



«Tit» «Name» «Fam_Nam»
«Organization»
«Address1»
«Address_2»
«PO_Box» «City». «Country»

Sevilla, August, 2012

Proficiency Test 2012-1

Laboratory Code: «**Lab_code**»

Dear participants,

Enclosed you will find the report of the Proficiency Test 2012-1 on Drugs of Abuse in Hair, organized by the Society of Hair Testing.

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

Sets of three samples were sent to forty seven participating laboratories. Forty one of them sent the report forms back.

Sample contents were as follows:

- * Sample A contained opiates (6-MAM, morphine and codeine), cocaine (cocaine and BE), cannabis (THC, CBD, CBN and THC-COOH), which also contained methadone, dihydrocodeine, tramadol and traces amphetamine compounds (methamphetamine, MDMA).
- * Sample B contained traces of cocaine (cocaine and BE).
- * Sample C contained opiates (6-MAM and traces of morphine) and cocaine (cocaine and BE) which also contained methadone, dihydrocodeine, tramadol and traces cannabis (THC, CBD, CBN and THC-COOH) and amphetamine compounds (amphetamine, MDMA).

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

χ : 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: $2 < Z\text{-score} \leq 3$

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

Certificate

A certificate will be mailed to the participants by the end of the year, after the second round.

Yours faithfully,

Carmen Jurado

QUALITATIVE RESULTS

Laboratory Code: **Lab**

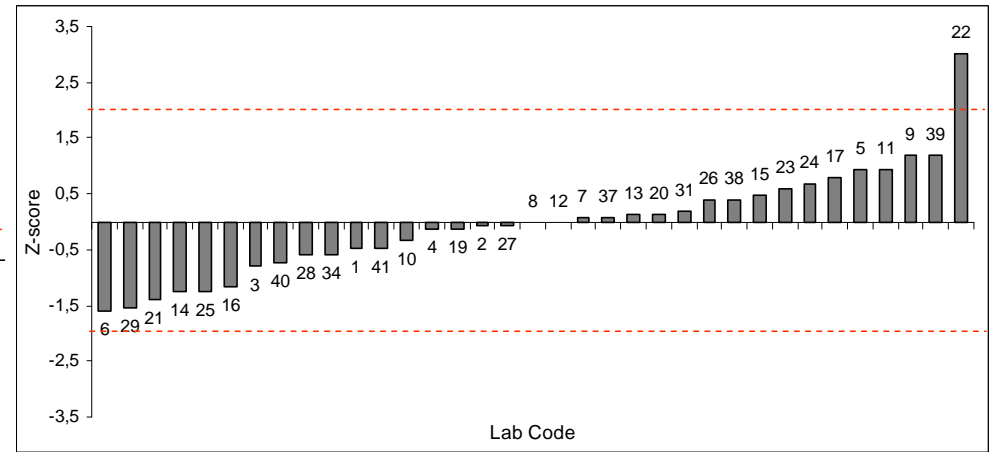
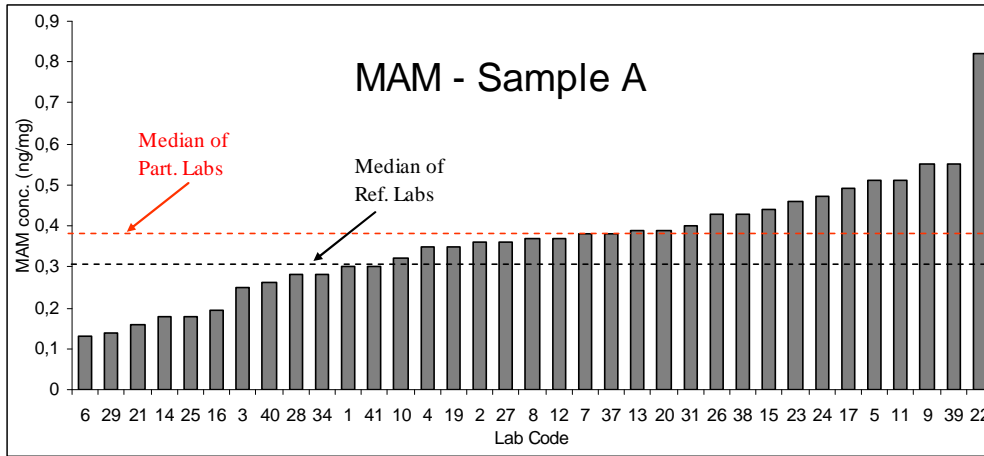
Sample A				Sample B				Sample C			
Substances	A	T	F	Substances	A	T	F	Substances	A	T	F
MAM		P		Cocaine**		P		MAM		P	
Morphine*		P		BE		P		Morphine		P	
Cocaine		P						Codeine		P	
BE		P						Cocaine		P	
THC		P						BE		P	

