-0.94	Satisfactory
32	0.68	-0.32	Satisfactory
36	P		
37	N		
38	U		
42	1.06	0.24	Satisfactory
43	1.10	0.29	Satisfactory
50	2.74	2.71	Questionable
54	0.28	-0.91	Satisfactory
55	350.00	Outlier*	
58	N		

\*Lab 55 has not included in the statistical study

Average	0.86
SD	0.63
CV%	73.34
Median	0.90
Minimum	0.14
Quartile 25	0.32
Quartile 75	1.00
Maximum	2.74
Iqr	0.68



**SAMPLE B**

Sample B contents were as follows:

- Opiate compounds: 6-MAM, morphine and codeine
- Cocaine compounds: cocaine, BE and low concentrations of cocaethylene (0.01 ng/mg median conc.) and norcocaine (0.02 ng/mg median conc.)
- Cannabis compounds: THC-COOH and low concentrations of THC (0.03 ng/mg median conc.)
- Methadone and EDDP
- Tramadol
- Diazepam and nordazepam

Other compounds reported by more than two participating laboratories were:

Compound	N <sup>*</sup>	Average	SD	CV%	Median	Minimum	Quartile 25	Quartile 75	Maximum	Iqr
DHC	20	0.32	0.13	39.61	0.25	0.19	0.22	0.40	0.64	0.18
Ketamine	20	0.11	0.16	149.76	0.07	0.01	0.05	0.09	0.78	0.04
CBN	12	0.10	0.18	176.96	0.04	0.03	0.04	0.05	0.66	0.01
Acetylcodeine	9	0.41	0.06	15.47	0.40	0.35	0.35	0.44	0.54	0.09
CBD	9	0.04	0.03	67.81	0.03	0.01	0.02	0.05	0.10	0.03
Fentanyl	9	0.01	0.00	20.07	0.01	0.01	0.01	0.01	0.01	0.00
AEME	8	0.69	0.80	115.81	0.41	0.26	0.38	0.45	2.80	0.07
Heroin	8	0.13	0.02	16.08	0.13	0.10	0.12	0.13	0.18	0.01
nor-Tramadol	8	0.87	0.47	54.52	0.78	0.33	0.48	1.18	1.58	0.69
Tilidine	8	0.72	1.52	210.79	0.15	0.11	0.14	0.17	4.75	0.03
Norketamine	7	0.02	0.01	58.38	0.01	0.01	0.01	0.02	0.03	0.01
buprenorphine	6	0.05	0.06	113.23	0.01	0.01	0.01	0.10	0.13	0.09
Nortilidine	6	0.51	0.10	19.46	0.53	0.38	0.42	0.55	0.66	0.13
Zopiclone	5	0.02	0.01	46.45	0.02	0.00	0.01	0.02	0.02	0.01
Diphenhydramine	4	0.02	0.00	9.52	0.02	0.02	0.02	0.02	0.02	0.00
Hydromorphone	4	0.08	0.02	26.58	0.08	0.06	0.07	0.09	0.10	0.02
JWH-210	4	0.02	0.00	25.00	0.02	0.01	0.01	0.02	0.02	0.00
o-Desmethyltramadol	4	0.25	0.05	21.43	0.27	0.16	0.24	0.28	0.30	0.04
Citalopram	3	0.08	0.03	35.48	0.08	0.05	0.06	0.09	0.11	0.03
Doxylamine	3	0.65	0.00	0.00	0.65	0.65	0.65	0.65	0.65	0.00
JWH-018	3	0.01	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.00
JWH-073	3	0.02	0.00	0.00	0.02	0.02	0.02	0.02	0.02	0.00
JWH-081	3	0.28	0.00	0.00	0.28	0.28	0.28	0.28	0.28	0.00
JWH-122	3	0.13	0.00	0.00	0.13	0.13	0.13	0.13	0.13	0.00
JWH-250	3	0.03	0.00	0.00	0.03	0.03	0.03	0.03	0.03	0.00
Oxycodone	3	0.05	0.05	103.03	0.02	0.01	0.01	0.07	0.12	0.05

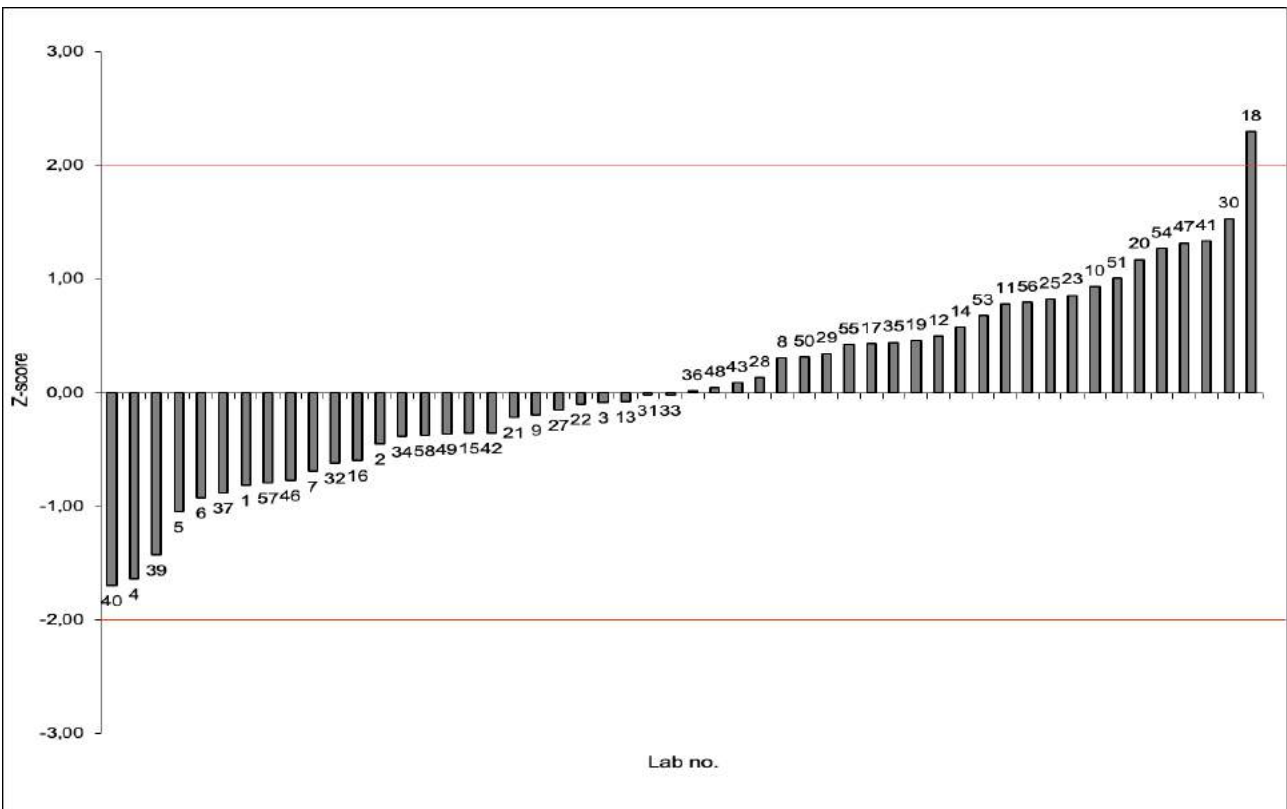
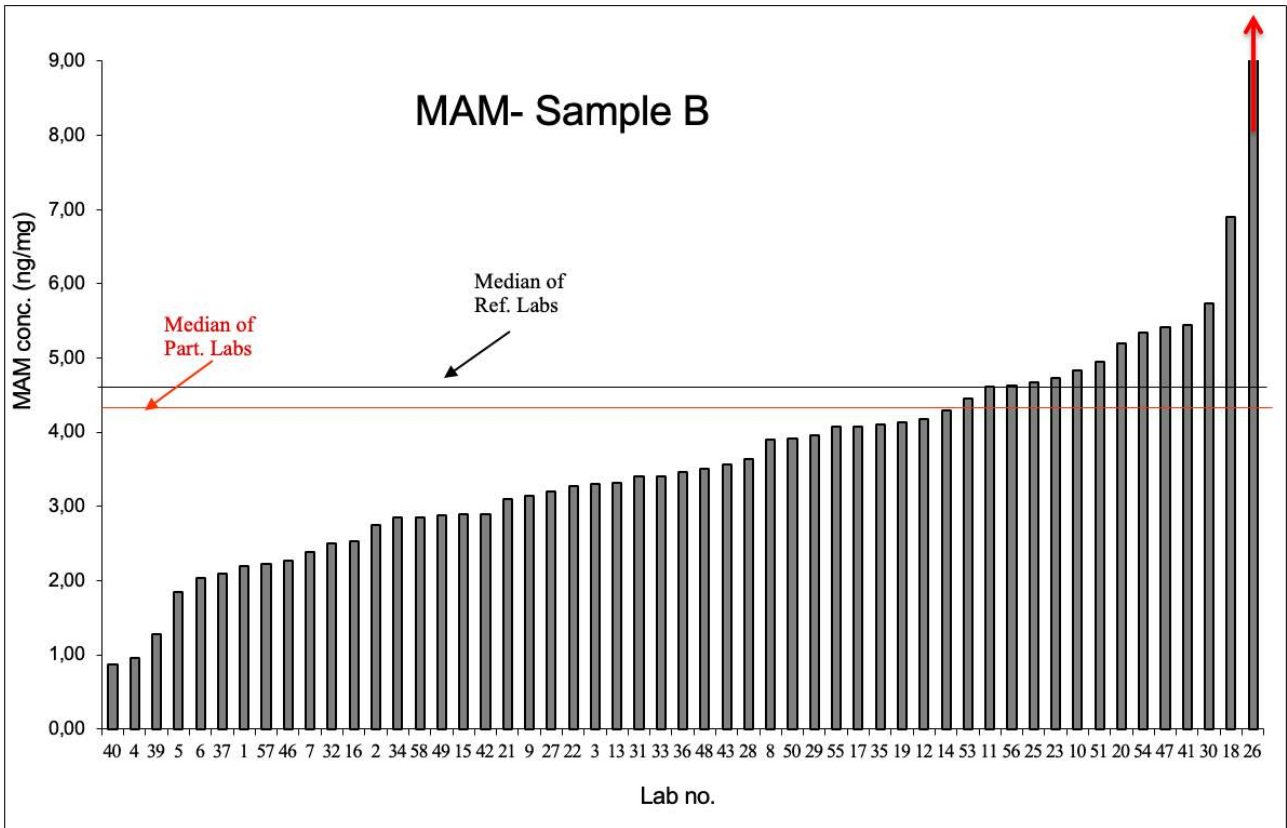
**6-MONOACETYL MORPHINE (MAM)**

Lab	MAM (ng/mg)	Z-score	Result
1	2.20	-0.81	Satisfactory
2	2.75	-0.45	Satisfactory
3	3.30	-0.09	Satisfactory
4	0.96	-1.64	Satisfactory
5	1.85	-1.04	Satisfactory
6	2.04	-0.92	Satisfactory
7	2.39	-0.69	Satisfactory
8	3.90	0.31	Satisfactory
9	3.14	-0.19	Satisfactory
10	4.84	0.93	Satisfactory
11	4.61	0.78	Satisfactory
12	4.18	0.50	Satisfactory
13	3.32	-0.08	Satisfactory
14	4.30	0.58	Satisfactory
15	2.89	-0.36	Satisfactory
16	2.53	-0.59	Satisfactory
17	4.08	0.43	Satisfactory
18	6.90	2.30	Questionable
19	4.13	0.46	Satisfactory
20	5.20	1.17	Satisfactory
21	3.10	-0.22	Satisfactory
22	3.28	-0.10	Satisfactory
23	4.73	0.86	Satisfactory
25	4.68	0.83	Satisfactory
26	87.43	Outlier*	
27	3.20	-0.15	Satisfactory
28	3.63	0.13	Satisfactory
29	3.95	0.35	Satisfactory
30	5.74	1.53	Satisfactory
31	3.40	-0.02	Satisfactory
32	2.50	-0.62	Satisfactory
33	3.40	-0.02	Satisfactory
34	2.85	-0.38	Satisfactory
35	4.10	0.44	Satisfactory
36	3.46	0.02	Satisfactory
37	2.10	-0.88	Satisfactory
38	P		
39	1.28	-1.43	Satisfactory
40	0.87	-1.70	Satisfactory
41	5.45	1.34	Satisfactory
42	2.90	-0.35	Satisfactory
43	3.57	0.09	Satisfactory
44	P		
45	>2.0		
46	2.27	-0.77	Satisfactory
47	5.42	1.32	Satisfactory
48	3.50	0.05	Satisfactory
49	2.88	-0.36	Satisfactory
50	3.91	0.32	Satisfactory
51	4.95	1.01	Satisfactory
53	4.46	0.68	Satisfactory
54	5.35	1.27	Satisfactory

Lab	MAM (ng/mg)	Z-score	Result
55	4.07	0.42	Satisfactory
56	4.63	0.79	Satisfactory
57	2.23	-0.79	Satisfactory
58	2.86	-0.38	Satisfactory

\*Lab 26 has not been included in the statistical study

Average	3.54
SD	1.24
CV%	34.94
Median	3.43
Minimum	0.87
Quartile 25	2.83
Quartile 75	4.34
Maximum	6.90
Iqr	1.51





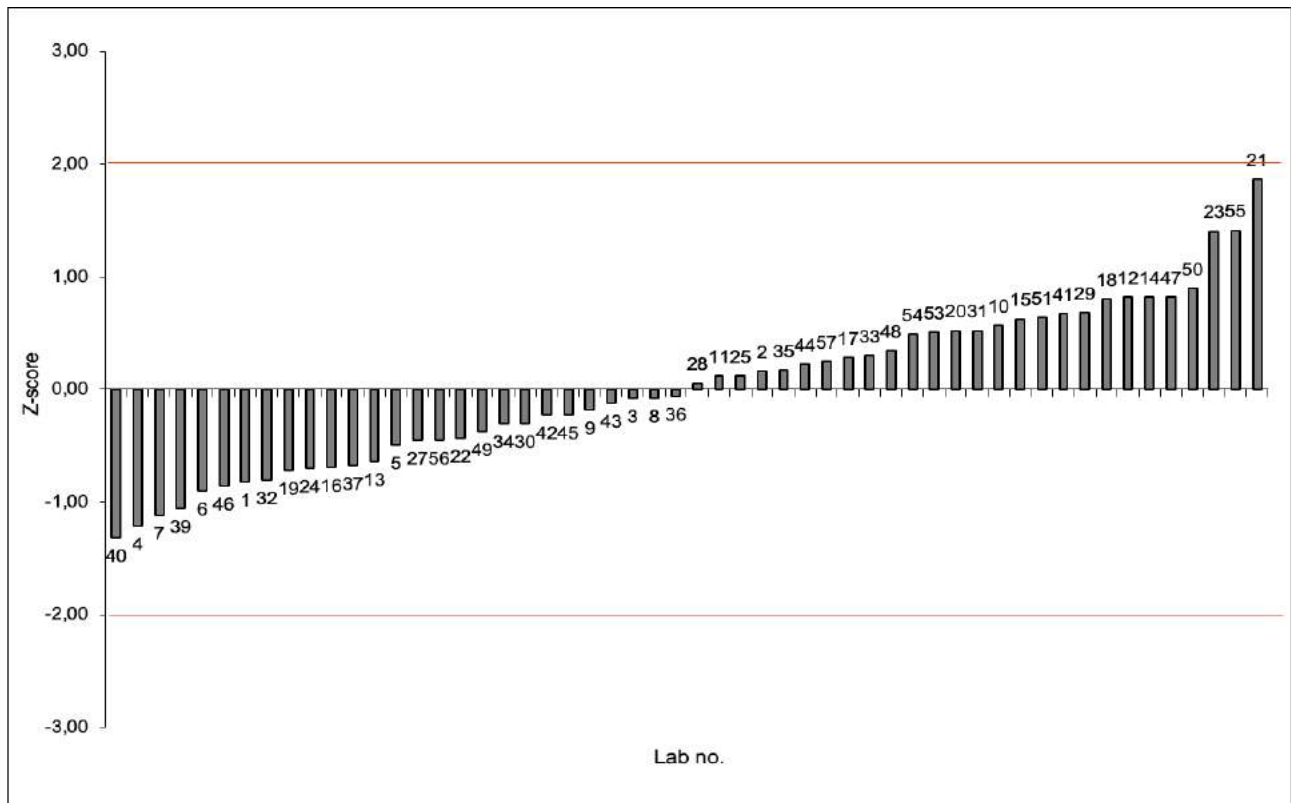
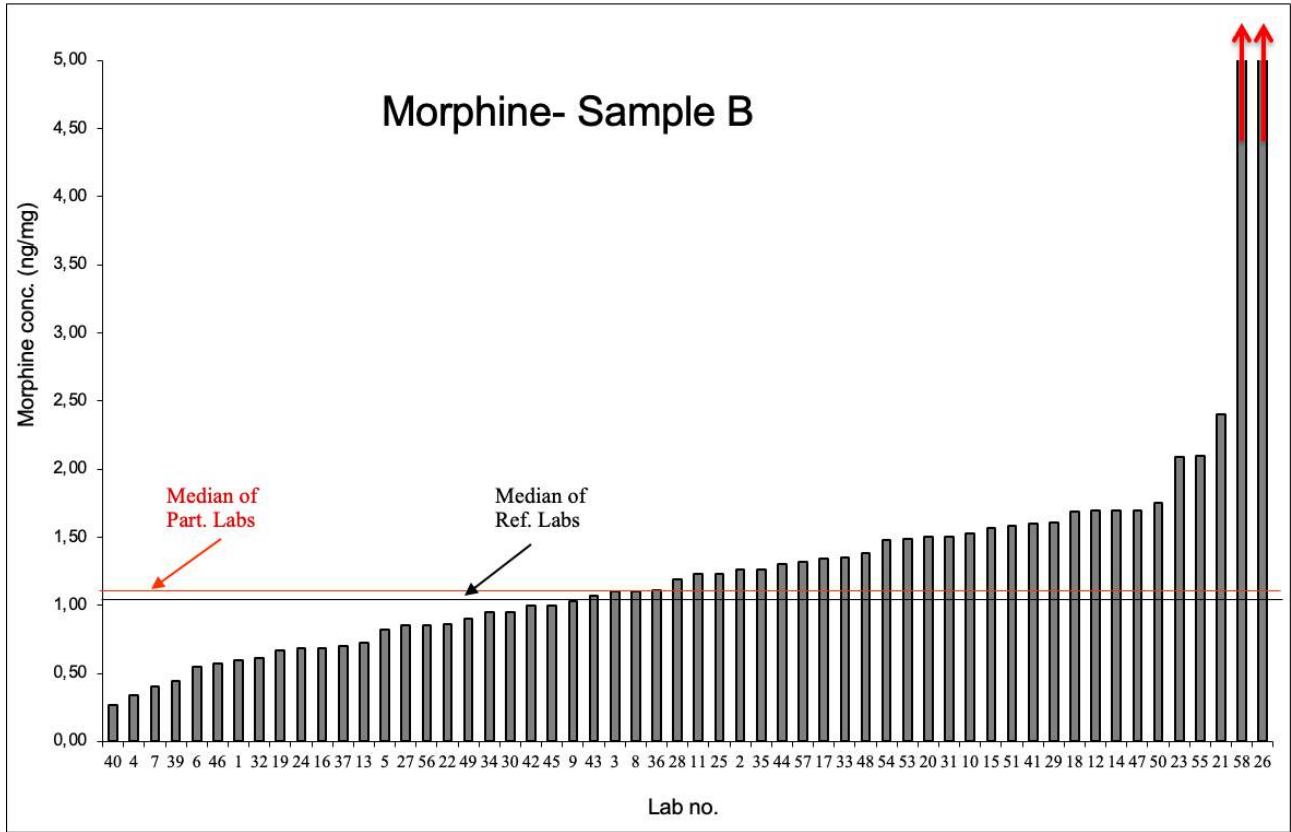
**MORPHINE**

Lab	Morphine (ng/mg)	Z-score	Result
1	0.60	-0.82	Satisfactory
2	1.26	0.16	Satisfactory
3	1.10	-0.07	Satisfactory
4	0.34	-1.21	Satisfactory
5	0.82	-0.49	Satisfactory
6	0.55	-0.90	Satisfactory
7	0.40	-1.12	Satisfactory
8	1.10	-0.07	Satisfactory
9	1.03	-0.18	Satisfactory
10	1.53	0.57	Satisfactory
11	1.23	0.12	Satisfactory
12	1.70	0.82	Satisfactory
13	0.72	-0.64	Satisfactory
14	1.70	0.82	Satisfactory
15	1.57	0.63	Satisfactory
16	0.69	-0.69	Satisfactory
17	1.34	0.28	Satisfactory
18	1.69	0.81	Satisfactory
19	0.67	-0.72	Satisfactory
20	1.50	0.52	Satisfactory
21	2.40	1.87	Satisfactory
22	0.86	-0.43	Satisfactory
23	2.09	1.40	Satisfactory
24	0.68	-0.70	Satisfactory
25	1.23	0.12	Satisfactory
26	8.73	Outlier*	
27	0.85	-0.45	Satisfactory
28	1.19	0.06	Satisfactory
29	1.61	0.69	Satisfactory
30	0.95	-0.30	Satisfactory
31	1.50	0.52	Satisfactory
32	0.61	-0.81	Satisfactory
33	1.35	0.30	Satisfactory
34	0.95	-0.30	Satisfactory
35	1.26	0.17	Satisfactory
36	1.11	-0.06	Satisfactory
37	0.70	-0.67	Satisfactory
38	P		
39	0.44	-1.06	Satisfactory
40	0.27	-1.31	Satisfactory
41	1.60	0.67	Satisfactory
42	1.00	-0.22	Satisfactory
43	1.07	-0.12	Satisfactory
44	1.30	0.22	Satisfactory
45	1.00	-0.22	Satisfactory
46	0.57	-0.86	Satisfactory
47	1.70	0.82	Satisfactory
48	1.38	0.35	Satisfactory
49	0.90	-0.37	Satisfactory
50	1.75	0.90	Satisfactory
51	1.58	0.64	Satisfactory
52	N		

Lab	Morphine (ng/mg)	Z-score	Result
53	1.49	0.51	Satisfactory
54	1.48	0.49	Satisfactory
55	2.10	1.41	Satisfactory
56	0.85	-0.45	Satisfactory
57	1.32	0.25	Satisfactory
58	5.56	Outlier*	

\*Labs 26 and 58 have not been included in the statistical study

Average	1.16
SD	0.47
CV%	40.48
Median	1.15
Minimum	0.27
Quartile 25	0.83
Quartile 75	1.50
Maximum	2.40
Iqr	0.67