* The concentration of morphine in Sample A is very low. The median concentration reported by the participating laboratories is 0.10 ng/mg, which is lower than the cut-off's proposed by SoHT (0.2 ng/mg)

** The concentration of cocaine in Sample B is very low. The median concentration reported by the participating laboratories is 0.20 ng/mg, which is lower than the cut-off's proposed by SoHT (0.5 ng/mg)

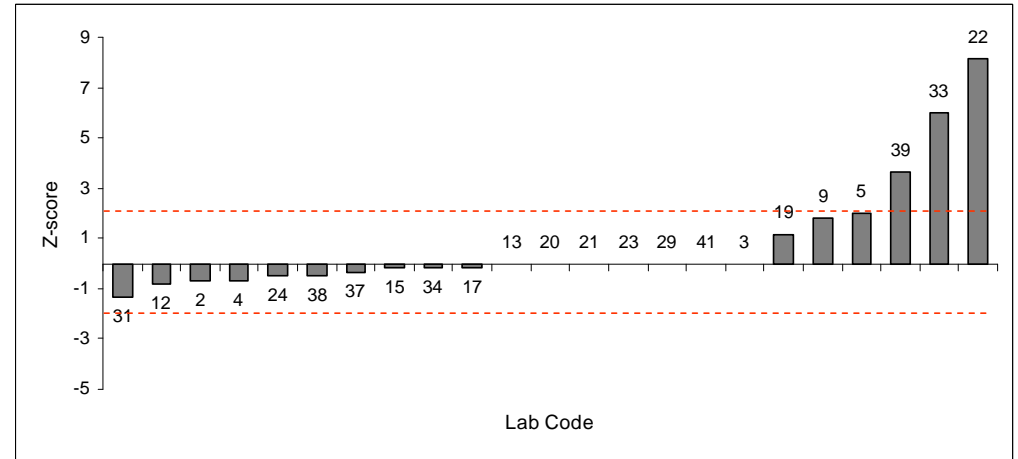
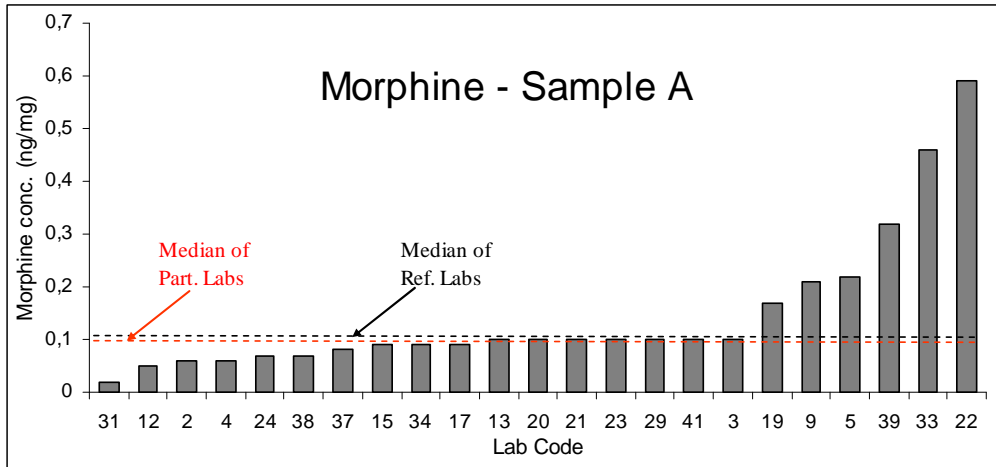
A: Your answer**P:** Positive**NR:** Not reported**FN:** False Negative**T:** True answer**N:** Negative**NA:** Not analyzed**FP:** False Positive**F:** False answer**Comments:**