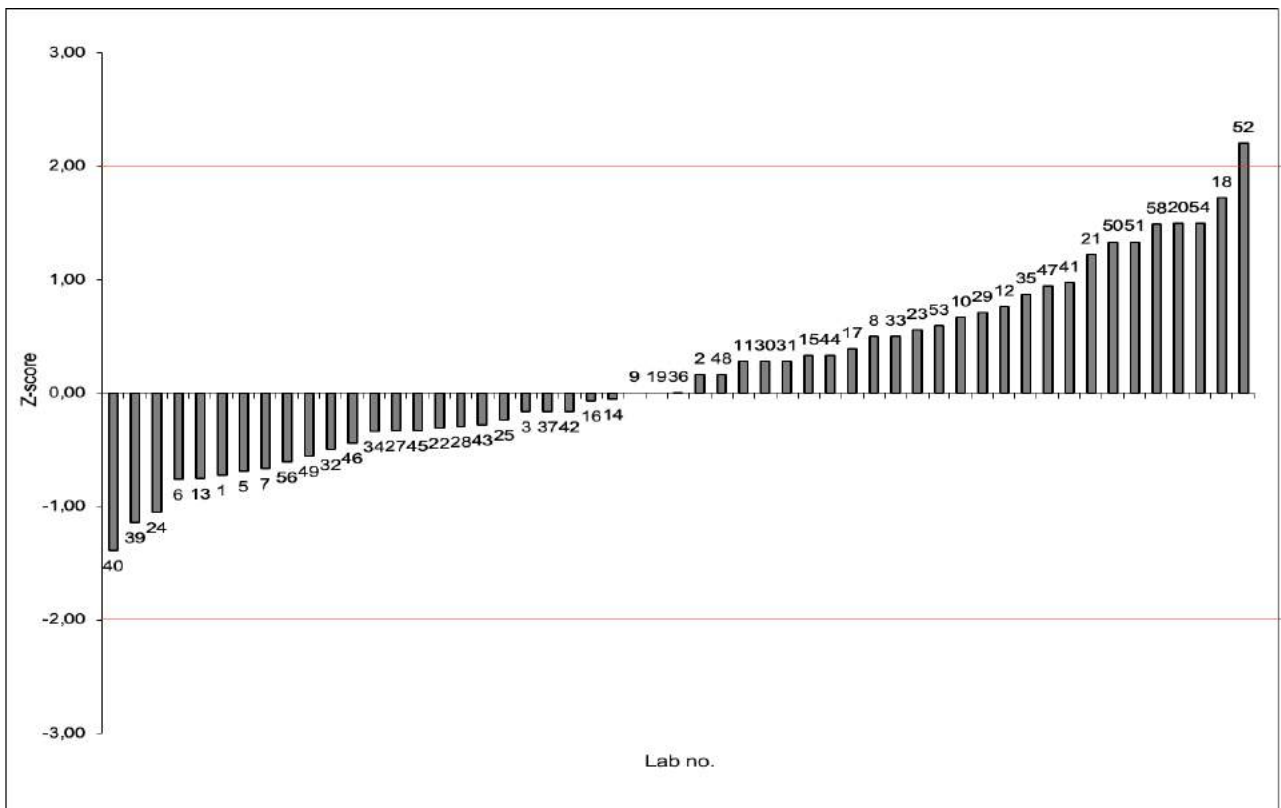
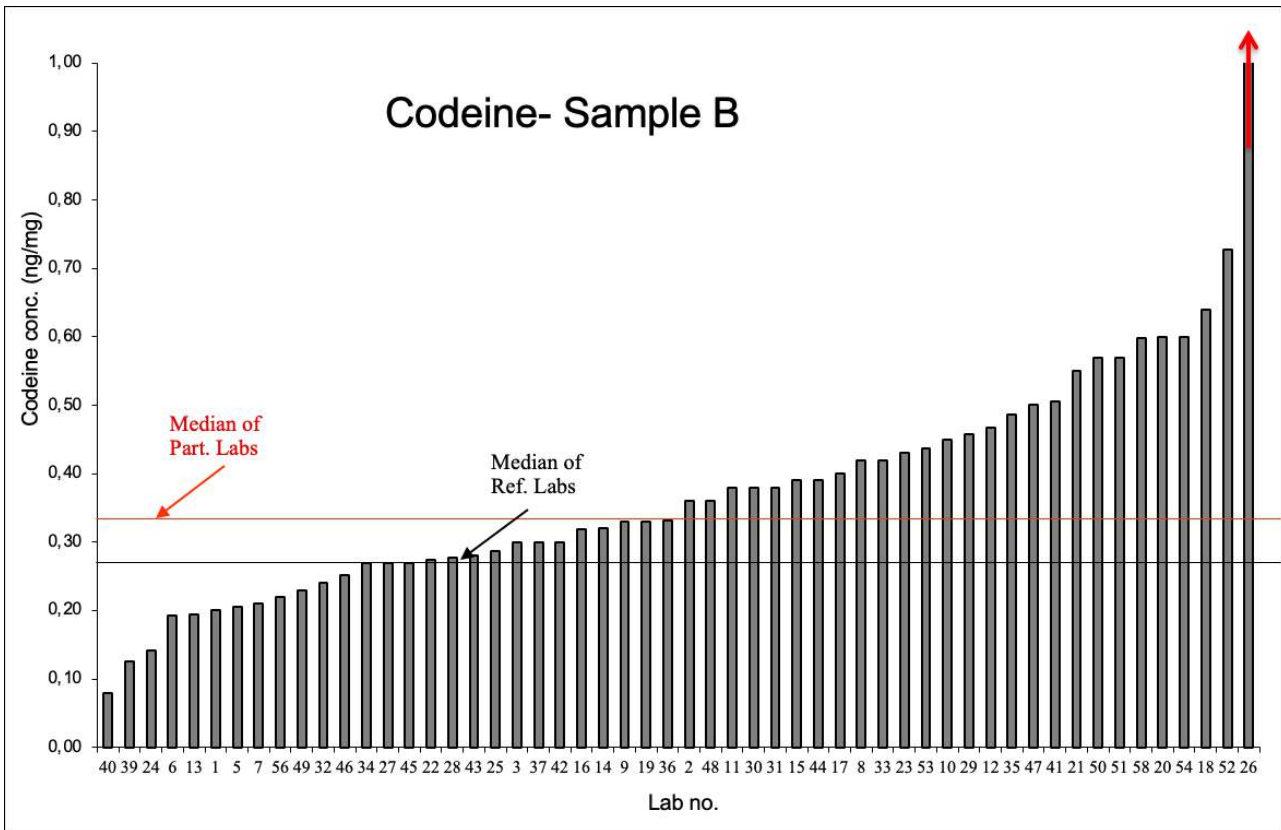
**CODEINE**

Lab	Codeine (ng/mg)	Z-score	Result
1	0.20	-0.72	Satisfactory
2	0.36	0.17	Satisfactory
3	0.30	-0.17	Satisfactory
4	N		
5	0.21	-0.69	Satisfactory
6	0.19	-0.76	Satisfactory
7	0.21	-0.67	Satisfactory
8	0.42	0.50	Satisfactory
9	0.33	0.00	Satisfactory
10	0.45	0.67	Satisfactory
11	0.38	0.28	Satisfactory
12	0.47	0.76	Satisfactory
13	0.20	-0.75	Satisfactory
14	0.32	-0.06	Satisfactory
15	0.39	0.33	Satisfactory
16	0.32	-0.07	Satisfactory
17	0.40	0.39	Satisfactory
18	0.64	1.72	Satisfactory
19	0.33	0.00	Satisfactory
20	0.60	1.50	Satisfactory
21	0.55	1.22	Satisfactory
22	0.27	-0.31	Satisfactory
23	0.43	0.56	Satisfactory
24	0.14	-1.05	Satisfactory
25	0.29	-0.24	Satisfactory
26	6.22	Outlier*	
27	0.27	-0.33	Satisfactory
28	0.28	-0.29	Satisfactory
29	0.46	0.71	Satisfactory
30	0.38	0.28	Satisfactory
31	0.38	0.28	Satisfactory
32	0.24	-0.50	Satisfactory
33	0.42	0.50	Satisfactory
34	0.27	-0.34	Satisfactory
35	0.49	0.87	Satisfactory
36	0.33	0.01	Satisfactory
37	0.30	-0.17	Satisfactory
38	U		
39	0.13	-1.14	Satisfactory
40	0.08	-1.39	Satisfactory
41	0.51	0.97	Satisfactory
42	0.30	-0.17	Satisfactory
43	0.28	-0.28	Satisfactory
44	0.39	0.33	Satisfactory
45	0.27	-0.33	Satisfactory
46	0.25	-0.44	Satisfactory
47	0.50	0.94	Satisfactory
48	0.36	0.17	Satisfactory
49	0.23	-0.56	Satisfactory
50	0.57	1.33	Satisfactory
51	0.57	1.33	Satisfactory
52	0.73	2.21	Questionable

Lab	Codeine (ng/mg)	Z-score	Result
53	0.44	0.59	Satisfactory
54	0.60	1.50	Satisfactory
56	0.22	-0.61	Satisfactory
57	N		
58	0.60	1.49	Satisfactory

\*Lab 26 has not been included in the statistical study

Average	0.36
SD	0.14
CV%	38.93
Median	0.33
Minimum	0.08
Quartile 25	0.27
Quartile 75	0.45
Maximum	0.73
Iqr	0.18



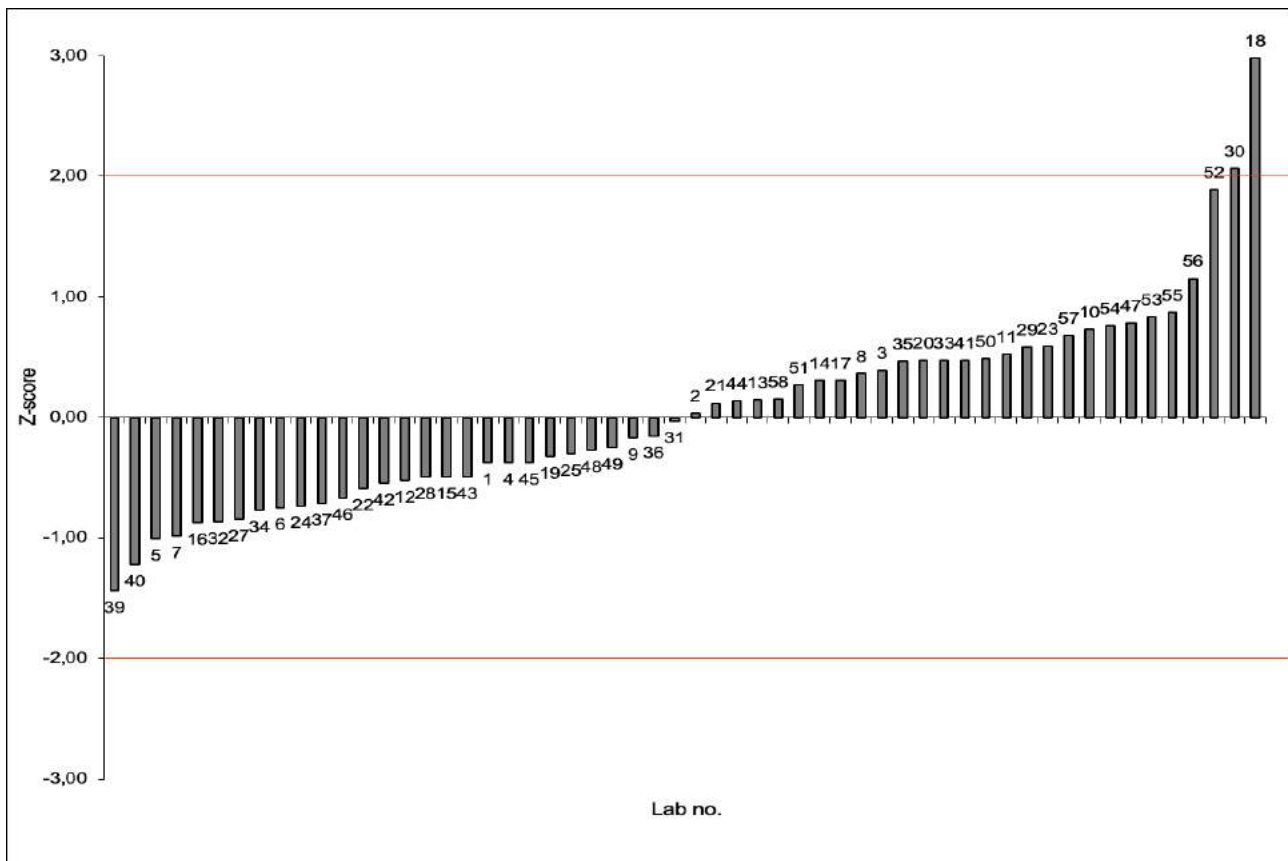
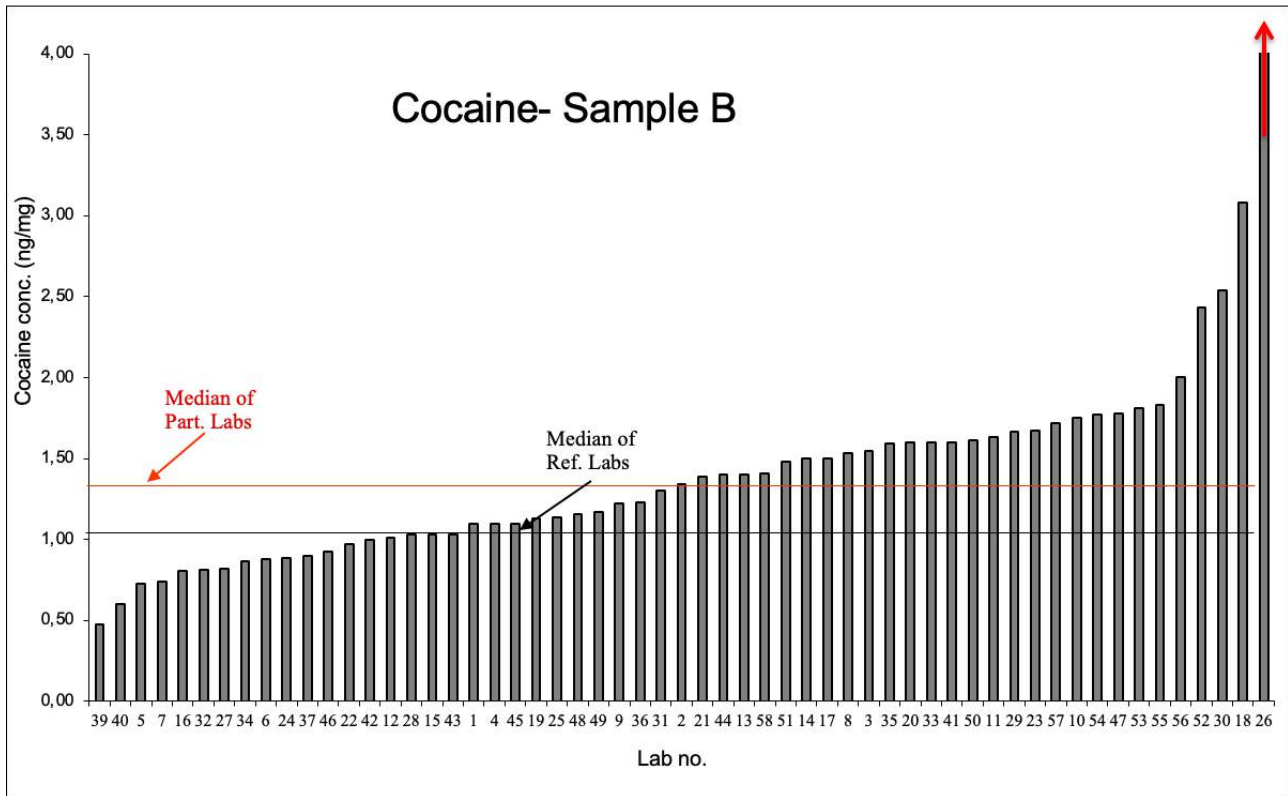
**COCAINE**

Lab	Cocaine (ng/mg)	Z-score	Result
1	1.10	-0.37	Satisfactory
2	1.34	0.03	Satisfactory
3	1.55	0.39	Satisfactory
4	1.10	-0.37	Satisfactory
5	0.73	-1.00	Satisfactory
6	0.88	-0.75	Satisfactory
7	0.74	-0.98	Satisfactory
8	1.54	0.36	Satisfactory
9	1.22	-0.17	Satisfactory
10	1.75	0.73	Satisfactory
11	1.63	0.53	Satisfactory
12	1.01	-0.52	Satisfactory
13	1.40	0.14	Satisfactory
14	1.50	0.31	Satisfactory
15	1.03	-0.49	Satisfactory
16	0.81	-0.87	Satisfactory
17	1.50	0.31	Satisfactory
18	3.08	2.98	Questionable
19	1.13	-0.32	Satisfactory
20	1.60	0.47	Satisfactory
21	1.39	0.12	Satisfactory
22	0.97	-0.59	Satisfactory
23	1.67	0.59	Satisfactory
24	0.89	-0.74	Satisfactory
25	1.14	-0.31	Satisfactory
26	8.96	Outlier*	
27	0.82	-0.85	Satisfactory
28	1.03	-0.49	Satisfactory
29	1.67	0.59	Satisfactory
30	2.54	2.07	Questionable
31	1.30	-0.03	Satisfactory
32	0.81	-0.86	Satisfactory
33	1.60	0.47	Satisfactory
34	0.86	-0.77	Satisfactory
35	1.59	0.46	Satisfactory
36	1.23	-0.15	Satisfactory
37	0.90	-0.71	Satisfactory
38	P		
39	0.47	-1.44	Satisfactory
40	0.60	-1.22	Satisfactory
41	1.60	0.47	Satisfactory
42	1.00	-0.54	Satisfactory
43	1.03	-0.49	Satisfactory
44	1.40	0.14	Satisfactory
45	1.10	-0.37	Satisfactory
46	0.92	-0.67	Satisfactory
47	1.78	0.78	Satisfactory
48	1.16	-0.27	Satisfactory
49	1.17	-0.25	Satisfactory
50	1.61	0.49	Satisfactory
51	1.48	0.27	Satisfactory
52	2.44	1.89	Satisfactory

Lab	Cocaine (ng/mg)	Z-score	Result
53	1.81	0.83	Satisfactory
54	1.77	0.76	Satisfactory
55	1.83	0.87	Satisfactory
56	2.00	1.15	Satisfactory
57	1.72	0.68	Satisfactory
58	1.41	0.15	Satisfactory

\*Lab 26 has not been included in the statistical study

Average	1.35
SD	0.48
CV%	35.72
Median	1.32
Minimum	0.47
Quartile 25	1.01
Quartile 75	1.60
Maximum	3.08
Iqr	0.59

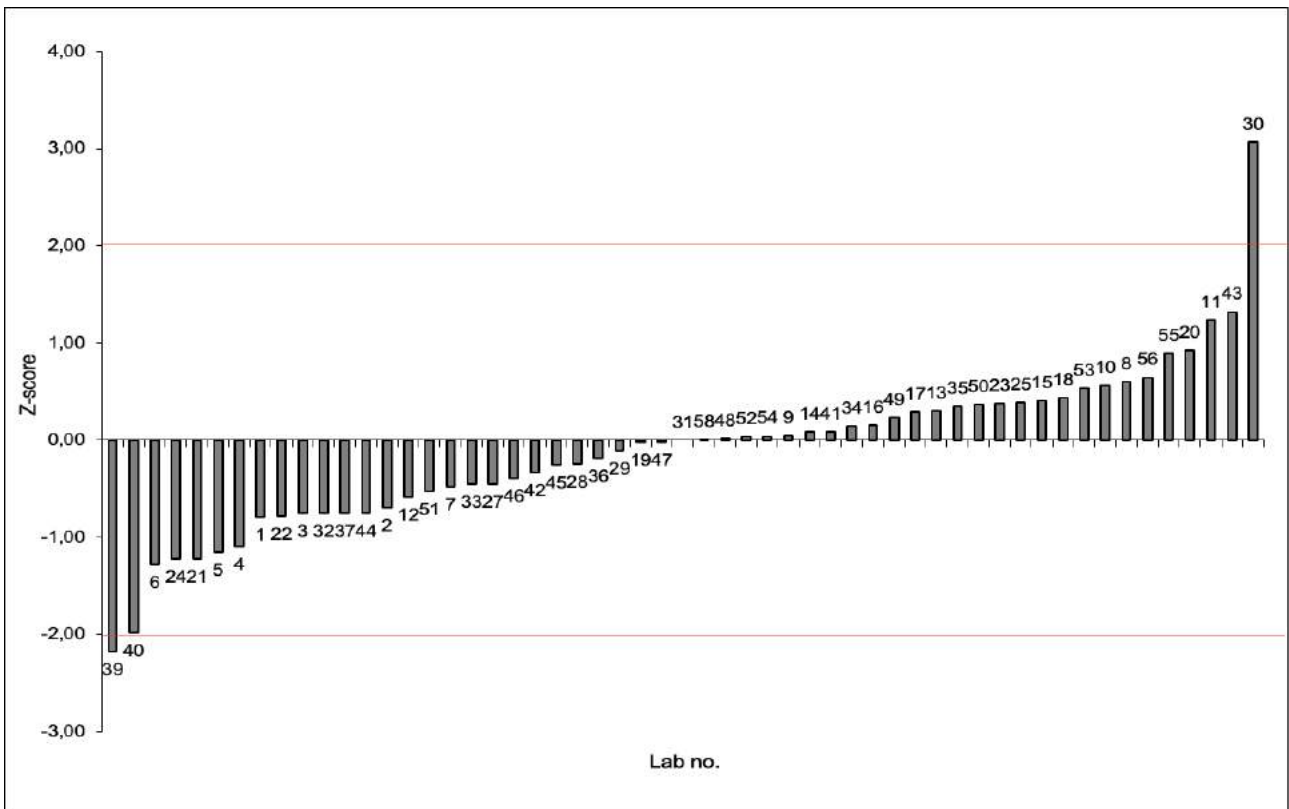
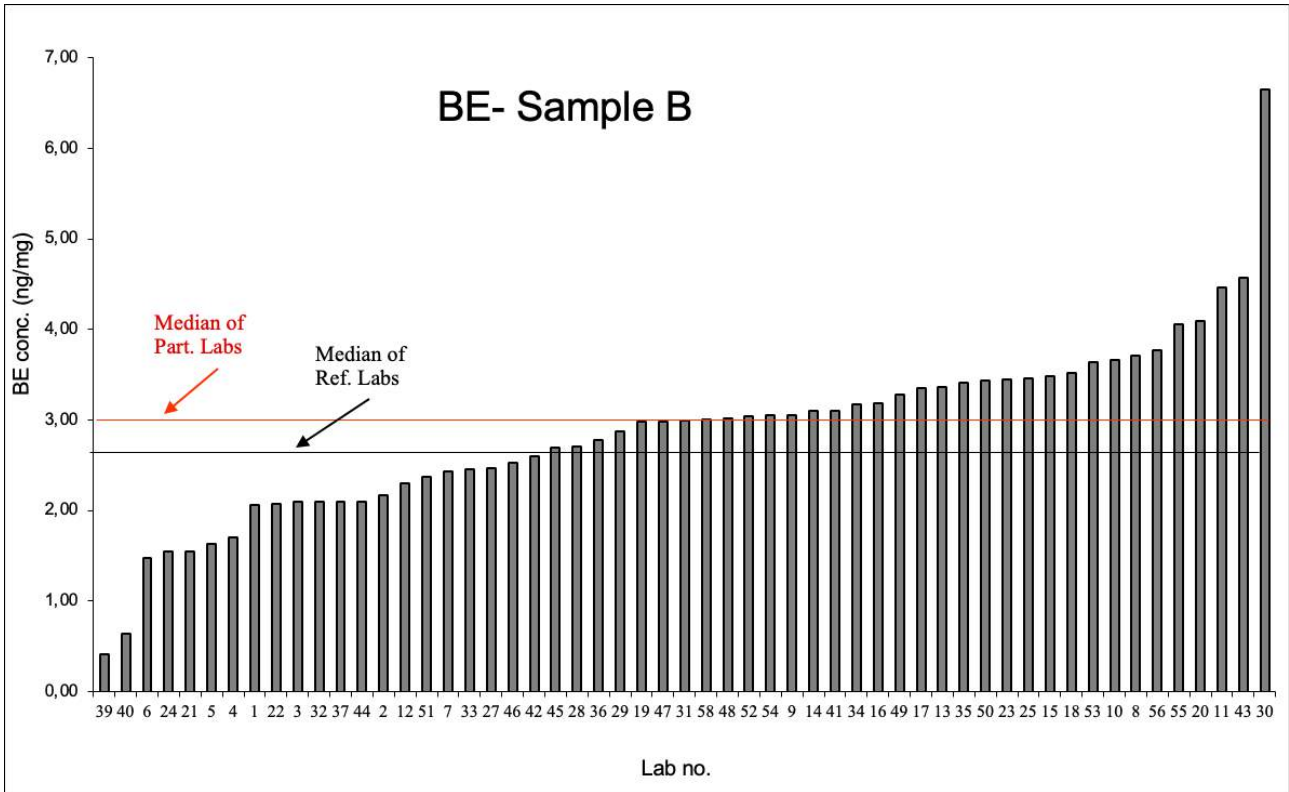


**BENZOYLECGONINE (BE)**

Lab	BE (ng/mg)	Z-score	Result
1	2.06	-0.79	Satisfactory
2	2.17	-0.70	Satisfactory
3	2.10	-0.76	Satisfactory
4	1.70	-1.09	Satisfactory
5	1.63	-1.15	Satisfactory
6	1.48	-1.28	Satisfactory
7	2.43	-0.48	Satisfactory
8	3.72	0.60	Satisfactory
9	3.06	0.05	Satisfactory
10	3.67	0.56	Satisfactory
11	4.47	1.24	Satisfactory
12	2.30	-0.59	Satisfactory
13	3.36	0.30	Satisfactory
14	3.10	0.08	Satisfactory
15	3.48	0.40	Satisfactory
16	3.19	0.16	Satisfactory
17	3.35	0.29	Satisfactory
18	3.52	0.44	Satisfactory
19	2.98	-0.02	Satisfactory
20	4.10	0.92	Satisfactory
21	1.55	-1.22	Satisfactory
22	2.07	-0.78	Satisfactory
23	3.45	0.38	Satisfactory
24	1.54	-1.22	Satisfactory
25	3.46	0.39	Satisfactory
26	P		
27	2.47	-0.45	Satisfactory
28	2.71	-0.24	Satisfactory
29	2.88	-0.10	Satisfactory
30	6.65	3.07	Unsatisfactory
31	3.00	0.00	Satisfactory
32	2.10	-0.76	Satisfactory
33	2.46	-0.45	Satisfactory
34	3.17	0.14	Satisfactory
35	3.41	0.35	Satisfactory
36	2.78	-0.18	Satisfactory
37	2.10	-0.76	Satisfactory
38	P		
39	0.41	-2.18	Questionable
40	0.64	-1.98	Satisfactory
41	3.10	0.08	Satisfactory
42	2.60	-0.34	Satisfactory
43	4.57	1.32	Satisfactory
44	2.10	-0.76	Satisfactory
45	2.70	-0.25	Satisfactory
46	2.53	-0.39	Satisfactory
47	2.98	-0.02	Satisfactory
48	3.03	0.02	Satisfactory
49	3.28	0.24	Satisfactory
50	3.44	0.37	Satisfactory
51	2.37	-0.53	Satisfactory
52	3.04	0.03	Satisfactory

Lab	BE (ng/mg)	Z-score	Result
53	3.64	0.54	Satisfactory
54	3.05	0.04	Satisfactory
55	4.07	0.89	Satisfactory
56	3.77	0.65	Satisfactory
58	3.01	0.01	Satisfactory

Average	2.87
SD	0.99
CV%	34.34
Median	3.00
Minimum	0.41
Quartile 25	2.24
Quartile 75	3.43
Maximum	6.65
Iqr	1.19





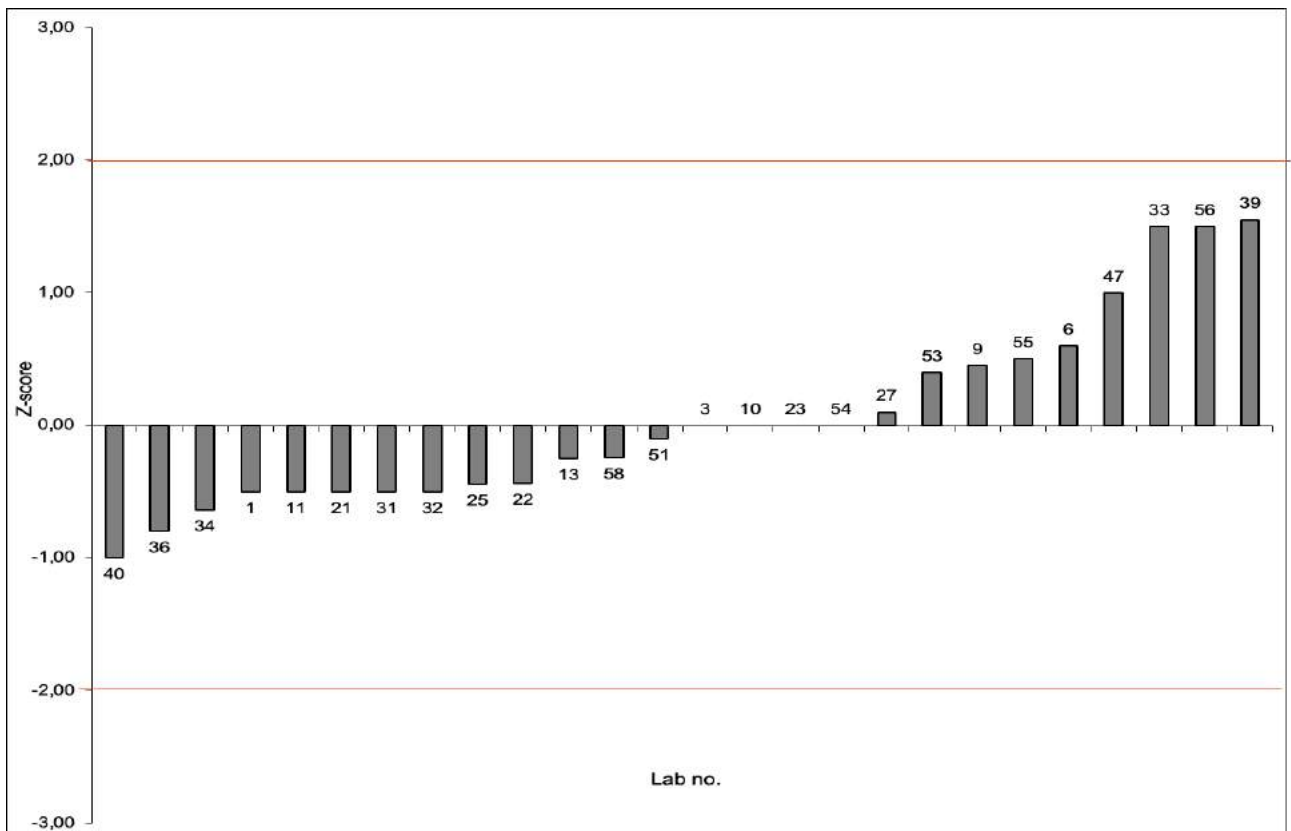
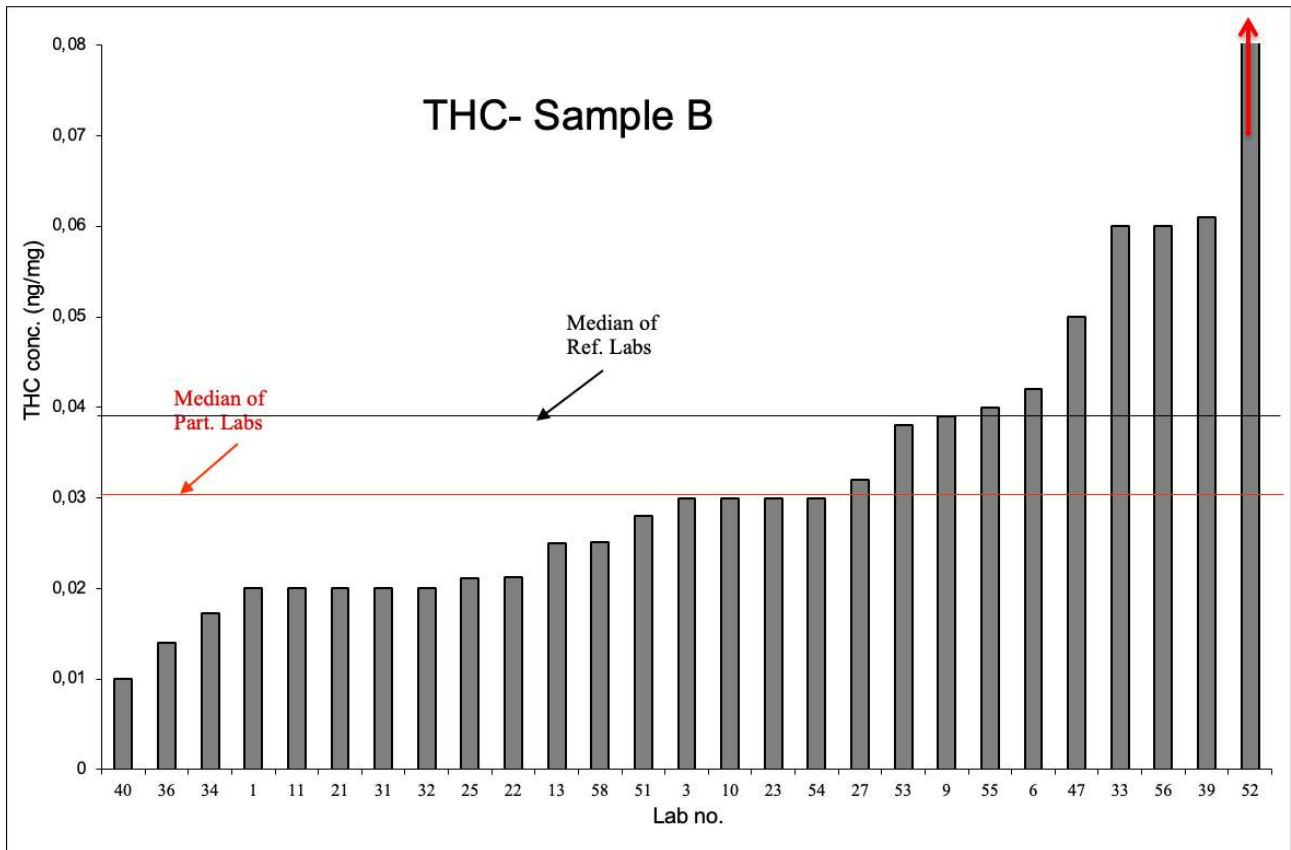
**$\Delta^9$ -TETRAHYDROCANNABINOL (THC)**

Lab	THC (ng/mg)	Z-score	Result
1	0.02	-0.50	Satisfactory
3	0.03	0.00	Satisfactory
5	N		
6	0.042	0.60	Satisfactory
7	N		
9	0.039	0.45	Satisfactory
10	0.03	0.00	Satisfactory
11	0.02	-0.50	Satisfactory
13	0.025	-0.25	Satisfactory
14	N		
15	<0.05		
16	P		
18	N		
20	N		
21	0.02	-0.50	Satisfactory
22	0.0213	-0.44	Satisfactory
23	0.03	0.00	Satisfactory
24	N		
25	0.0211	-0.45	Satisfactory
26	P		
27	0.032	0.10	Satisfactory
31	0.02	-0.50	Satisfactory
32	0.02	-0.50	Satisfactory
33	0.06	1.50	Satisfactory
34	0.0173	-0.64	Satisfactory
36	0.014	-0.80	Satisfactory
38	U		
39	0.061	1.55	Questionable
40	0.01	-1.00	Questionable
42	N		
43	N		
44	N		
45	N		
46	N		
47	0.05	1.00	
51	0.028	-0.10	Satisfactory
52	0.132	Outlier*	
53	0.038	0.40	Satisfactory
54	0.03	0.00	Satisfactory
55	0.04	0.50	Satisfactory
56	0.06	1.50	Questionable
58	0.0251	-0.25	Satisfactory

\*Lab 52 has not been included in the statistical study

Average	0.03
SD	0.01
CV%	45.11
Median	0.03
Minimum	0.01
Quartile 25	0.02
Quartile 75	0.04
Maximum	0.06
Iqr	0.02

THC median concentration is below the cut-off proposed by SoHT (0.05 ng/mg).



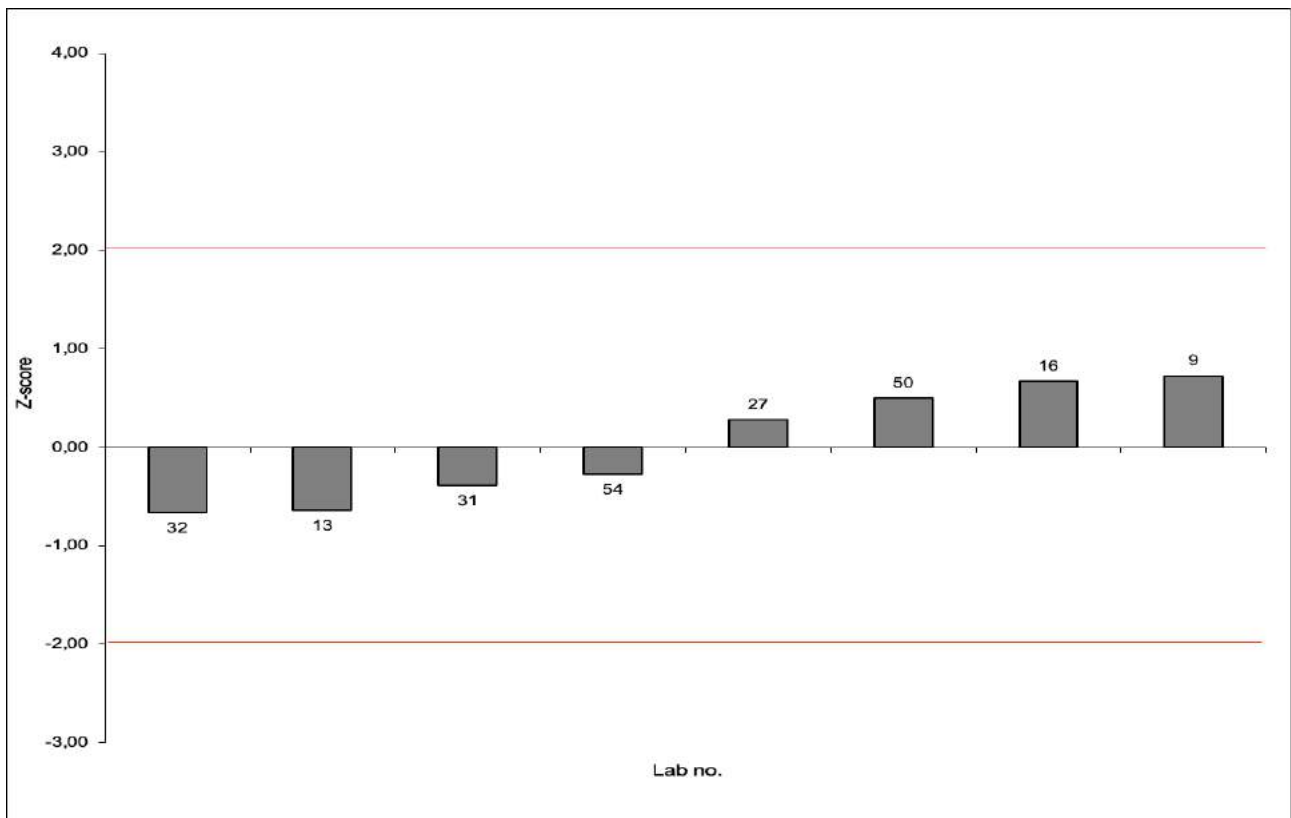
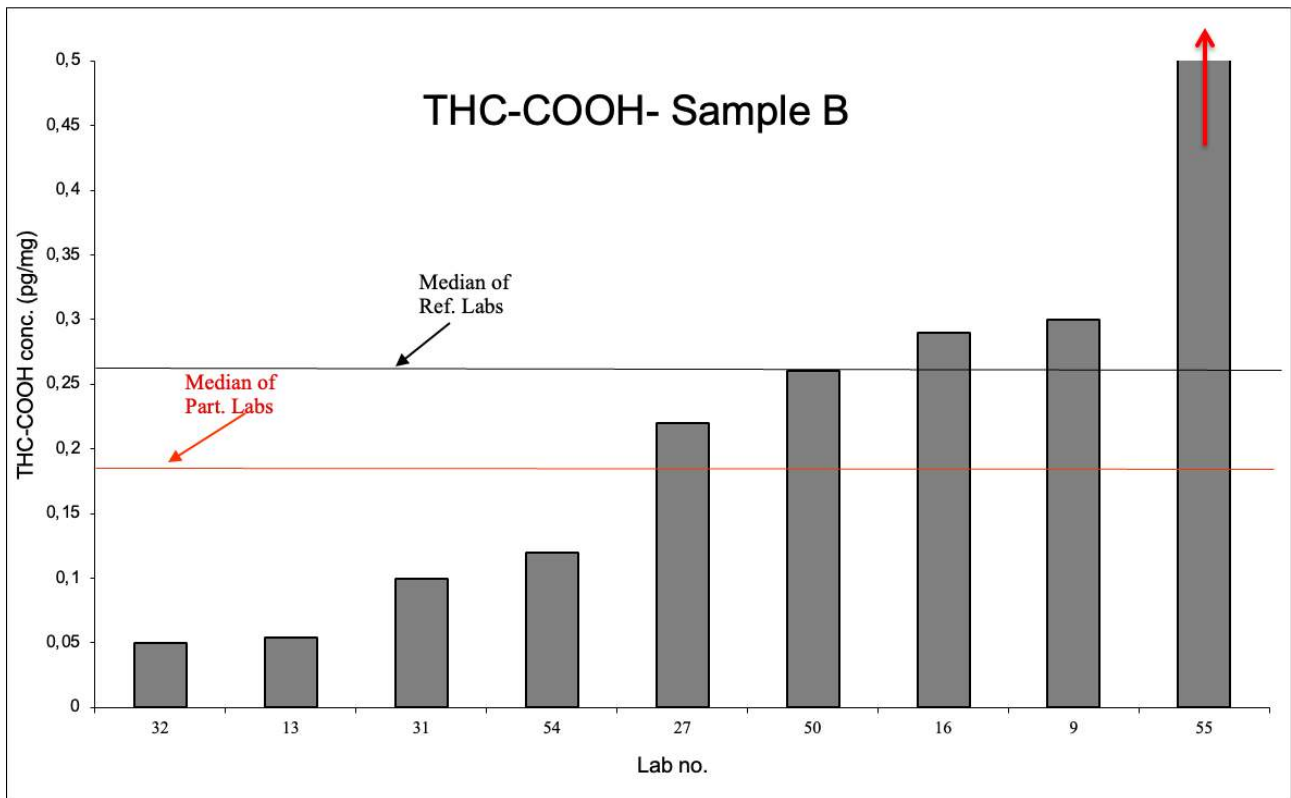
## 11-nor- $\Delta^9$ -Tetrahydrocannabinol-9-Carboxylic Acid (THC-COOH)

Lab	THC-COOH (pg/mg)	Z-score	Result
1	N		
7	N		
9	0.3	0.72	Satisfactory
12	N		
13	0.054	-0.64	Satisfactory
15	N		
16	0.29	0.67	Satisfactory
18	N		
21	N		
27	0.22	0.28	Satisfactory
31	0.1	-0.39	Satisfactory
32	0.05	-0.67	Satisfactory
36	P		
38	U		
42	N		
43	N		
50	0.26	0.50	Satisfactory
54	0.12	-0.28	Satisfactory
55	100	Outlier*	
58	N		

\*Lab 55 has not been included in the statistical study

Average	0.17
SD	0.10
CV%	56.31
Median	0.17
Minimum	0.05
Quartile 25	0.09
Quartile 75	0.27
Maximum	0.30
Iqr	0.18

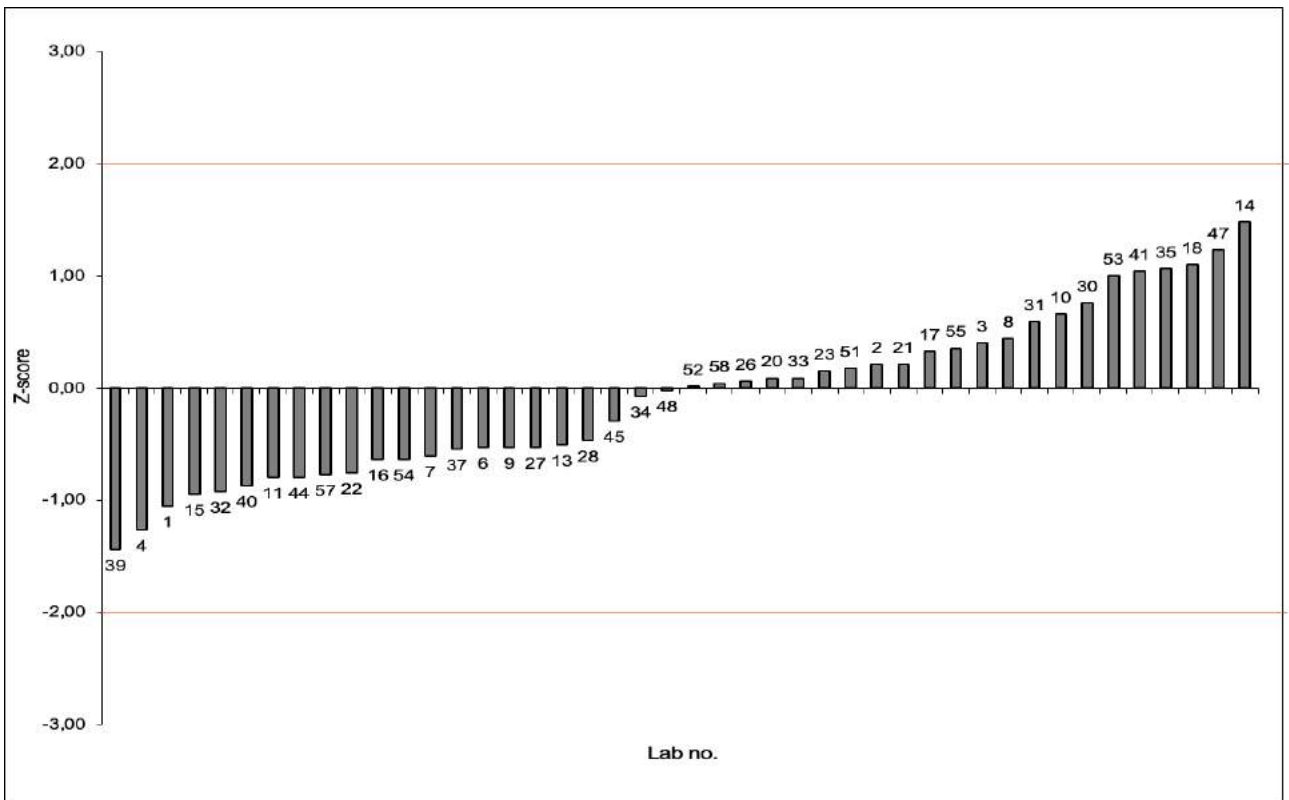
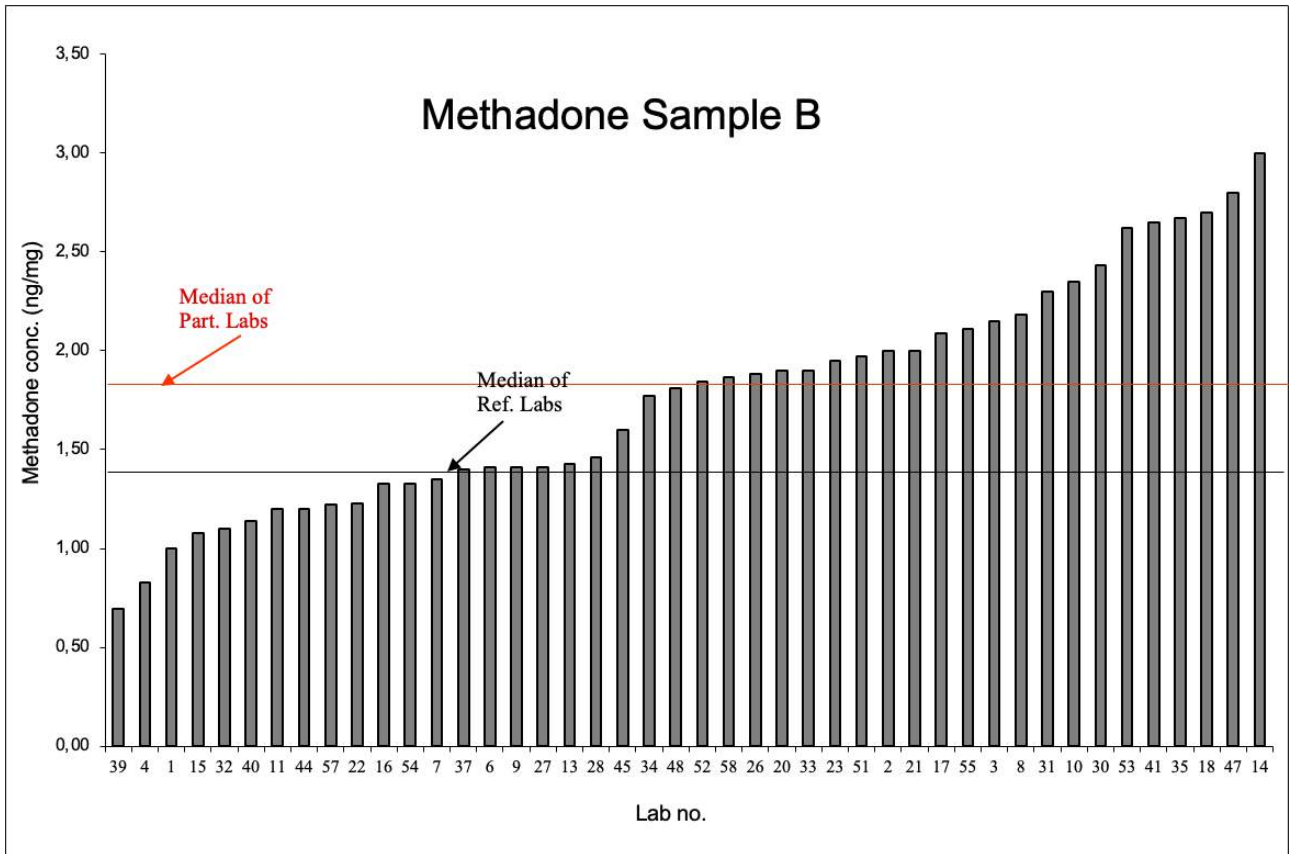
THC-COOH median concentration is below the cut-off proposed by SoHT (0.2 pg/mg).