- Sample A contains THC-COOH, methadone, dihydrocodeine, tramadol and traces of codeine and amphetamine compounds (methamphetamine, MDMA). The median concentration of codeine, reported by the participating laboratories, is 0.05 ng/mg, which is lower than the cut-off's proposed by SoHT (0.20 ng/mg). The median concentrations of methamphetamine and MDMA, reported by the participating laboratories, are 0.05 and 0.04 ng/mg, respectively. Both of them are below 0.2 ng/mg, which is the cut-off proposed by SoHT for these compounds.
- Sample C contains methadone, dihydrocodeine, tramadol and traces of THC and amphetamine compounds (amphetamine, MDMA). The median concentration of THC reported by the participating laboratories is 0.02 ng/mg, which is lower than the cut-off's proposed by SoHT (0.05 ng/mg). The median concentrations, of amphetamine and MDMA, reported by the participating laboratories are 0.05 and 0.08 ng/mg, respectively. Both of them are below 0.2 ng/mg.



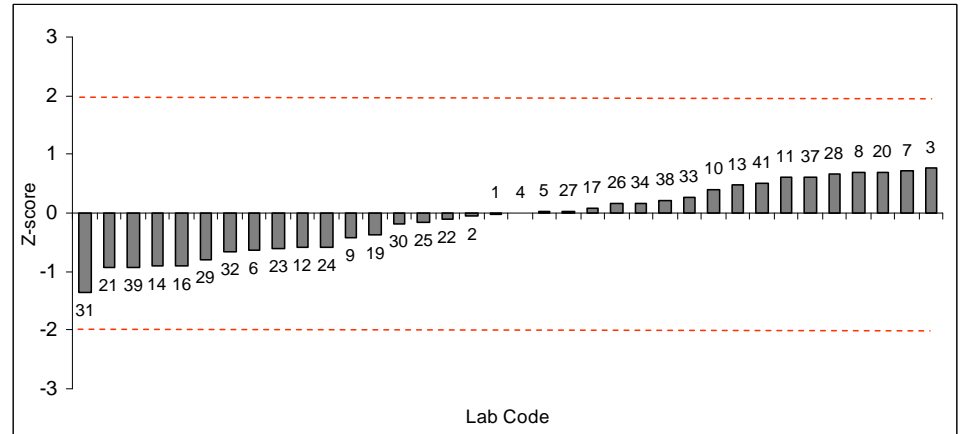
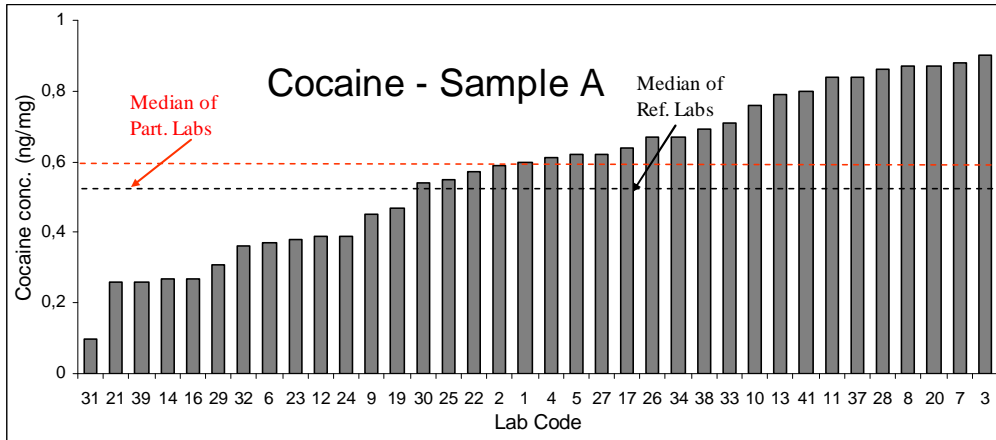
Lab. No.	MAM (ng/mg)	Z-score	Result
6	0,13	-1,60	Satisfactory
29	0,14	-1,53	Satisfactory
21	0,16	-1,40	Satisfactory
14	0,18	-1,27	Satisfactory
25	0,18	-1,27	Satisfactory
16	0,19	-1,18	Satisfactory
3	0,25	-0,80	Satisfactory
40	0,26	-0,73	Satisfactory
28	0,28	-0,60	Satisfactory
34	0,28	-0,60	Satisfactory
1	0,30	-0,47	Satisfactory
41	0,30	-0,47	Satisfactory
10	0,32	-0,33	Satisfactory
4	0,35	-0,13	Satisfactory
19	0,35	-0,13	Satisfactory
2	0,36	-0,07	Satisfactory
27	0,36	-0,07	Satisfactory
8	0,37	0	Satisfactory
12	0,37	0	Satisfactory
7	0,38	0,07	Satisfactory
37	0,38	0,07	Satisfactory
13	0,39	0,13	Satisfactory
20	0,39	0,13	Satisfactory
31	0,40	0,20	Satisfactory
26	0,43	0,40	Satisfactory
38	0,43	0,40	Satisfactory