**METHADONE**

Lab	Methadone (ng/mg)	Z-score	Result
1	1.00	-1.05	Satisfactory
2	2.00	0.22	Satisfactory
3	2.15	0.41	Satisfactory
4	0.83	-1.27	Satisfactory
6	1.41	-0.53	Satisfactory
7	1.35	-0.61	Satisfactory
8	2.18	0.44	Satisfactory
9	1.41	-0.53	Satisfactory
10	2.35	0.66	Satisfactory
11	1.20	-0.80	Satisfactory
13	1.43	-0.51	Satisfactory
14	3.00	1.48	Satisfactory
15	1.08	-0.95	Satisfactory
16	1.33	-0.64	Satisfactory
17	2.09	0.33	Satisfactory
18	2.70	1.10	Satisfactory
20	1.90	0.09	Satisfactory
21	2.00	0.22	Satisfactory
22	1.23	-0.76	Satisfactory
23	1.95	0.15	Satisfactory
26	1.88	0.06	Satisfactory
27	1.41	-0.53	Satisfactory
28	1.46	-0.47	Satisfactory
30	2.43	0.76	Satisfactory
31	2.30	0.59	Satisfactory
32	1.10	-0.92	Satisfactory
33	1.90	0.09	Satisfactory
34	1.77	-0.08	Satisfactory
35	2.67	1.06	Satisfactory
37	1.40	-0.54	Satisfactory
38	P		
39	0.69	-1.44	Satisfactory
40	1.14	-0.87	Satisfactory
41	2.65	1.04	Satisfactory
44	1.20	-0.80	Satisfactory
45	1.60	-0.29	Satisfactory
47	2.80	1.23	Satisfactory
48	1.81	-0.02	Satisfactory
51	1.97	0.18	Satisfactory
52	1.85	0.02	Satisfactory
53	2.62	1.00	Satisfactory
54	1.33	-0.63	Satisfactory
55	2.11	0.35	Satisfactory
56	P		
57	1.22	-0.77	Satisfactory
58	1.86	0.04	Satisfactory

Average	1.77
SD	0.57
CV%	32.03
Median	1.83
Minimum	0.69
Quartile 25	1.33
Quartile 75	2.12
Maximum	3.00
Iqr	0.79

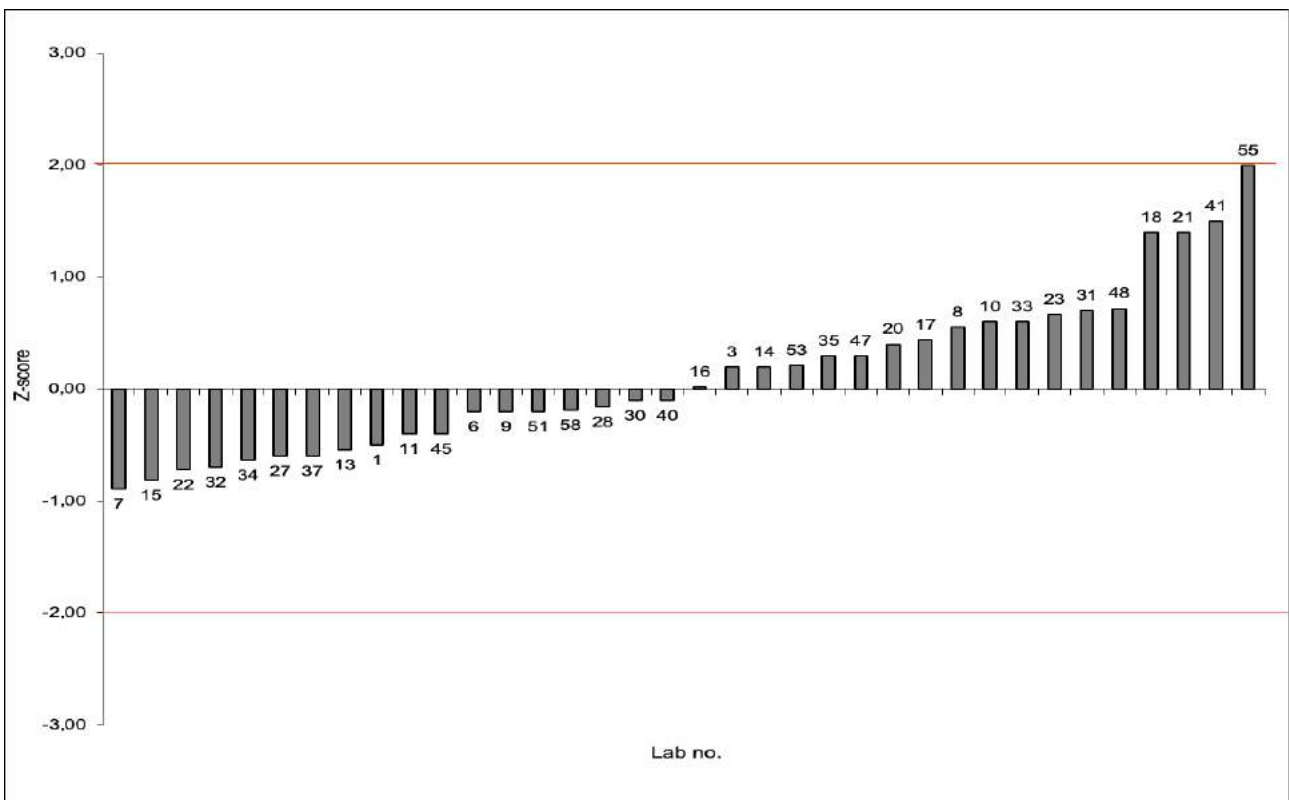
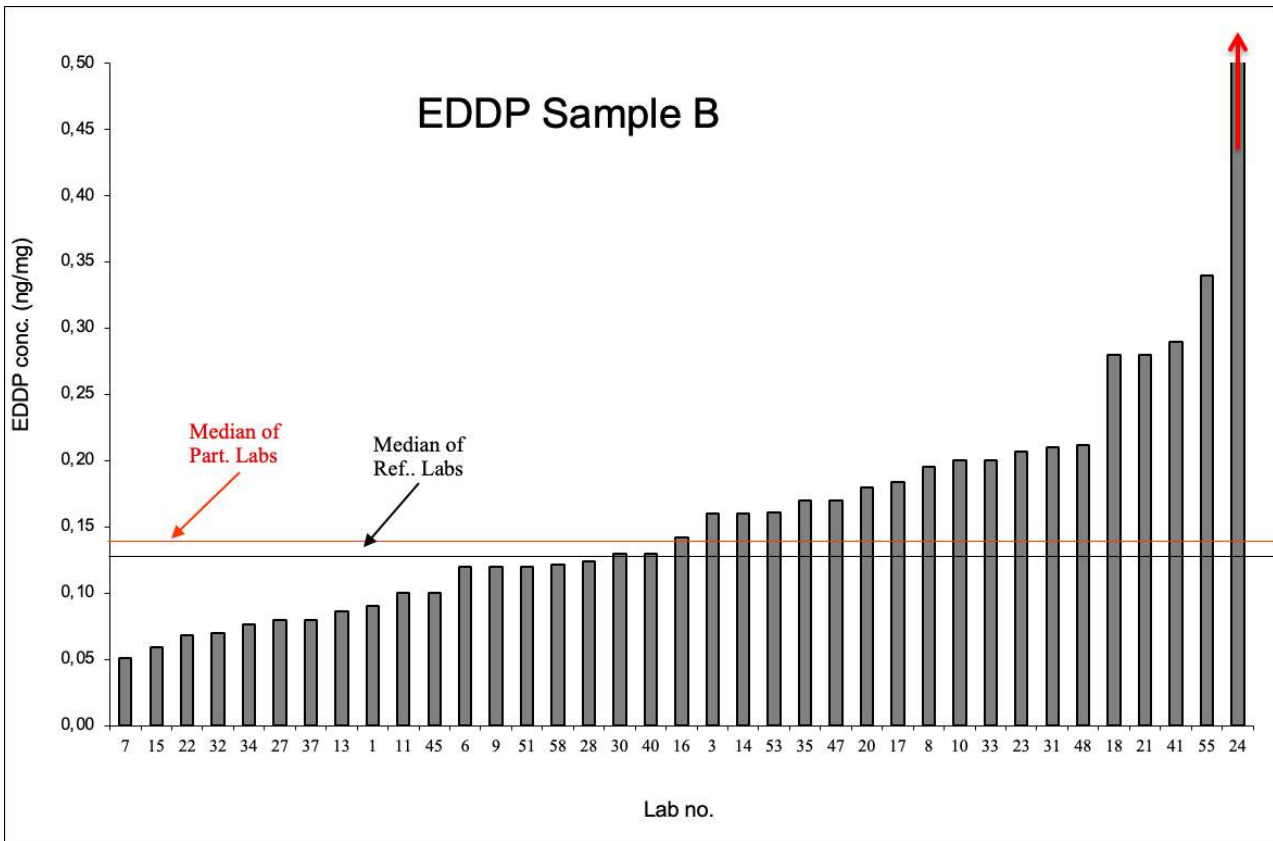


**EDDP**

Lab	EDDP (ng/mg)	Z-score	Result
1	0.09	-0.50	Satisfactory
2	N		
3	0.16	0.20	Satisfactory
4	N		
6	0.12	-0.20	Satisfactory
7	0.05	-0.89	Satisfactory
8	0.20	0.55	Satisfactory
9	0.12	-0.20	Satisfactory
10	0.20	0.60	Satisfactory
11	0.10	-0.40	Satisfactory
13	0.09	-0.54	Satisfactory
14	0.16	0.20	Satisfactory
15	0.06	-0.81	Satisfactory
16	0.14	0.02	Satisfactory
17	0.18	0.44	Satisfactory
18	0.28	1.40	Satisfactory
20	0.18	0.40	Satisfactory
21	0.28	1.40	Satisfactory
22	0.07	-0.72	Satisfactory
23	0.21	0.67	Satisfactory
24	1.03	Outlier*	
25	N		
26	P		
27	0.08	-0.60	Satisfactory
28	0.12	-0.16	Satisfactory
30	0.13	-0.10	Satisfactory
31	0.21	0.70	Satisfactory
32	0.07	-0.70	Satisfactory
33	0.20	0.60	Satisfactory
34	0.08	-0.64	Satisfactory
35	0.17	0.30	Satisfactory
37	0.08	-0.60	Satisfactory
38	U		
40	0.13	-0.10	Satisfactory
41	0.29	1.50	Satisfactory
44	P		
45	0.10	-0.40	Satisfactory
47	0.17	0.30	Satisfactory
48	0.21	0.72	Satisfactory
51	0.12	-0.20	Satisfactory
53	0.16	0.21	Satisfactory
54	N		
55	0.34	2.00	Questionable
56	P		
58	0.12	-0.19	Satisfactory

Average	0.15
SD	0.07
CV%	45.84
Median	0.14
Minimum	0.05
Quartile 25	0.10
Quartile 75	0.20
Maximum	0.34
Iqr	0.10

\*Lab 24 has not been included in the statistical study

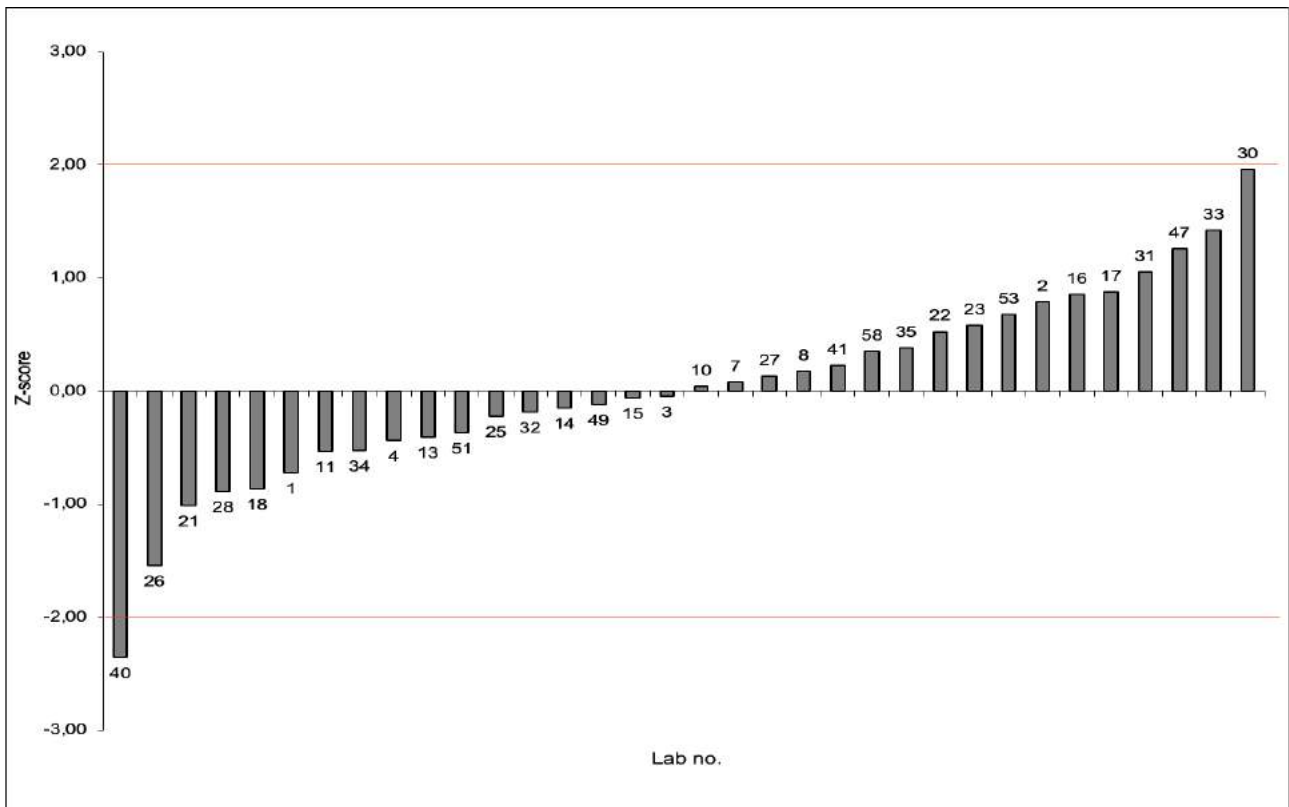
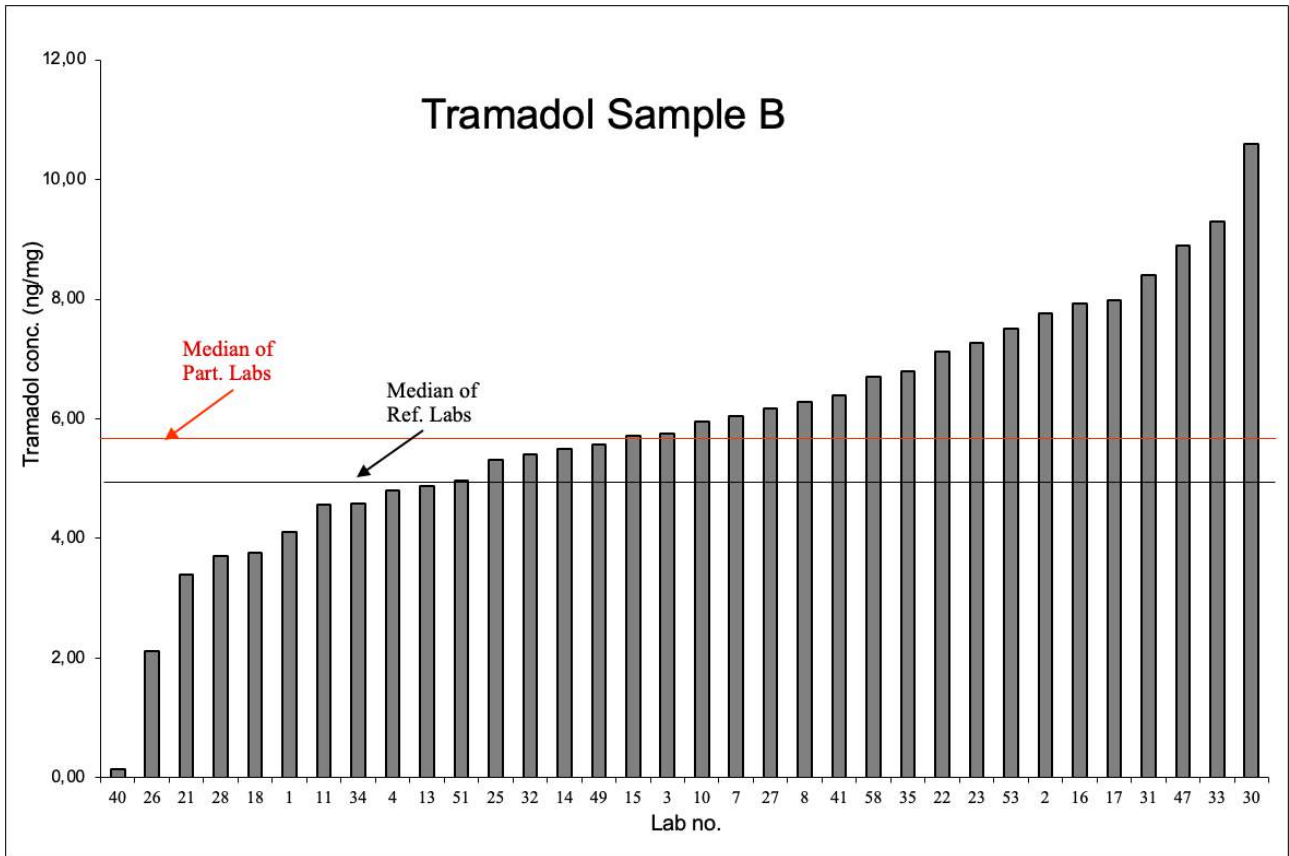




**TRAMADOL**

Lab	Tramadol (ng/mg)	Z-score	Result
1	4.10	-0.73	Satisfactory
2	7.77	0.79	Satisfactory
3	5.75	-0.05	Satisfactory
4	4.80	-0.44	Satisfactory
7	6.05	0.08	Satisfactory
8	6.28	0.17	Satisfactory
10	5.96	0.04	Satisfactory
11	4.57	-0.53	Satisfactory
13	4.88	-0.41	Satisfactory
14	5.50	-0.15	Satisfactory
15	5.71	-0.06	Satisfactory
16	7.93	0.85	Satisfactory
17	7.98	0.88	Satisfactory
18	3.77	-0.86	Satisfactory
21	3.40	-1.02	Satisfactory
22	7.13	0.52	Satisfactory
23	7.27	0.58	Satisfactory
25	5.31	-0.23	Satisfactory
26	2.12	-1.55	Satisfactory
27	6.17	0.13	Satisfactory
28	3.71	-0.89	Satisfactory
30	10.60	1.96	Satisfactory
31	8.40	1.05	Satisfactory
32	5.40	-0.19	Satisfactory
33	9.30	1.42	Satisfactory
34	4.59	-0.53	Satisfactory
35	6.79	0.38	Satisfactory
37	P		
38	P		
40	0.15	-2.36	Questionable
41	6.40	0.22	Satisfactory
45	>3.0		
47	8.90	1.26	Satisfactory
48	P		
49	5.57	-0.12	Satisfactory
51	4.96	-0.37	Satisfactory
53	7.50	0.68	Satisfactory
58	6.71	0.35	Satisfactory

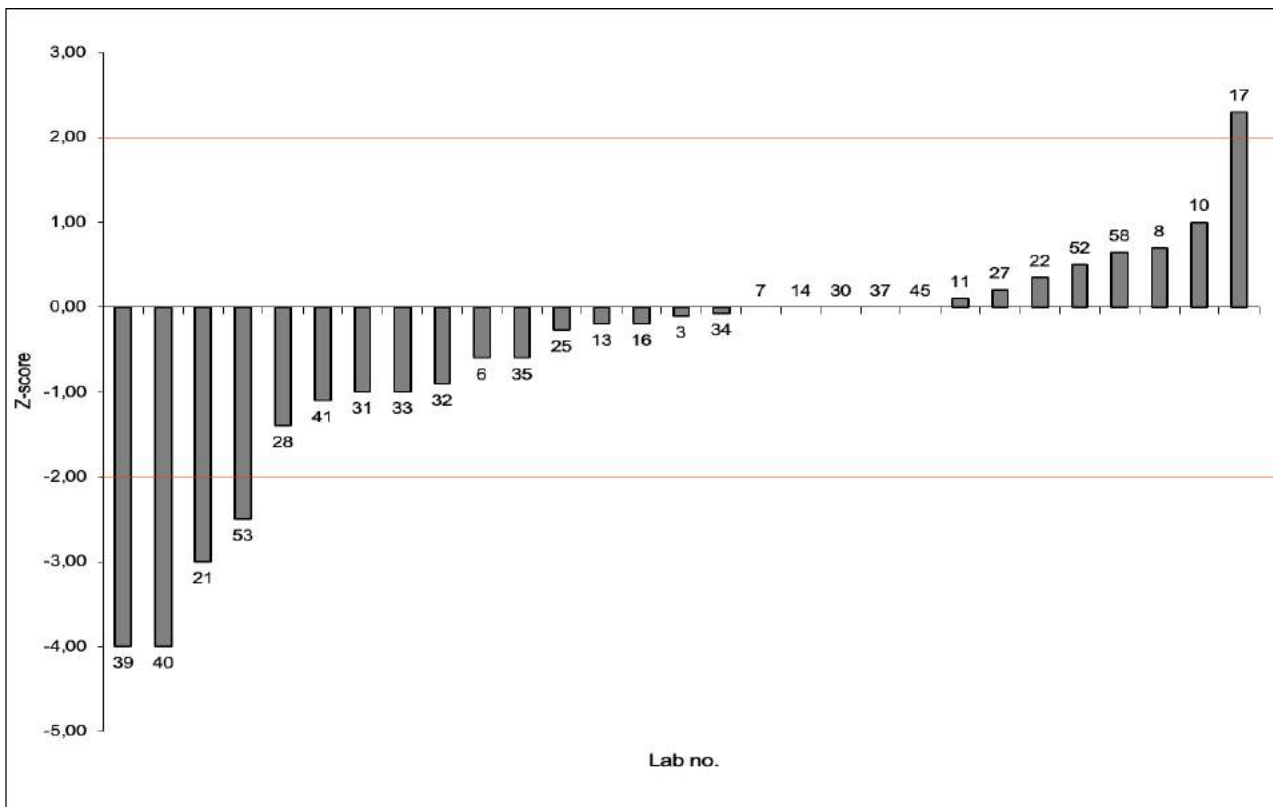
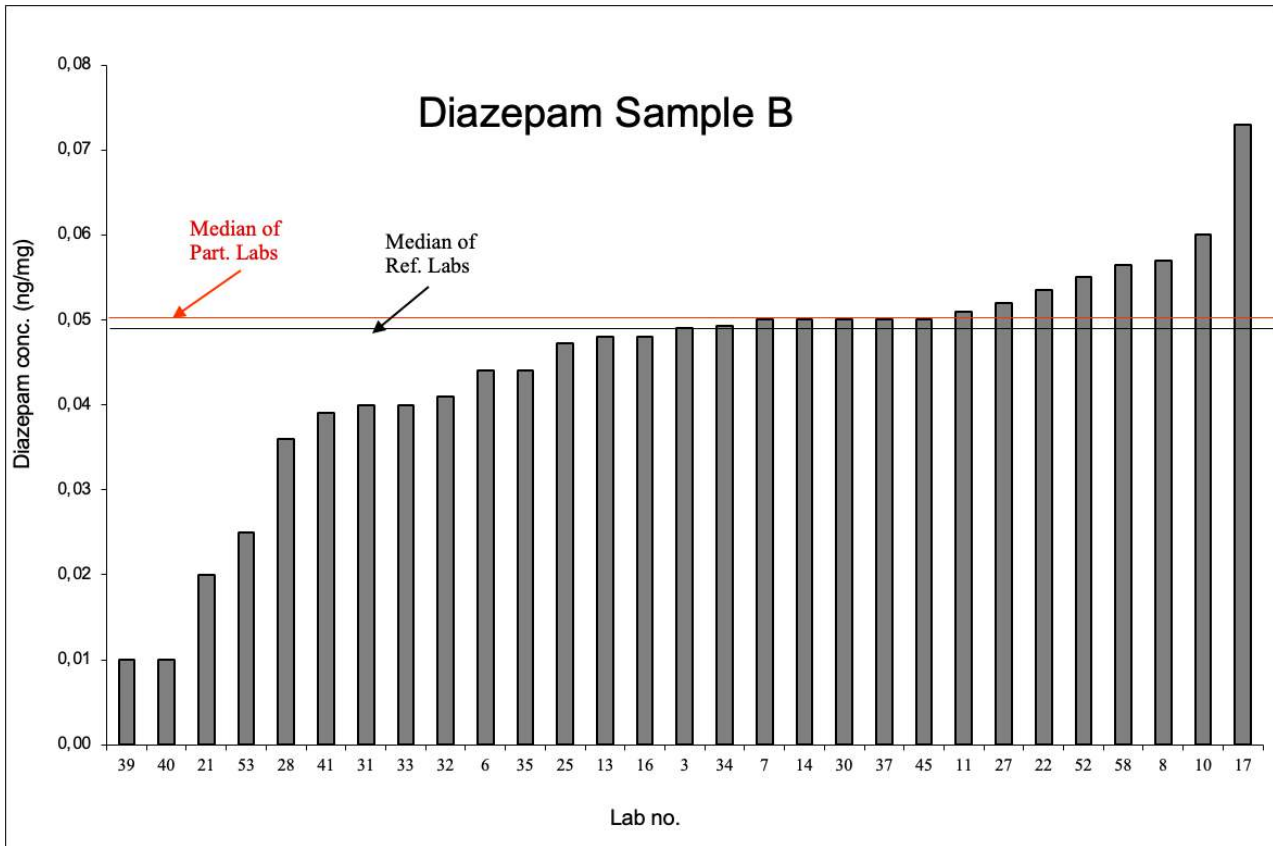
Average	5.92
SD	2.05
CV%	34.55
Median	5.86
Minimum	0.15
Quartile 25	4.82
Quartile 75	7.24
Maximum	10.60
Iqr	2.42



**DIAZEPAM**

Lab	Diazepam (ng/mg)	Z-score	Result
1	N		
2	N		
3	0.049	0.00	Satisfactory
6	0.044	-0.45	Satisfactory
7	0.050	0.09	Satisfactory
8	0.057	0.73	Satisfactory
10	0.060	1.00	Satisfactory
11	0.051	0.18	Satisfactory
12	N		
13	0.048	-0.09	Satisfactory
14	0.050	0.09	Satisfactory
16	0.048	-0.09	Satisfactory
17	0.073	2.18	Questionable
18	P		
21	0.020	-2.64	Unsatisfactory
22	0.054	0.41	Satisfactory
24	N		
25	0.047	-0.15	Satisfactory
26	P		
27	0.052	0.27	Satisfactory
28	0.036	-1.18	Satisfactory
30	0.050	0.09	Satisfactory
31	0.040	-0.82	Satisfactory
32	0.041	-0.73	Satisfactory
33	0.040	-0.82	Satisfactory
34	0.049	0.03	Satisfactory
35	0.044	-0.45	Satisfactory
37	0.050	0.09	Satisfactory
38	U		
39	0.010	-3.55	Unsatisfactory
40	0.010	-3.55	Unsatisfactory
41	0.039	-0.91	Satisfactory
44	N		
45	0.050	0.09	Satisfactory
48	P		
52	0.055	0.55	Satisfactory
53	0.025	-2.18	Questionable
54	N		
58	0.057	0.68	Satisfactory

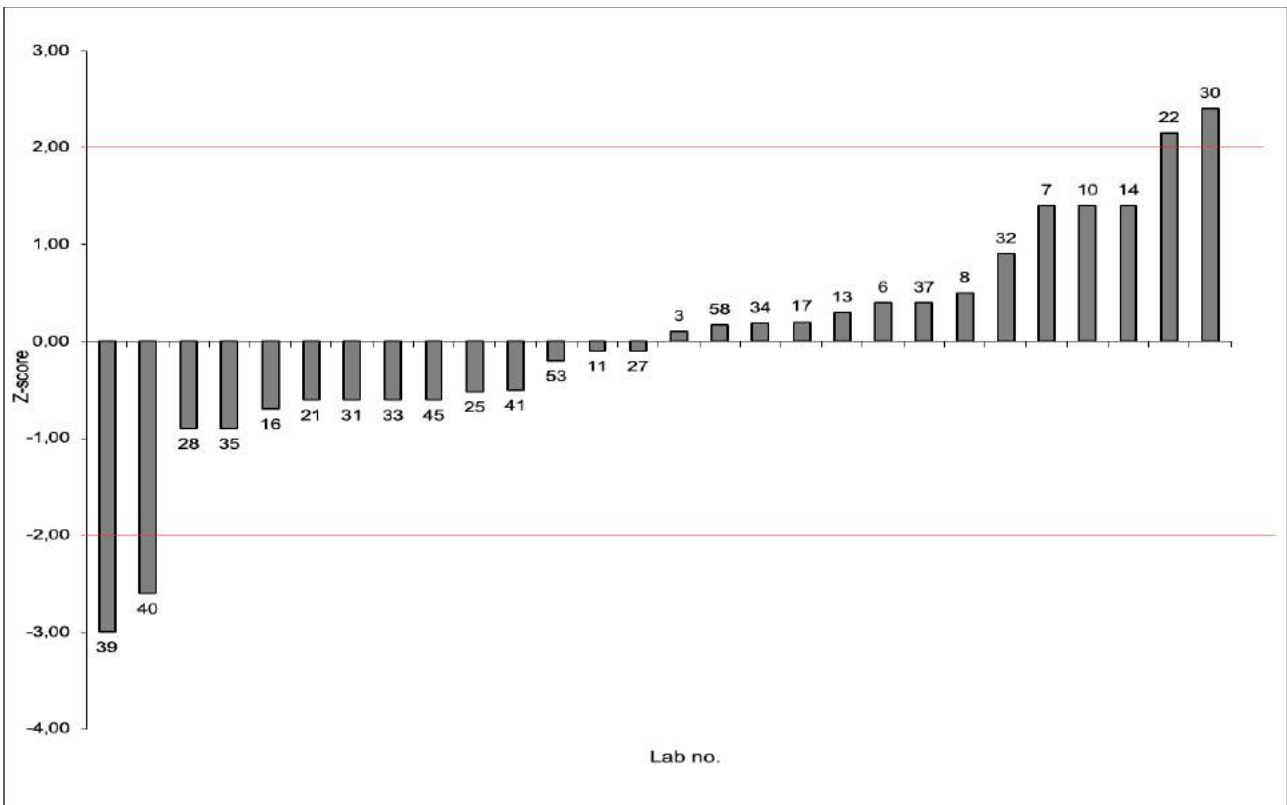
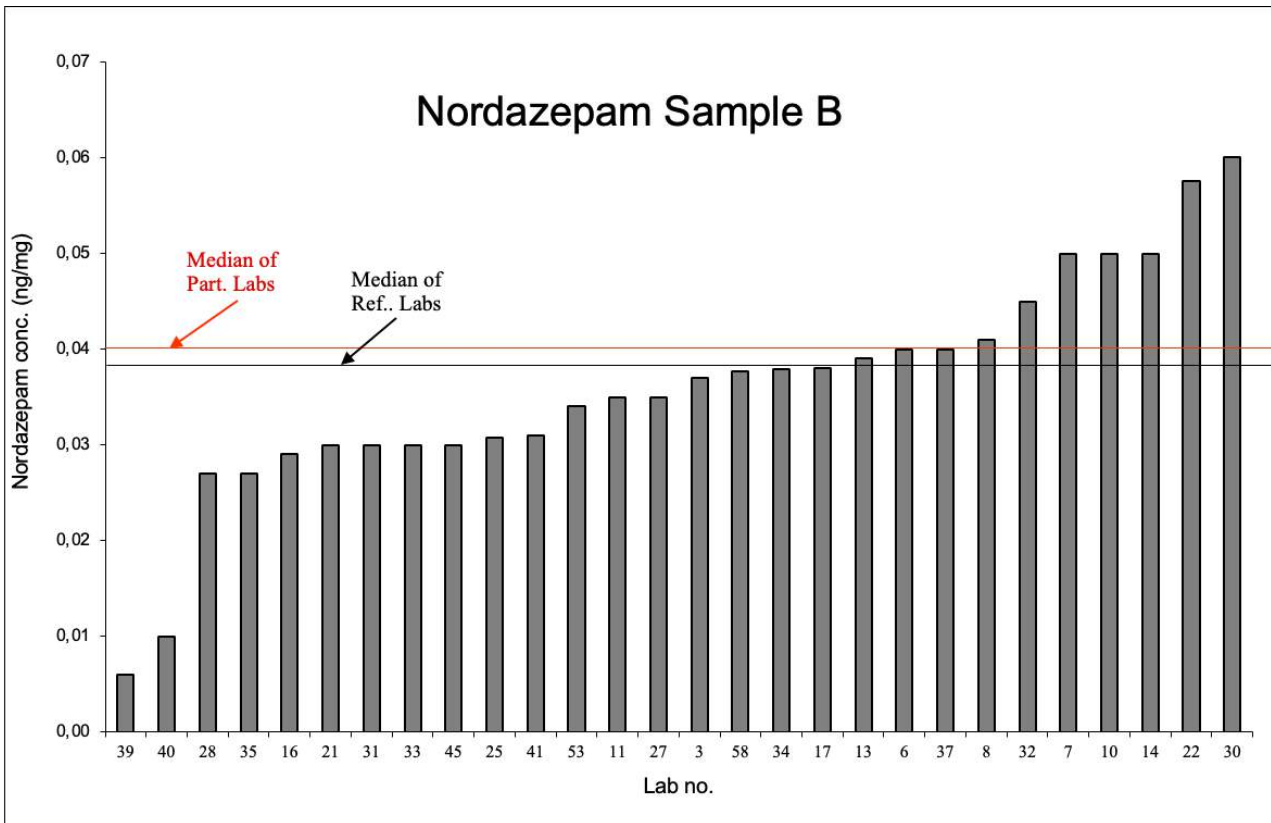
Average	0.045
SD	0.014
CV%	30.428
Median	0.049
Minimum	0.010
Quartile 25	0.040
Quartile 75	0.051
Maximum	0.073
Iqr	0.011



**NORDAZEPAM**

Lab	Nordazepam (ng/mg)	Z-score	Result
1	N		
2	N		
3	0.037	0.10	Satisfactory
6	0.040	0.40	Satisfactory
7	0.050	1.40	Satisfactory
8	0.041	0.50	Satisfactory
10	0.050	1.40	Satisfactory
11	0.035	-0.10	Satisfactory
12	N		
13	0.039	0.30	Satisfactory
14	0.050	1.40	Satisfactory
16	0.029	-0.70	Satisfactory
17	0.038	0.20	Satisfactory
18	P		
21	0.030	-0.60	Satisfactory
22	0.058	2.15	Questionable
24	N		
25	0.031	-0.52	Satisfactory
26	N		
27	0.035	-0.10	Satisfactory
28	0.027	-0.90	Satisfactory
30	0.060	2.40	Questionable
31	0.030	-0.60	Satisfactory
32	0.045	0.90	Satisfactory
33	0.030	-0.60	Satisfactory
34	0.038	0.19	Satisfactory
35	0.027	-0.90	Satisfactory
37	0.040	0.40	Satisfactory
38	U		
39	0.006	-3.00	Unsatisfactory
40	0.010	-2.60	Unsatisfactory
41	0.031	-0.50	Satisfactory
44	N		
45	0.030	-0.60	Satisfactory
48	P		
52	N		
53	0.034	-0.20	Satisfactory
54	N		
58	0.038	0.17	Satisfactory

Average	0.036
SD	0.012
CV%	32.252
Median	0.036
Minimum	0.006
Quartile 25	0.030
Quartile 75	0.040
Maximum	0.060
Iqr	0.010



**SAMPLE C**





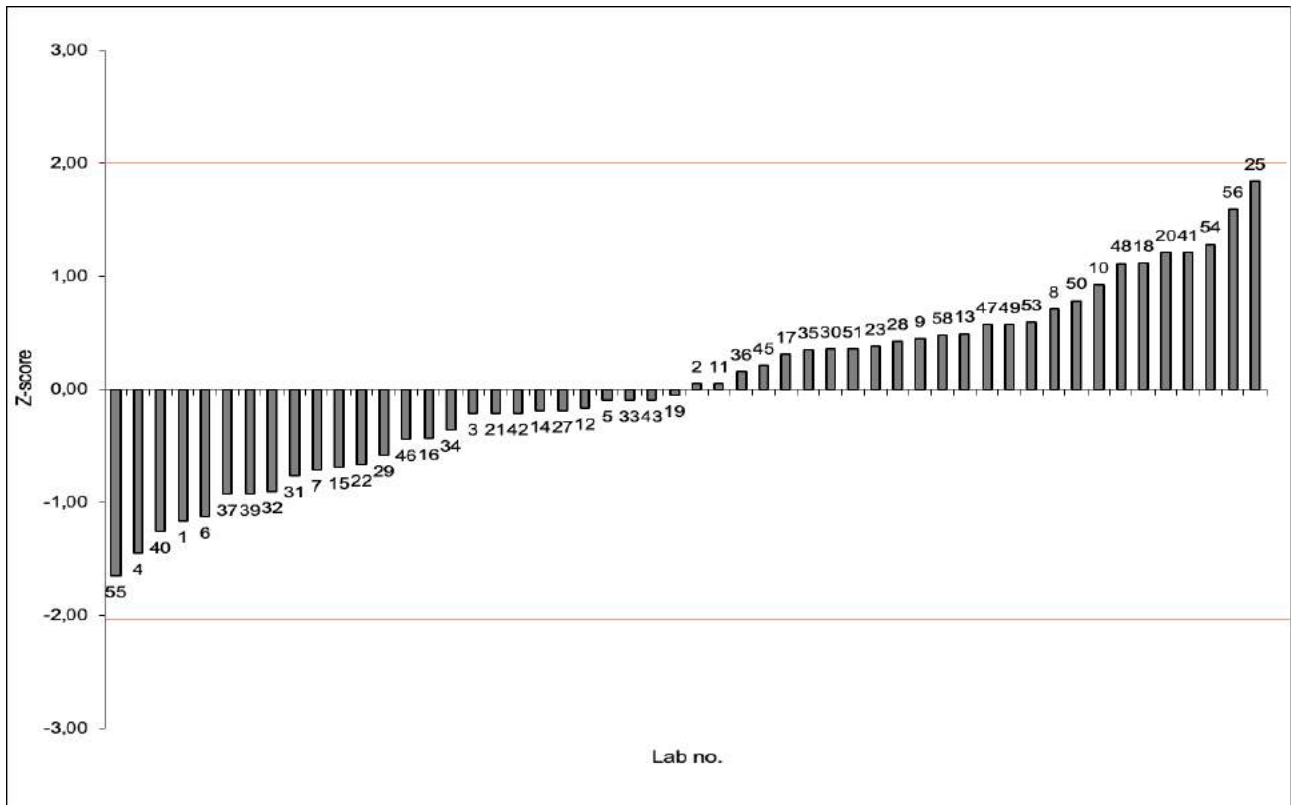
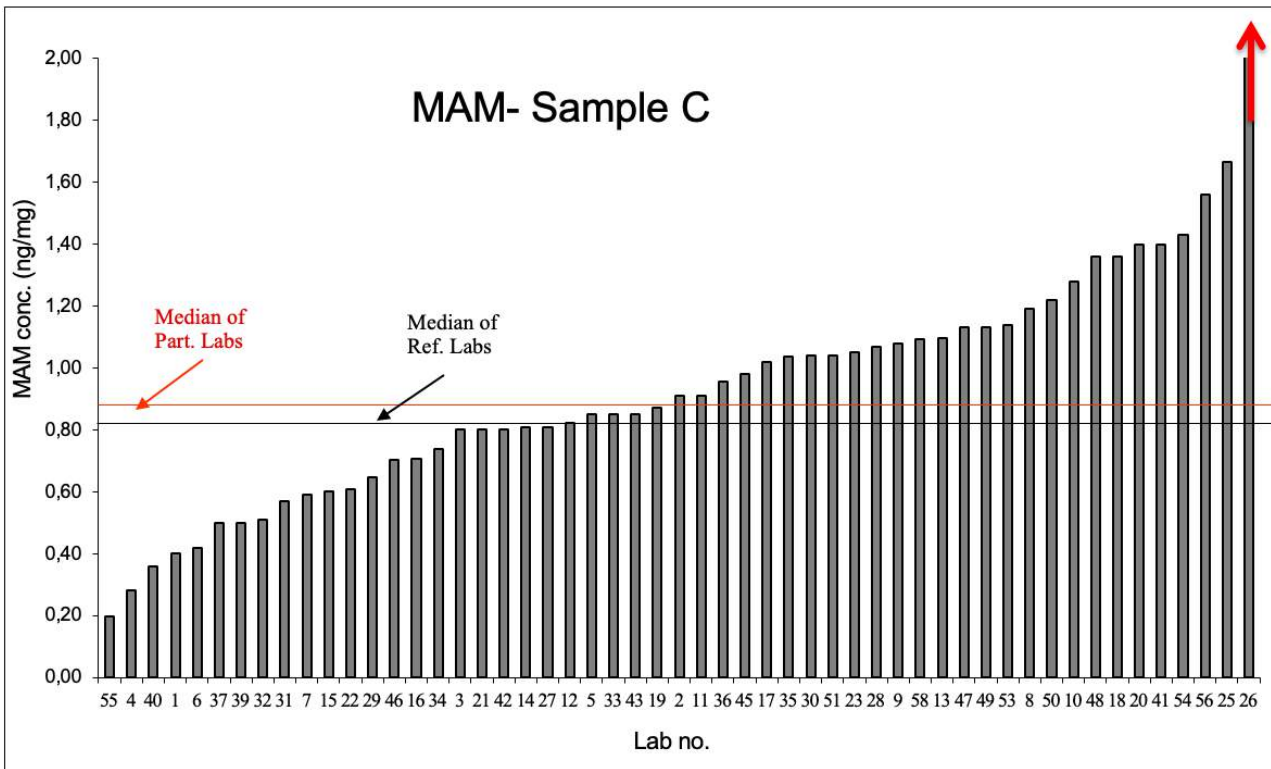
**6-MONOACETILMORPHINE (MAM)**

Lab	MAM (ng/mg)	Z-score	Result
1	0.40	-1.17	Satisfactory
2	0.91	0.05	Satisfactory
3	0.80	-0.21	Satisfactory
4	0.28	-1.45	Satisfactory
5	0.85	-0.10	Satisfactory
6	0.42	-1.12	Satisfactory
7	0.59	-0.71	Satisfactory
8	1.19	0.71	Satisfactory
9	1.08	0.45	Satisfactory
10	1.28	0.93	Satisfactory
11	0.91	0.05	Satisfactory
12	0.82	-0.16	Satisfactory
13	1.10	0.49	Satisfactory
14	0.81	-0.19	Satisfactory
15	0.60	-0.69	Satisfactory
16	0.71	-0.44	Satisfactory
17	1.02	0.31	Satisfactory
18	1.36	1.12	Satisfactory
19	0.87	-0.05	Satisfactory
20	1.40	1.21	Satisfactory
21	0.80	-0.21	Satisfactory
22	0.61	-0.67	Satisfactory
23	1.05	0.38	Satisfactory
25	1.67	1.85	Satisfactory
26	39.43	Outlier*	
27	0.81	-0.19	Satisfactory
28	1.07	0.43	Satisfactory
29	0.65	-0.58	Satisfactory
30	1.04	0.36	Satisfactory
31	0.57	-0.76	Satisfactory
32	0.51	-0.90	Satisfactory
33	0.85	-0.10	Satisfactory
34	0.74	-0.36	Satisfactory
35	1.04	0.35	Satisfactory
36	0.96	0.16	Satisfactory
37	0.50	-0.93	Satisfactory
38	P		
39	0.50	-0.93	Satisfactory
40	0.36	-1.26	Satisfactory
41	1.40	1.21	Satisfactory
42	0.80	-0.21	Satisfactory
43	0.85	-0.10	Satisfactory
44	P		
45	0.98	0.21	Satisfactory
46	0.70	-0.45	Satisfactory
47	1.13	0.57	Satisfactory
48	1.36	1.12	Satisfactory
49	1.13	0.57	Satisfactory
50	1.22	0.79	Satisfactory
51	1.04	0.36	Satisfactory
53	1.14	0.60	Satisfactory
54	1.43	1.29	Satisfactory