Lab. No.	MAM (ng/mg)	Z-score	Result
15	0,44	0,47	Satisfactory
23	0,46	0,60	Satisfactory
24	0,47	0,67	Satisfactory
17	0,49	0,80	Satisfactory
5	0,51	0,93	Satisfactory
11	0,51	0,93	Satisfactory
9	0,55	1,20	Satisfactory
39	0,55	1,20	Satisfactory
22	0,82	3,00	UnSatisfactory
30	< 0'60		
35	P		
32	N		
33	N		
36	N		
18	NA		
Average	0,36		
SD	0,14		
CV%	37,91		
Median	0,37		
Minimum	0,13		
Quartile 25	0,28		
Quartile 75	0,435		
Maximum	0,82		
Iqr	0,155		



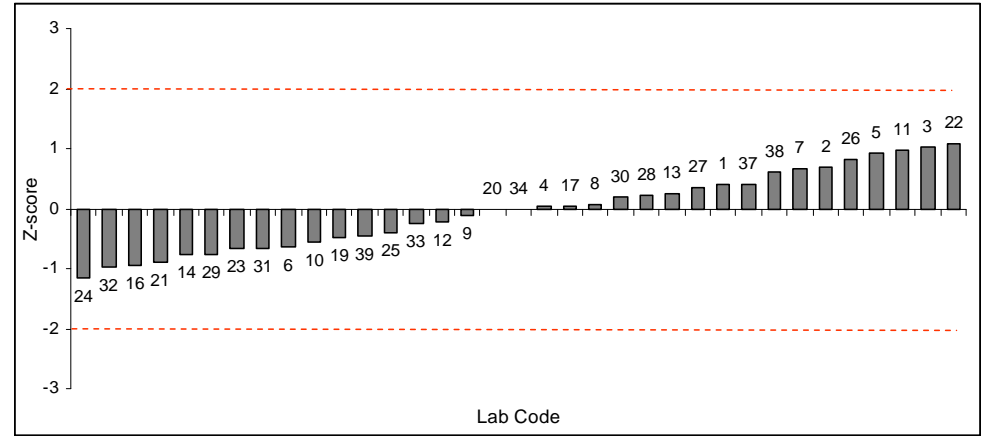
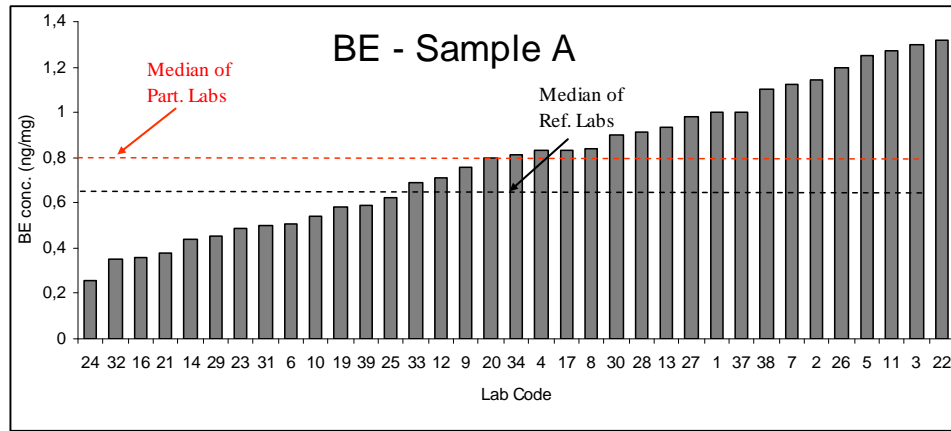
Lab. No.	Morphine (ng/mg)	Z-score	Result
31	0,02	-1,33	Satisfactory
12	0,05	-0,83	Satisfactory
2	0,06	-0,67	Satisfactory
4	0,06	-0,67	Satisfactory
24	0,07	-0,50	Satisfactory
38	0,07	-0,50	Satisfactory
37	0,08	-0,33	Satisfactory
15	0,09	-0,17	Satisfactory
34	0,09	-0,17	Satisfactory
17	0,09	-0,17	Satisfactory
13	0,10	0	Satisfactory
20	0,10	0	Satisfactory
21	0,10	0	Satisfactory
23	0,10	0	Satisfactory
29	0,10	0	Satisfactory
41	0,10	0	Satisfactory
3	0,10	0	Satisfactory
19	0,17	1,17	Satisfactory
9	0,21	1,83	Satisfactory
5	0,22	2,00	Questionable
39	0,32	3,67	UnSatisfactory
33	0,46	6,00	UnSatisfactory
22	0,59	8,17	UnSatisfactory
7	<0,05		
8	P		
14	P		

Lab. No.	Morphine (ng/mg)	Z-score	Result
1	N		
6	N		
10	N		
11	N		
25	N		
26	N		
27	N		
28	N		
30	N		
32	N		
35	N		
36	N		
40	N		
18	NA		
16	NR		
Average	0,14		
SD	0,13		
CV%	92,35		
Median	0,1		
Minimum	0,02		
Quartile 25	0,075		
Quartile 75	0,135		
Maximum	0,59		
Iqr	0,06		