Lab	MAM (ng/mg)	Z-score	Result
55	0.20	-1.65	Satisfactory
56	1.56	1.60	Satisfactory
57	N		
58	1.09	0.48	Satisfactory

\* Lab 26 has not included in the statistical study

Average	0.91
SD	0.33
CV%	36.49
Median	0.89
Minimum	0.20
Quartile 25	0.69
Quartile 75	1.11
Maximum	1.67
Iqr	0.42



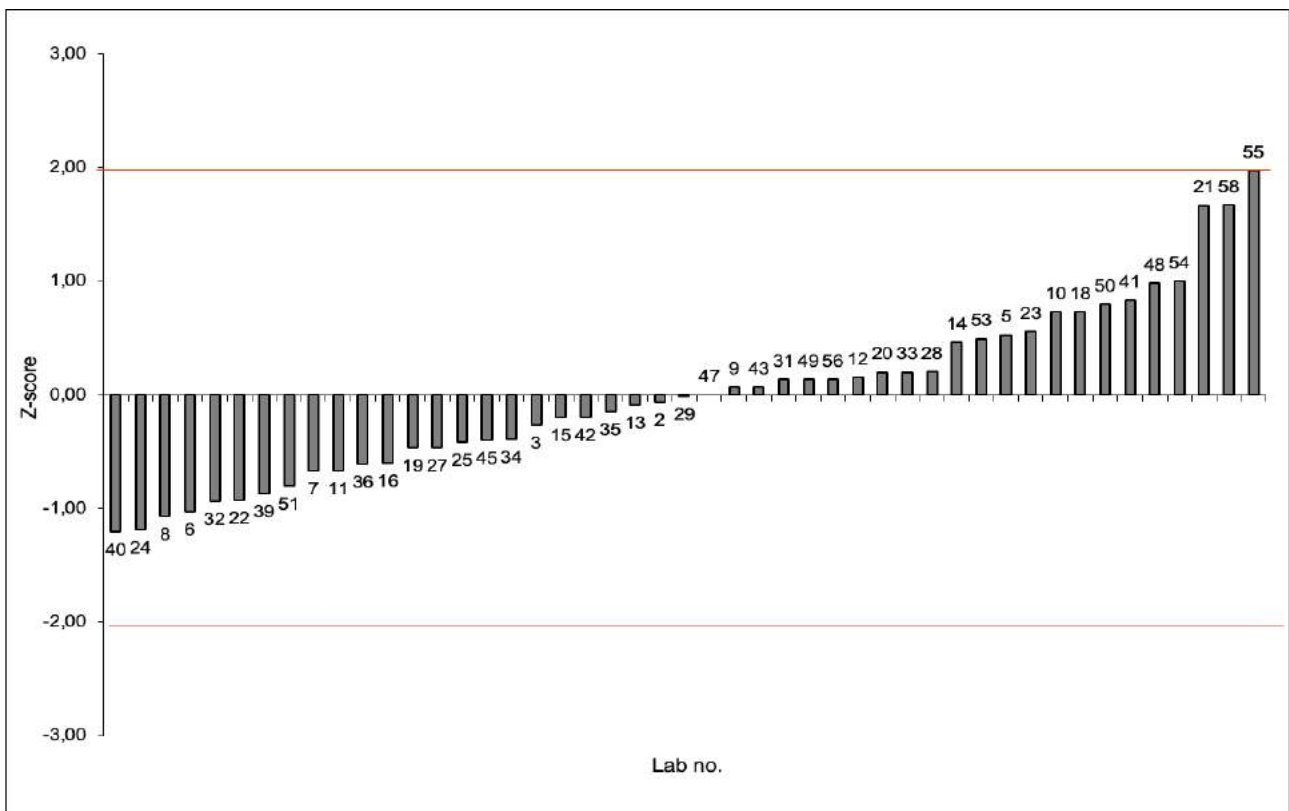
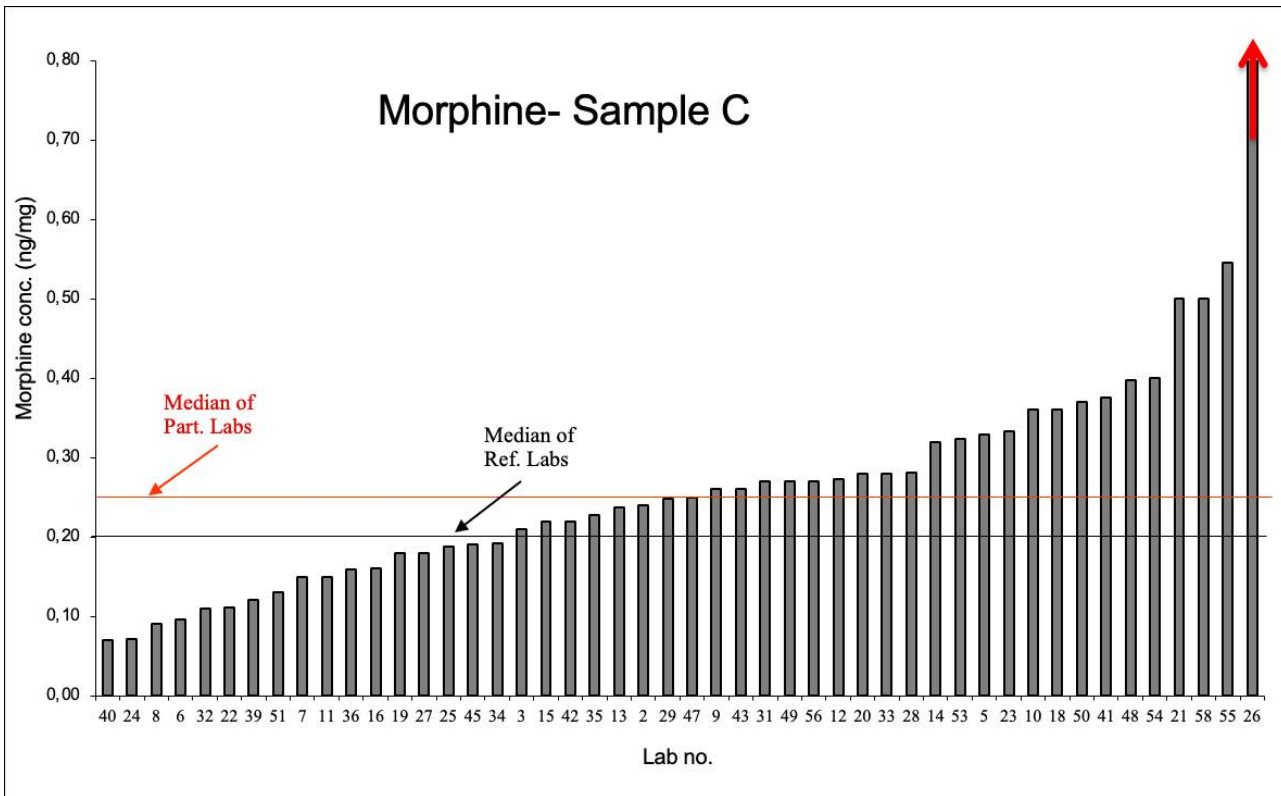
**MORPHINE**

Lab	Morphine (ng/mg)	Z-score	Result
1	N		
2	0.24	-0.07	Satisfactory
3	0.21	-0.27	Satisfactory
4	N		
5	0.33	0.53	Satisfactory
6	0.10	-1.03	Satisfactory
7	0.15	-0.67	Satisfactory
8	0.09	-1.07	Satisfactory
9	0.26	0.07	Satisfactory
10	0.36	0.73	Satisfactory
11	0.15	-0.67	Satisfactory
12	0.27	0.15	Satisfactory
13	0.24	-0.09	Satisfactory
14	0.32	0.47	Satisfactory
15	0.22	-0.20	Satisfactory
16	0.16	-0.60	Satisfactory
17	N		
18	0.36	0.73	Satisfactory
19	0.18	-0.47	Satisfactory
20	0.28	0.20	Satisfactory
21	0.50	1.67	Satisfactory
22	0.11	-0.93	Satisfactory
23	0.33	0.55	Satisfactory
24	0.07	-1.19	Satisfactory
25	0.19	-0.41	Satisfactory
26	2.35	Outlier*	
27	0.18	-0.47	Satisfactory
28	0.28	0.21	Satisfactory
29	0.25	-0.01	Satisfactory
30	N		
31	0.27	0.13	Satisfactory
32	0.11	-0.93	Satisfactory
33	0.28	0.20	Satisfactory
34	0.19	-0.39	Satisfactory
35	0.23	-0.15	Satisfactory
36	0.16	-0.61	Satisfactory
37	N		
38	U		
39	0.12	-0.87	Satisfactory
40	0.07	-1.20	Satisfactory
41	0.38	0.83	Satisfactory
42	0.22	-0.20	Satisfactory
43	0.26	0.07	Satisfactory
44	N		
45	0.19	-0.40	Satisfactory
46	N		
47	0.25	0.00	Satisfactory
48	0.40	0.99	Satisfactory
49	0.27	0.13	Satisfactory
50	0.37	0.80	Satisfactory
51	0.13	-0.80	Satisfactory
52	N		

Lab	Morphine (ng/mg)	Z-score	Result
53	0.32	0.49	Satisfactory
54	0.40	1.00	Satisfactory
55	0.55	1.97	Satisfactory
56	0.27	0.13	Satisfactory
57	N		
58	0.50	1.67	Satisfactory

\* Lab 26 has not included in the statistical study

Average	0.25
SD	0.11
CV%	44.57
Median	0.25
Minimum	0.07
Quartile 25	0.17
Quartile 75	0.32
Maximum	0.55
Iqr	0.15



**CODEINE**

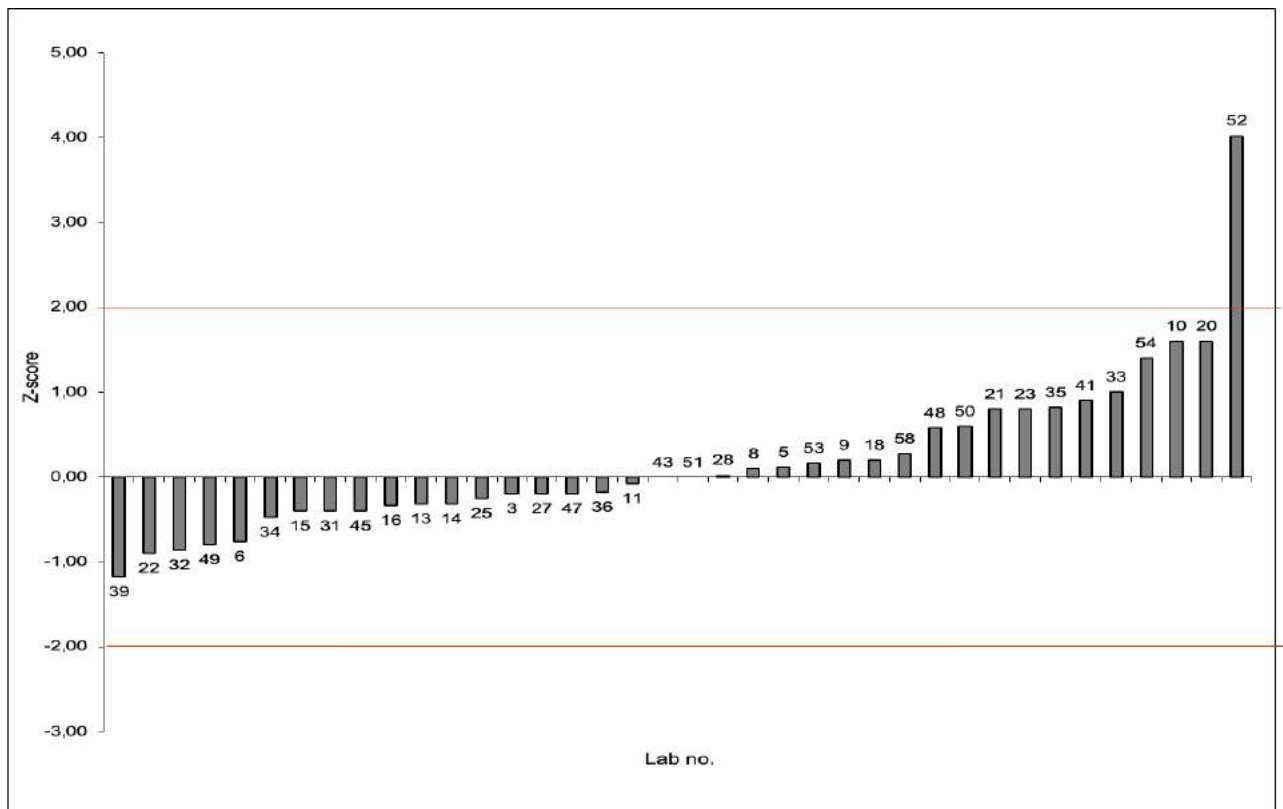
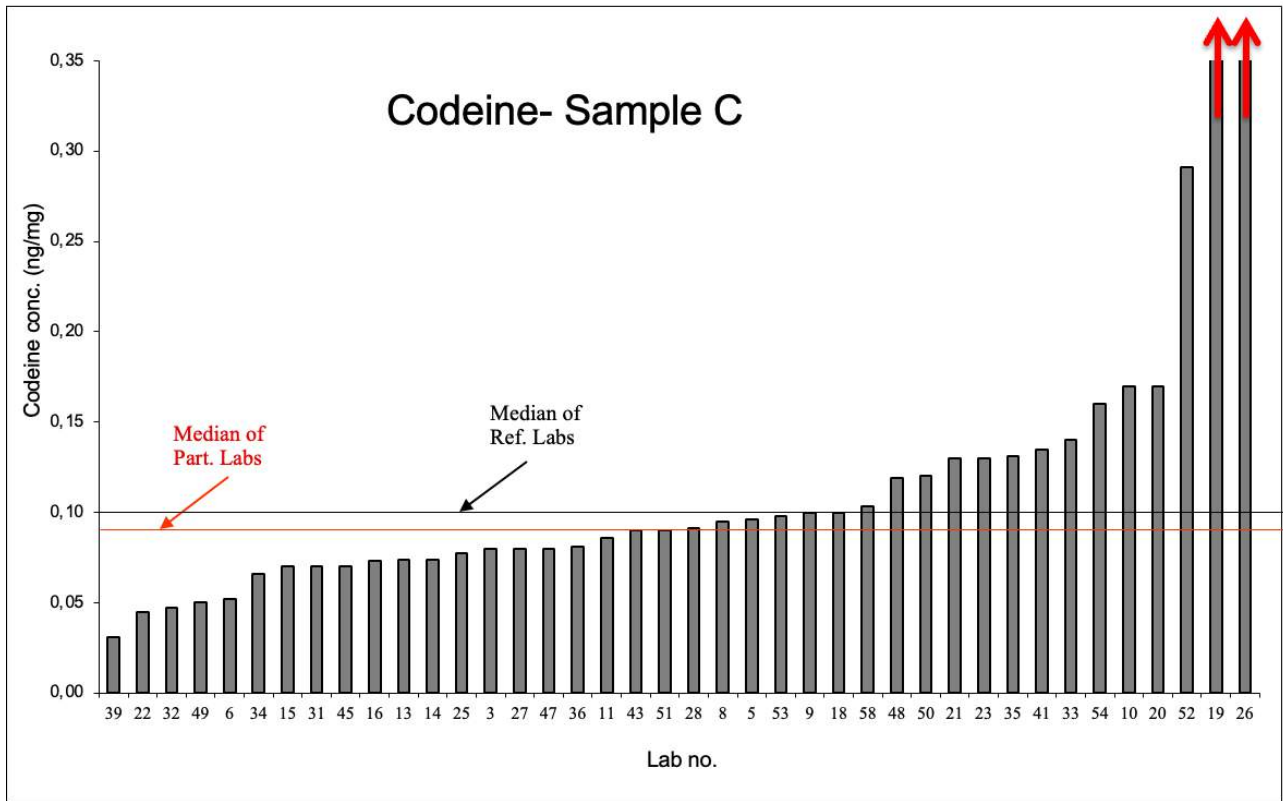
Lab	Codeine (ng/mg)	Z-score	Result
1	N		
2	N		
3	0.08	-0.20	Satisfactory
4	N		
5	0.10	0.12	Satisfactory
6	0.05	-0.76	Satisfactory
7	N		
8	0.10	0.10	Satisfactory
9	0.10	0.20	Satisfactory
10	0.17	1.60	Satisfactory
11	0.09	-0.08	Satisfactory
12	N		
13	0.07	-0.32	Satisfactory
14	0.07	-0.32	Satisfactory
15	0.07	-0.40	Satisfactory
16	0.07	-0.34	Satisfactory
17	N		
18	0.10	0.20	Satisfactory
19	0.43	Outlier*	
20	0.17	1.60	Satisfactory
21	0.13	0.80	Satisfactory
22	0.04	-0.90	Satisfactory
23	0.13	0.80	Satisfactory
24	N		
25	0.08	-0.25	Satisfactory
26	2.13	Outlier*	
27	0.08	-0.20	Satisfactory
28	0.09	0.02	Satisfactory
29	N		
30	N		
31	0.07	-0.40	Satisfactory
32	0.05	-0.86	Satisfactory
33	0.14	1.00	Satisfactory
34	0.07	-0.48	Satisfactory
35	0.13	0.82	Satisfactory
36	0.08	-0.18	Satisfactory
37	N		
38	U		
39	0.03	-1.18	Satisfactory
40	N		
41	0.14	0.90	Satisfactory
42	N		
43	0.09	0.00	Satisfactory
44	N		
45	0.07	-0.40	Satisfactory
46	N		
47	0.08	-0.20	Satisfactory
48	0.12	0.58	Satisfactory
49	0.05	-0.80	Satisfactory
50	0.12	0.60	Satisfactory
51	0.09	0.00	Satisfactory
52	0.29	4.02	Unsatisfactory

Lab	Codeine (ng/mg)	Z-score	Result
53	0.10	0.16	Satisfactory
54	0.16	1.40	Satisfactory
56	N		
57	N		
58	0.10	0.27	Satisfactory

\* Labs 19 and 26 have not been included in the statistical study

Average	0.10
SD	0.05
CV%	46.34
Median	0.09
Minimum	0.03
Quartile 25	0.07
Quartile 75	0.12
Maximum	0.29
Iqr	0.05

Codeine median concentration is below the cut-off proposed by SoHT (0.2 ng/mg).

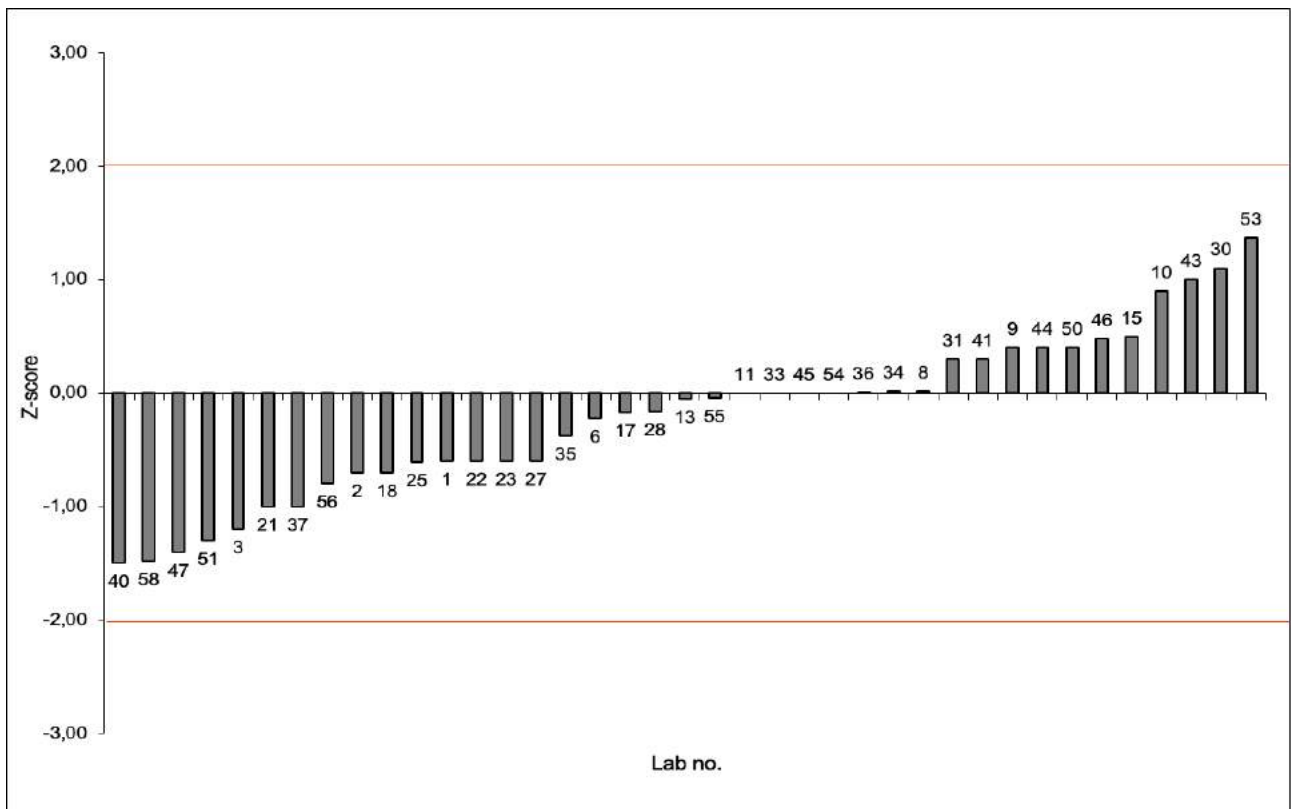
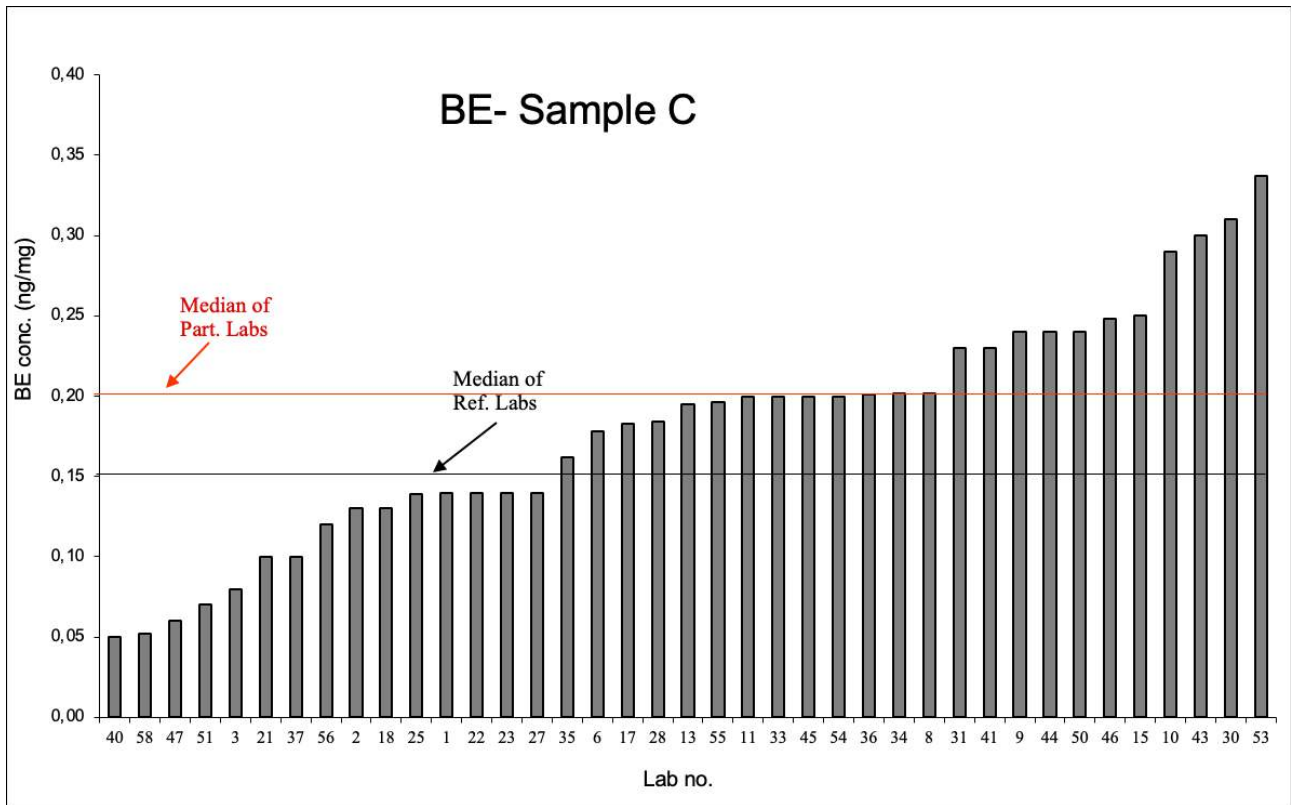


**BENZOYLECGONINE (BE)**

Lab	BE (ng/mg)	Z-score	Result
1	0.14	-0.60	Satisfactory
2	0.13	-0.70	Satisfactory
3	0.08	-1.20	Satisfactory
5	N		
6	0.18	-0.22	Satisfactory
7	N		
8	0.20	0.02	Satisfactory
9	0.24	0.40	Satisfactory
10	0.29	0.90	Satisfactory
11	0.20	0.00	Satisfactory
12	N		
13	0.20	-0.05	Satisfactory
14	N		
15	0.25	0.50	Satisfactory
16	N		
17	0.18	-0.17	Satisfactory
18	0.13	-0.70	Satisfactory
19	N		
20	P		
21	0.10	-1.00	Satisfactory
22	0.14	-0.60	Satisfactory
23	0.14	-0.60	Satisfactory
24	N		
25	0.14	-0.61	Satisfactory
26	N		
27	0.14	-0.60	Satisfactory
28	0.18	-0.16	Satisfactory
29	N		
30	0.31	1.10	Satisfactory
31	0.23	0.30	Satisfactory
32	Traces		
33	0.20	0.00	Satisfactory
34	0.20	0.02	Satisfactory
35	0.16	-0.38	Satisfactory
36	0.20	0.01	Satisfactory
37	0.10	-1.00	Satisfactory
38	P		
39	N		
40	0.05	-1.50	Satisfactory
41	0.23	0.30	Satisfactory
42	N		
43	0.30	1.00	Satisfactory
44	0.24	0.40	Satisfactory
45	0.20	0.00	Satisfactory
46	0.25	0.48	Satisfactory
47	0.06	-1.40	Satisfactory
48	N		
49	U		
50	0.24	0.40	Satisfactory
51	0.07	-1.30	Satisfactory
52	N		
53	0.34	1.37	Satisfactory

Lab	BE (ng/mg)	Z-score	Result
54	0.20	0.00	Satisfactory
55	0.20	-0.04	Satisfactory
56	0.12	-0.80	Satisfactory
58	0.05	-1.48	Satisfactory

Average	0.18
SD	0.07
CV%	39.49
Median	0.20
Minimum	0.05
Quartile 25	0.13
Quartile 75	0.23
Maximum	0.34
Iqr	0.10





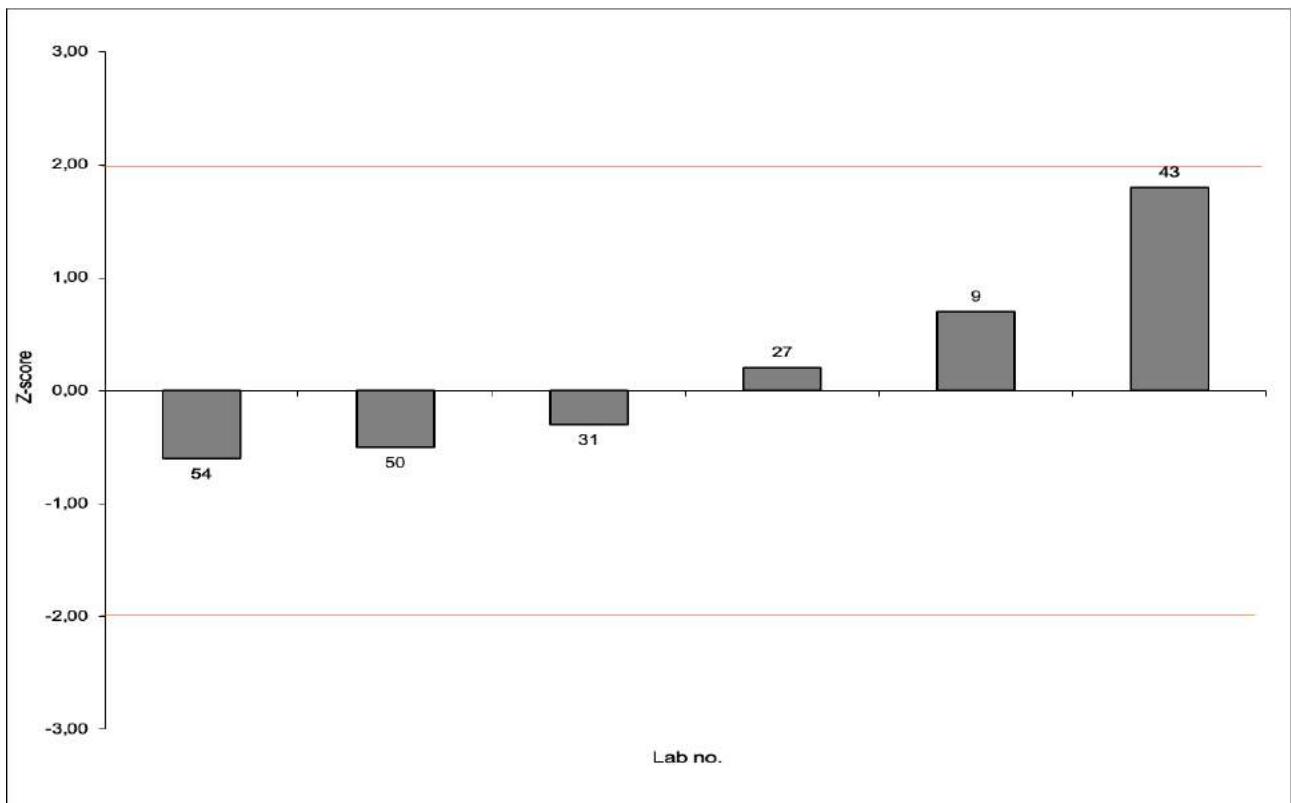
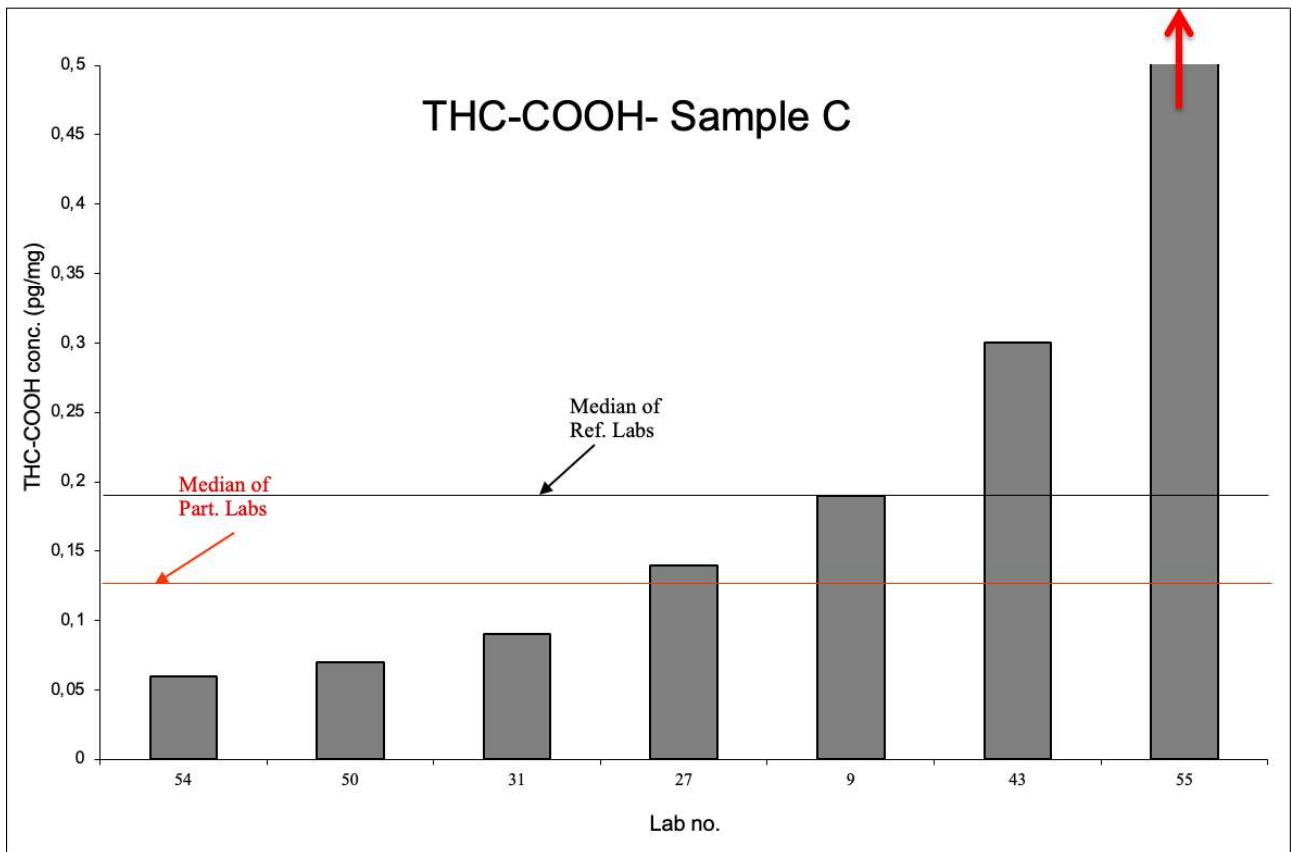
## 11-nor- $\Delta^9$ -TETRAHYDROCANNABINOL-9-CARBOXYLIC ACID (THC-COOH)

Lab	THC-COOH (pg/mg)	Z-score	Result
1	N		
5	N		
7	N		
9	0.19	0.70	Satisfactory
12	N		
13	N		
15	N		
18	N		
21	N		
27	0.14	0.20	Satisfactory
31	0.09	-0.30	Satisfactory
32	N		
36	N		
37	N		
38	N		
42	N		
43	0.3	1.80	Satisfactory
50	0.07	-0.50	Satisfactory
54	0.06	-0.60	Satisfactory
55	320	Outlier*	
58	N		

\* Lab 55 has not been included in the statistical study

Average	0.14
SD	0.08
CV%	58.98
Median	0.12
Minimum	0.06
Quartile 25	0.08
Quartile 75	0.18
Maximum	0.30
Iqr	0.10

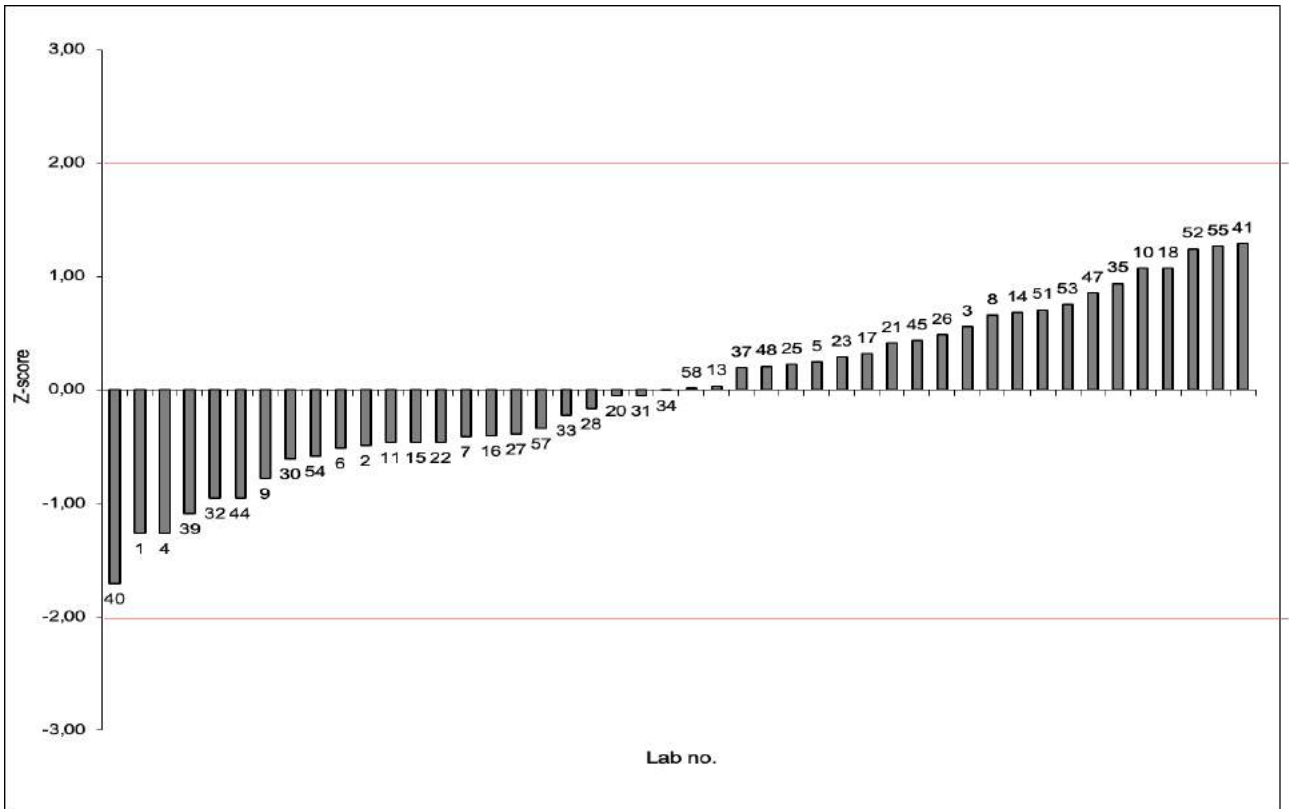
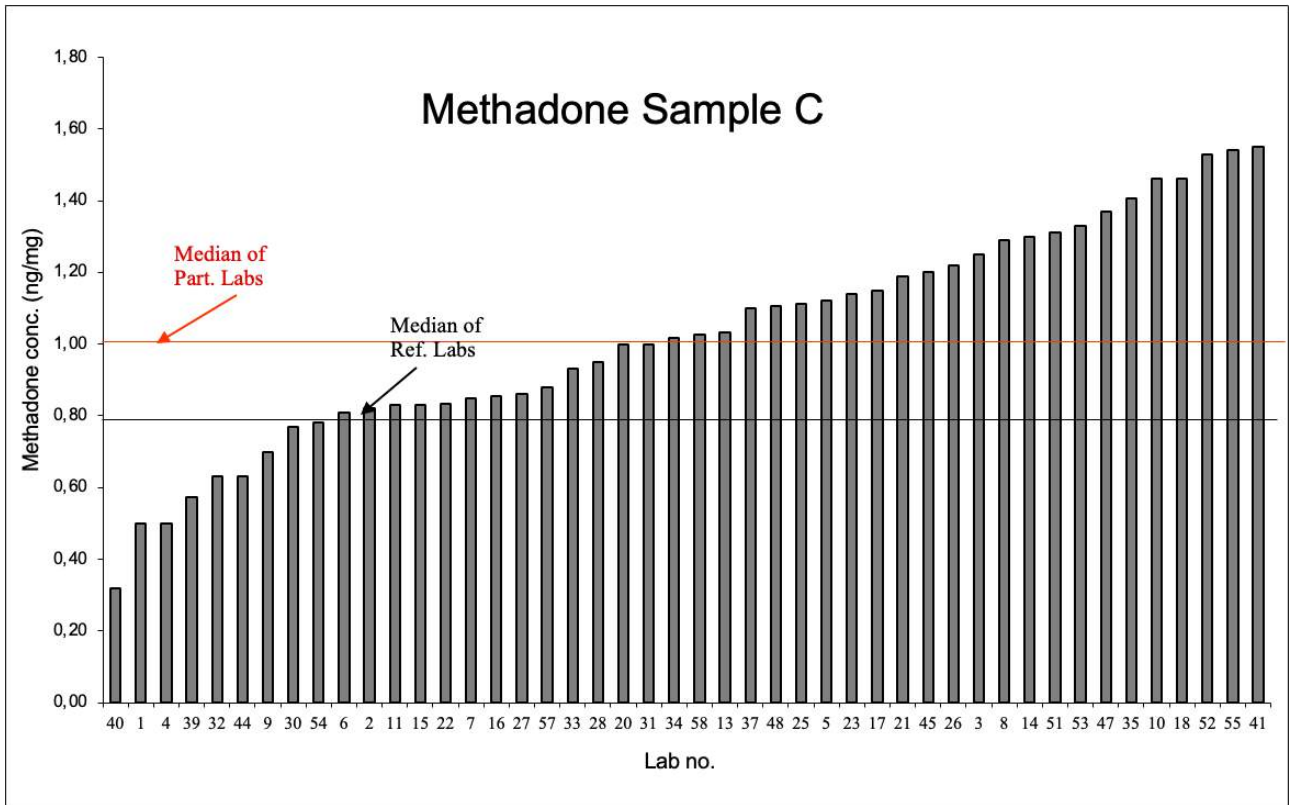
THC-COOH median concentration is below the cut-off proposed by SoHT (0.2 pg/mg).



**METHADONE**

Lab	Methadone (ng/mg)	Z-score	Result
1	0.50	-1.27	Satisfactory
2	0.82	-0.49	Satisfactory
3	1.25	0.56	Satisfactory
4	0.50	-1.27	Satisfactory
5	1.12	0.25	Satisfactory
6	0.81	-0.51	Satisfactory
7	0.85	-0.41	Satisfactory
8	1.29	0.66	Satisfactory
9	0.70	-0.78	Satisfactory
10	1.46	1.07	Satisfactory
11	0.83	-0.46	Satisfactory
13	1.03	0.03	Satisfactory
14	1.30	0.68	Satisfactory
15	0.83	-0.46	Satisfactory
16	0.86	-0.40	Satisfactory
17	1.15	0.32	Satisfactory
18	1.46	1.07	Satisfactory
20	1.00	-0.05	Satisfactory
21	1.19	0.41	Satisfactory
22	0.83	-0.46	Satisfactory
23	1.14	0.29	Satisfactory
25	1.11	0.23	Satisfactory
26	1.22	0.49	Satisfactory
27	0.86	-0.39	Satisfactory
28	0.95	-0.17	Satisfactory
30	0.77	-0.61	Satisfactory
31	1.00	-0.05	Satisfactory
32	0.63	-0.95	Satisfactory
33	0.93	-0.22	Satisfactory
34	1.02	0.00	Satisfactory
35	1.41	0.94	Satisfactory
37	1.10	0.20	Satisfactory
38	P		
39	0.57	-1.09	Satisfactory
40	0.32	-1.71	Satisfactory
41	1.55	1.29	Satisfactory
44	0.63	-0.95	Satisfactory
45	1.20	0.44	Satisfactory
47	1.37	0.85	Satisfactory
48	1.11	0.21	Satisfactory
51	1.31	0.71	Satisfactory
52	1.53	1.24	Satisfactory
53	1.33	0.76	Satisfactory
54	0.78	-0.59	Satisfactory
55	1.54	1.27	Satisfactory
56	P		
57	0.88	-0.34	Satisfactory
58	1.03	0.02	Satisfactory

Average	1.02
SD	0.30
CV%	29.12
Median	1.02
Minimum	0.32
Quartile 25	0.83
Quartile 75	1.24
Maximum	1.55
Iqr	0.41