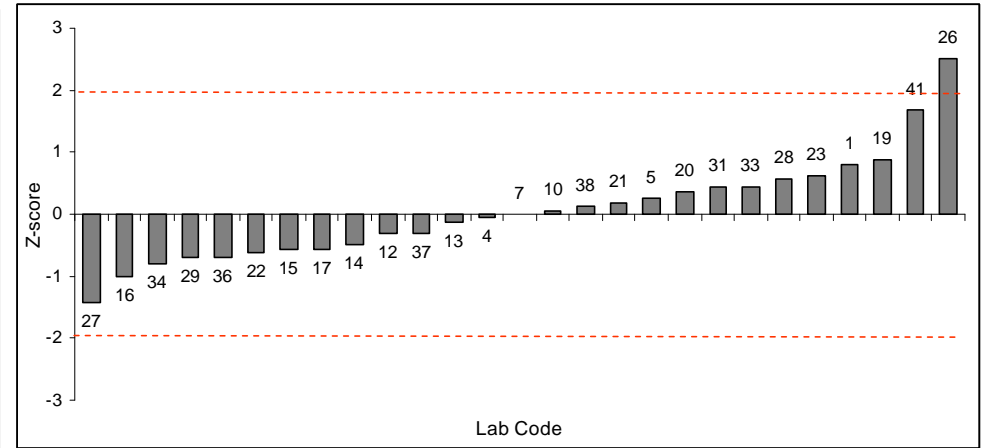
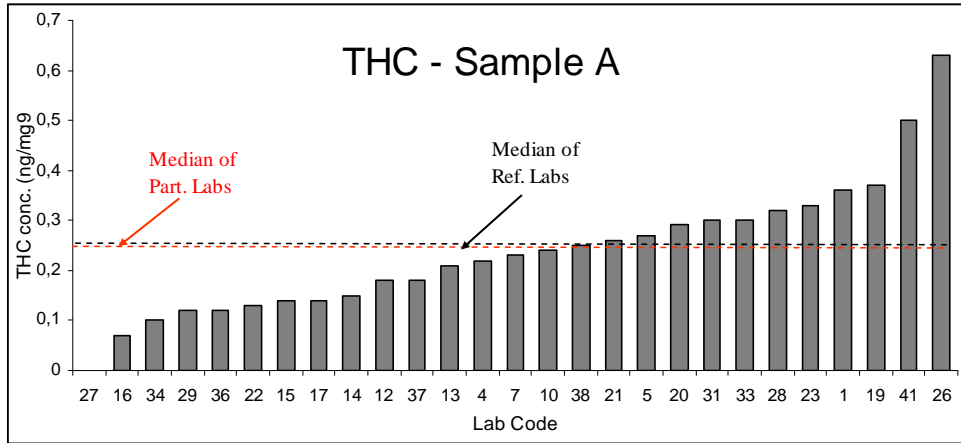
Lab. No.	Cocaine (ng/mg)	Z-score	Result
31	0,1	-1,34	Satisfactory
21	0,26	-0,92	Satisfactory
39	0,26	-0,92	Satisfactory
14	0,27	-0,89	Satisfactory
16	0,27	-0,89	Satisfactory
29	0,31	-0,79	Satisfactory
32	0,36	-0,66	Satisfactory
6	0,37	-0,63	Satisfactory
23	0,38	-0,60	Satisfactory
12	0,39	-0,56	Satisfactory
24	0,39	-0,58	Satisfactory
9	0,45	-0,42	Satisfactory
19	0,47	-0,37	Satisfactory
30	0,54	-0,18	Satisfactory
25	0,55	-0,16	Satisfactory
22	0,57	-0,10	Satisfactory
2	0,59	-0,05	Satisfactory
1	0,6	-0,03	Satisfactory
4	0,61	0	Satisfactory
5	0,62	0,03	Satisfactory
27	0,62	0,03	Satisfactory
17	0,64	0,08	Satisfactory
26	0,67	0,16	Satisfactory
34	0,67	0,16	Satisfactory
38	0,69	0,21	Satisfactory
33	0,71	0,26	Satisfactory

Lab. No.	Cocaine (ng/mg)	Z-score	Result
10	0,76	0,39	Satisfactory
13	0,79	0,47	Satisfactory
41	0,80	0,50	Satisfactory
11	0,84	0,60	Satisfactory
37	0,84	0,60	Satisfactory
28	0,86	0,66	Satisfactory
8	0,87	0,68	Satisfactory
20	0,87	0,68	Satisfactory
7	0,88	0,71	Satisfactory
3	0,90	0,76	Satisfactory
18	P		
15	N		
36	N		
40	NA		
35	U		
Average	0,58		
SD	0,22		
CV%	37,54		
Median	0,605		
Minimum	0,1		
Quartile 25	0,39		
Quartile 75	0,77		
Maximum	0,9		
Iqr	0,38		



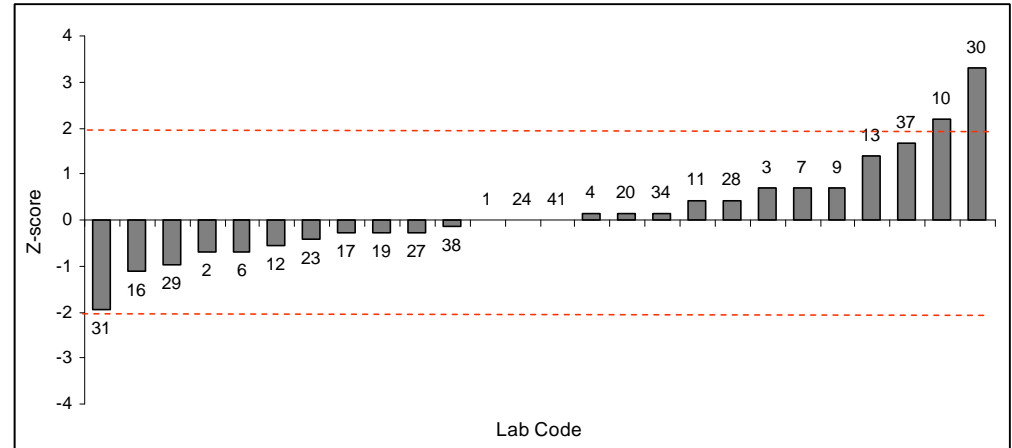
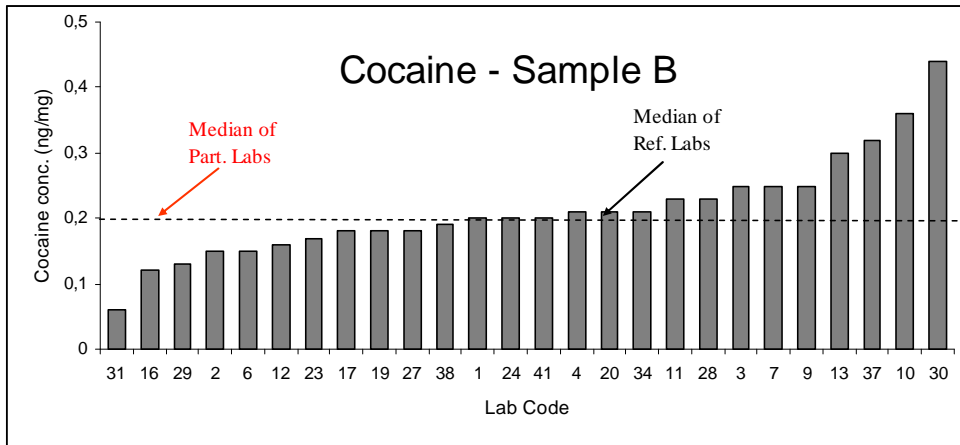
Lab. No.	BE (ng/mg)	Z-score	Result
24	0,26	-1,15	Satisfactory
32	0,35	-0,97	Satisfactory
16	0,36	-0,95	Satisfactory
21	0,38	-0,90	Satisfactory
14	0,44	-0,78	Satisfactory
29	0,45	-0,78	Satisfactory
23	0,49	-0,67	Satisfactory
31	0,50	-0,65	Satisfactory
6	0,51	-0,63	Satisfactory
10	0,54	-0,57	Satisfactory
19	0,58	-0,48	Satisfactory
39	0,59	-0,46	Satisfactory
25	0,62	-0,40	Satisfactory
33	0,69	-0,25	Satisfactory
12	0,71	-0,21	