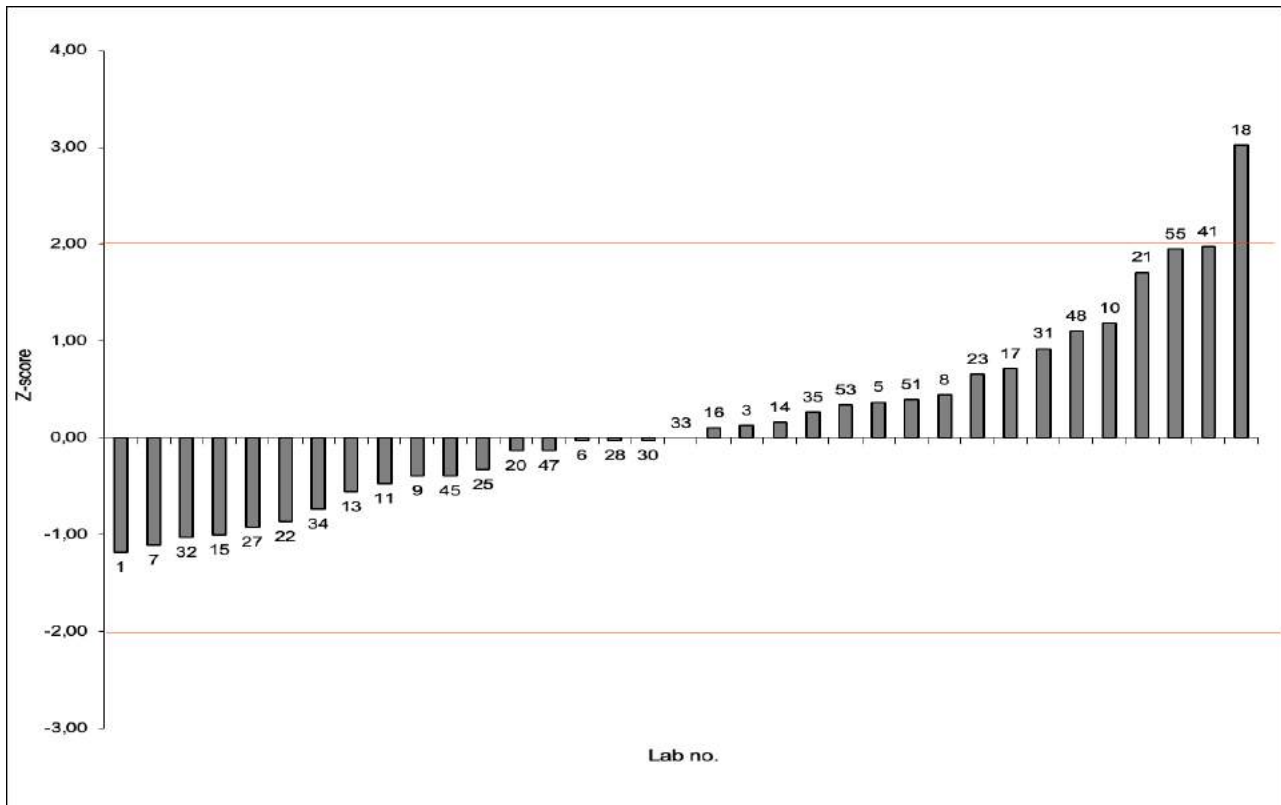
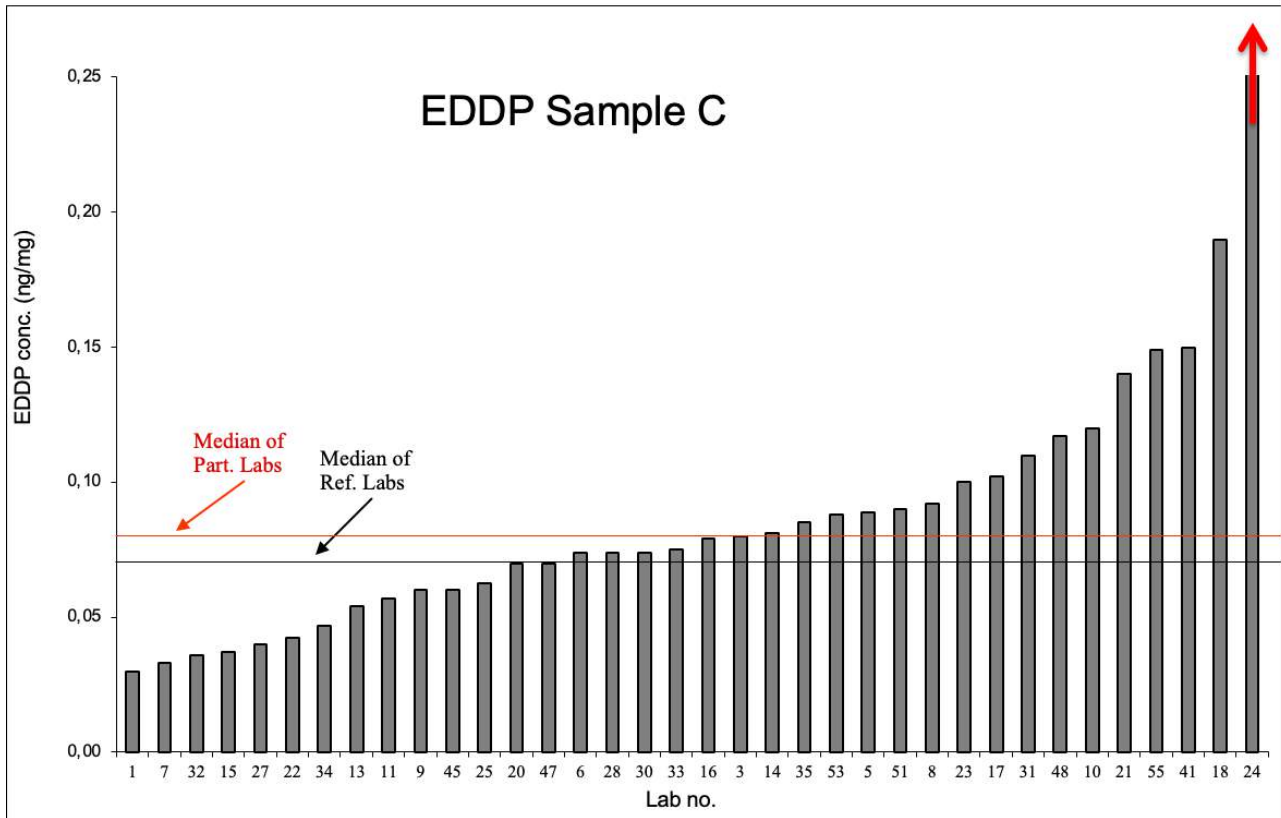


**EDDP**

Lab	EDDP (ng/mg)	Z-score	Result
1	0.030	-1.18	Satisfactory
2	N		
3	0.080	0.13	Satisfactory
4	N		
5	0.089	0.37	Satisfactory
6	0.074	-0.03	Satisfactory
7	0.033	-1.11	Satisfactory
8	0.092	0.45	Satisfactory
9	0.060	-0.39	Satisfactory
10	0.120	1.18	Satisfactory
11	0.057	-0.47	Satisfactory
13	0.054	-0.55	Satisfactory
14	0.081	0.16	Satisfactory
15	0.037	-1.00	Satisfactory
16	0.079	0.11	Satisfactory
17	0.102	0.71	Satisfactory
18	0.190	3.03	Unsatisfactory
20	0.070	-0.13	Satisfactory
21	0.140	1.71	Satisfactory
22	0.042	-0.86	Satisfactory
23	0.100	0.66	Satisfactory
24	0.471	Outlier*	
25	0.063	-0.33	Satisfactory
26	P		
27	0.040	-0.92	Satisfactory
28	0.074	-0.03	Satisfactory
30	0.074	-0.03	Satisfactory
31	0.110	0.92	Satisfactory
32	0.036	-1.03	Satisfactory
33	0.075	0.00	Satisfactory
34	0.047	-0.74	Satisfactory
35	0.085	0.26	Satisfactory
37	N		
38	U		
40	N		
41	0.150	1.97	Satisfactory
44	P		
45	0.060	-0.39	Satisfactory
47	0.070	-0.13	Satisfactory
48	0.117	1.11	Satisfactory
51	0.090	0.39	Satisfactory
53	0.088	0.34	Satisfactory
54	N		
55	0.149	1.95	Satisfactory
56	P		
58	N		

Average	0.090
SD	0.080
CV%	88.722
Median	0.074
Minimum	0.030
Quartile 25	0.054
Quartile 75	0.092
Maximum	0.471
Iqr	0.038

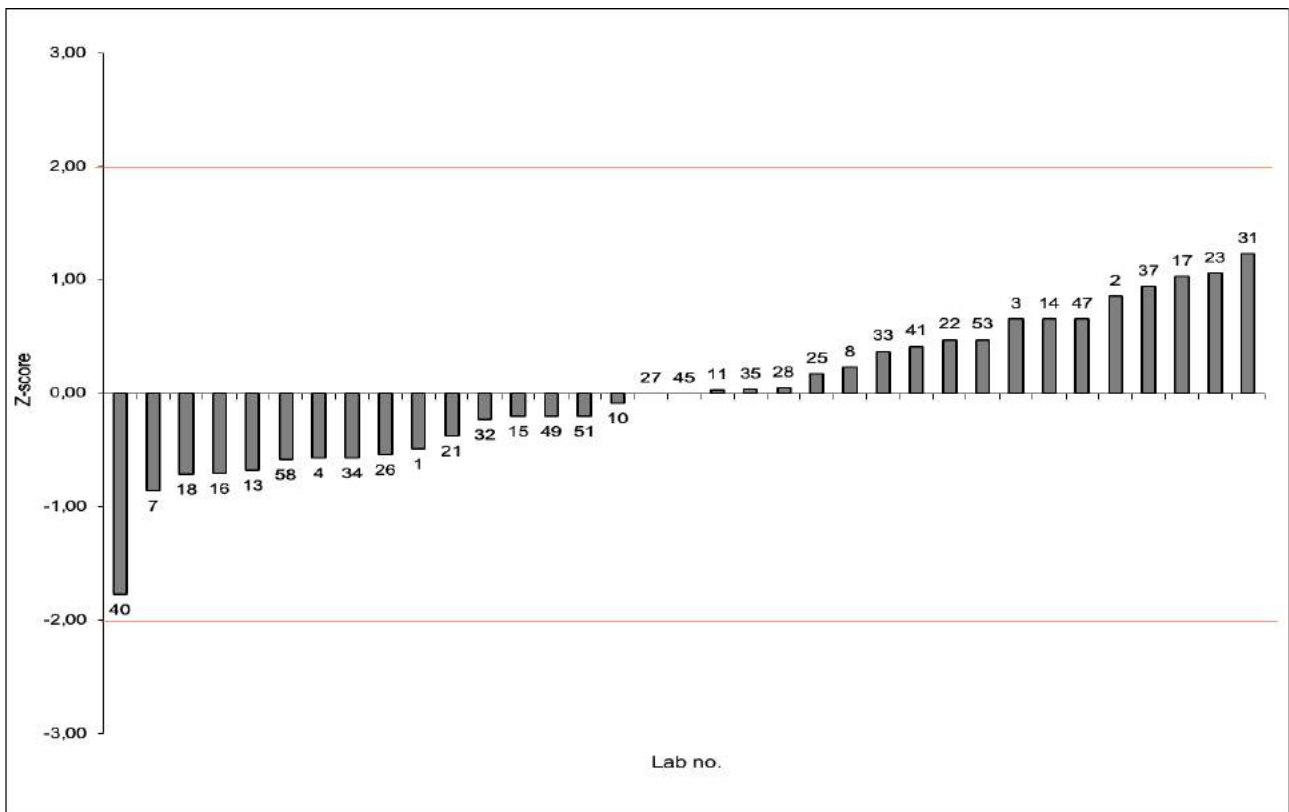
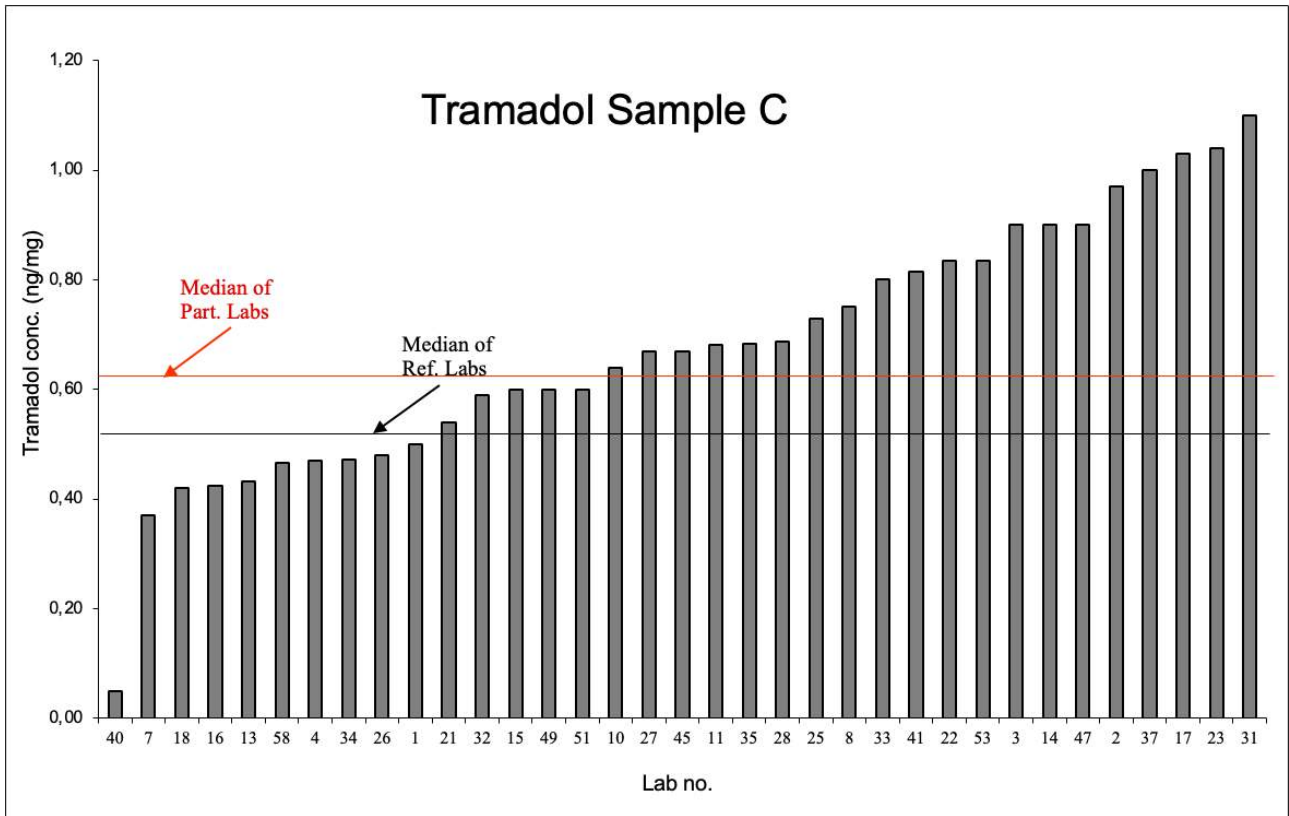
\*Lab 24 has not been included in the statistical study



**TRAMADOL**

Lab	Tramadol (ng/mg)	Z-score	Result
1	0.50	-0.49	Satisfactory
2	0.97	0.86	Satisfactory
3	0.90	0.66	Satisfactory
4	0.47	-0.57	Satisfactory
5	N		
7	0.37	-0.86	Satisfactory
8	0.75	0.23	Satisfactory
10	0.64	-0.09	Satisfactory
11	0.68	0.03	Satisfactory
13	0.43	-0.68	Satisfactory
14	0.90	0.66	Satisfactory
15	0.60	-0.20	Satisfactory
16	0.42	-0.70	Satisfactory
17	1.03	1.03	Satisfactory
18	0.42	-0.71	Satisfactory
21	0.54	-0.37	Satisfactory
22	0.84	0.47	Satisfactory
23	1.04	1.06	Satisfactory
25	0.73	0.17	Satisfactory
26	0.48	-0.54	Satisfactory
27	0.67	0.00	Satisfactory
28	0.69	0.05	Satisfactory
30	N		
31	1.10	1.23	Satisfactory
32	0.59	-0.23	Satisfactory
33	0.80	0.37	Satisfactory
34	0.47	-0.57	Satisfactory
35	0.68	0.04	Satisfactory
37	1.00	0.94	Satisfactory
38	P		
40	0.05	-1.77	Satisfactory
41	0.82	0.41	Satisfactory
45	0.67	0.00	Satisfactory
47	0.90	0.66	Satisfactory
48	P		
49	0.60	-0.20	Satisfactory
51	0.60	-0.20	Satisfactory
53	0.84	0.47	Satisfactory
58	0.47	-0.58	Satisfactory

Average	0.68
SD	0.23
CV%	33.46
Median	0.67
Minimum	0.05
Quartile 25	0.49
Quartile 75	0.84
Maximum	1.10
Iqr	0.35

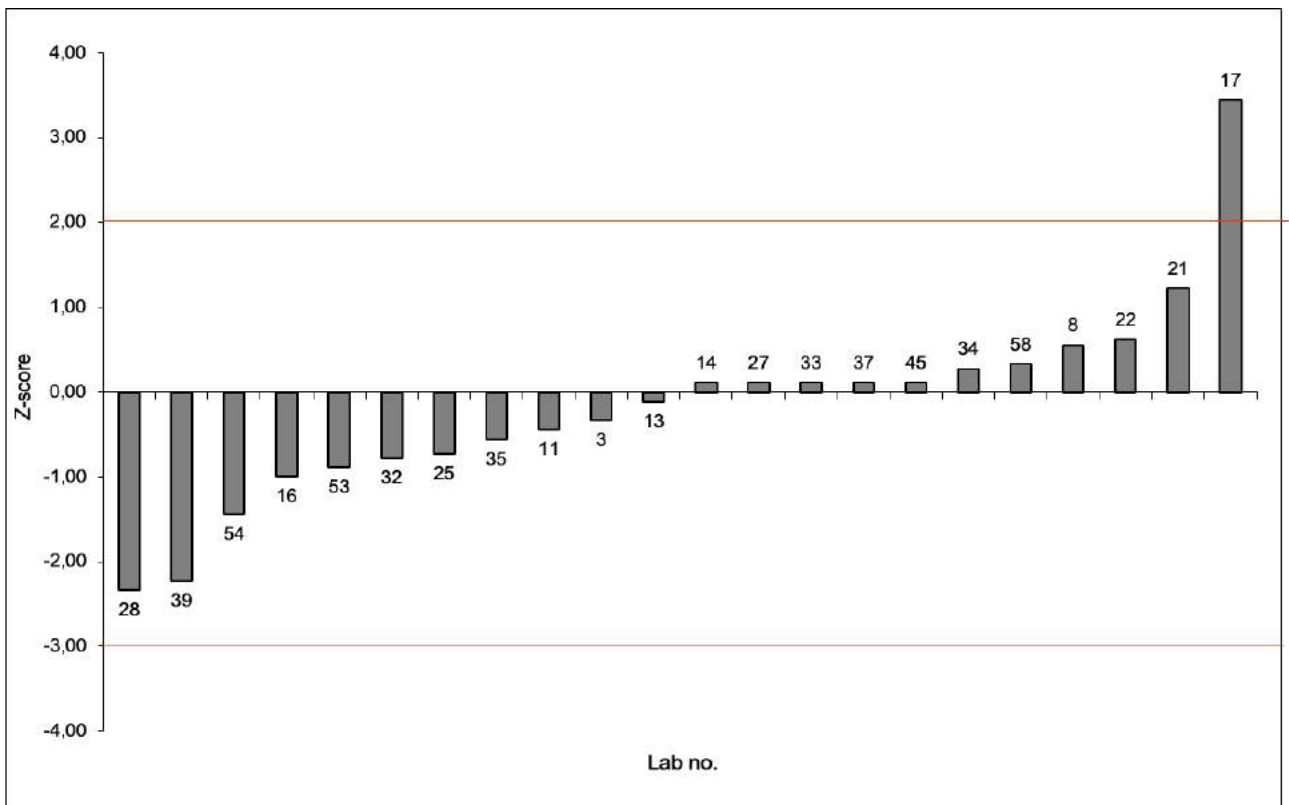
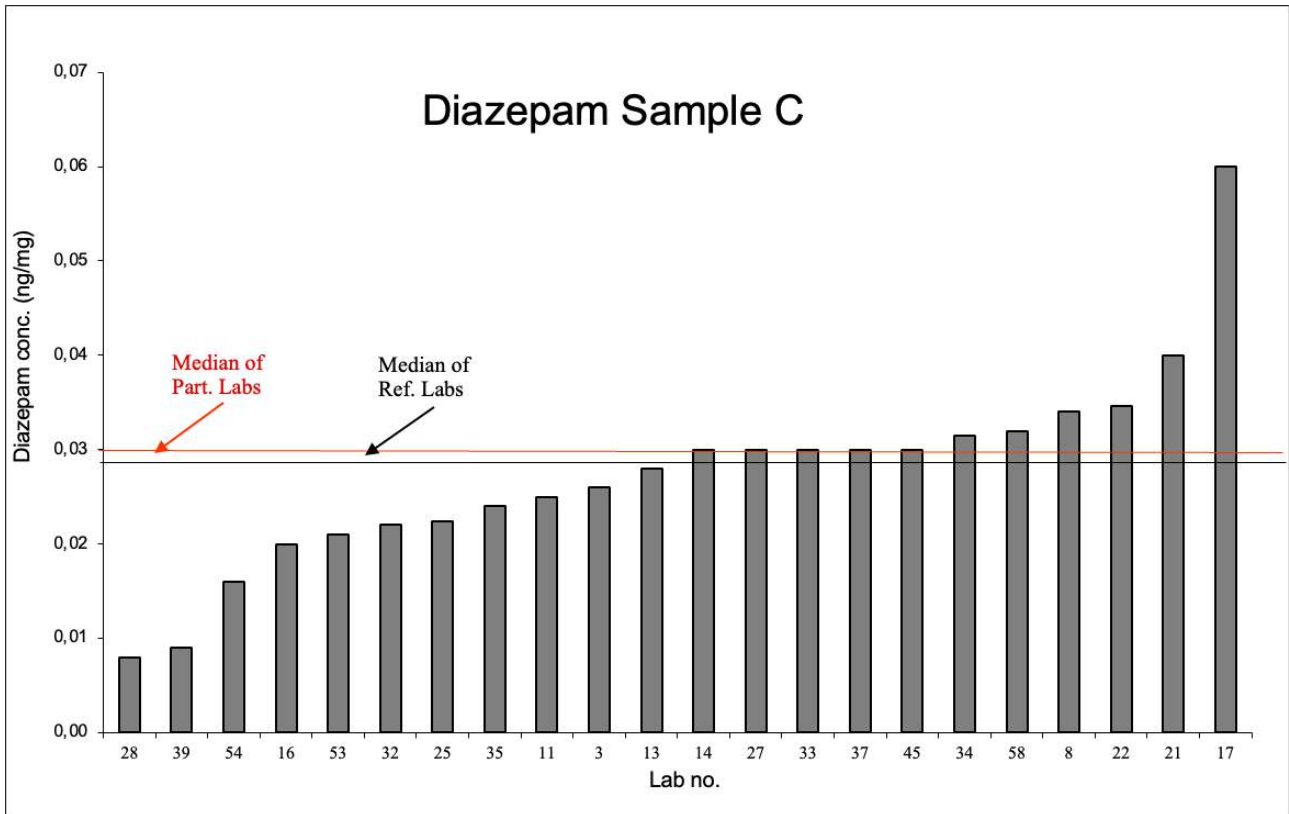




**DIAZEPAM**

Lab	Diazepam (ng/mg)	Z-score	Result
1	N		
2	N		
3	0.026	-0.33	Satisfactory
6	N		
7	N		
8	0.034	0.56	Satisfactory
10	<0.05		
11	0.025	-0.44	Satisfactory
12	N		
13	0.028	-0.11	Satisfactory
14	0.030	0.11	Satisfactory
16	0.020	-1.00	Satisfactory
17	0.060	3.44	Unsatisfactory
18	P		
21	0.040	1.22	Satisfactory
22	0.035	0.62	Satisfactory
24	N		
25	0.022	-0.73	Satisfactory
26	P		
27	0.030	0.11	Satisfactory
28	0.008	-2.33	Questionable
30	N		
31	N		
32	0.022	-0.78	Satisfactory
33	0.030	0.11	Satisfactory
34	0.032	0.28	Satisfactory
35	0.024	-0.56	Satisfactory
37	0.030	0.11	Satisfactory
38	U		
39	0.009	-2.22	Questionable
40	N		
41	N		
44	N		
45	0.030	0.11	Satisfactory
48	P		
52	N		
53	0.021	-0.89	Satisfactory
54	0.016	-1.44	Satisfactory
58	0.032	0.33	Satisfactory

Average	0.027
SD	0.010
CV%	38.099
Median	0.029
Minimum	0.008
Quartile 25	0.022
Quartile 75	0.031
Maximum	0.060
Iqr	0.009



**NORDAZEPAM**

Lab	Nordazepam (ng/mg)	Z-score	Result
1	N		
2	N		
3	0.015	-0.17	Satisfactory
6	N		
7	N		
8	0.017	0.17	Satisfactory
10	0.050	Outlier*	
11	N		
12	N		
13	0.018	0.33	Satisfactory
14	<0.02		
16	0.012	-0.67	Satisfactory
17	N		
18	N		
21	0.010	-1.00	Satisfactory
22	0.026	1.68	Satisfactory
24	N		
25	0.012	-0.67	Satisfactory
26	N		
28	N		
30	N		
31	N		
32	0.016	0.00	Satisfactory
33	0.050	Outlier*	
34	N		
35	0.010	-1.00	Satisfactory
37	N		
38	U		
39	0.006	-1.67	Satisfactory
40	N		
41	N		
44	N		
45	0.020	0.67	Satisfactory
48	P		
52	N		
53	0.018	0.33	Satisfactory
54	N		
58	0.016	0.03	Satisfactory

Average	0.015
SD	0.005
CV%	32.935
Median	0.016
Minimum	0.006
Quartile 25	0.012
Quartile 75	0.018
Maximum	0.026
Iqr	0.006

\*Labs 10 and 33 have not been included in the statistical study

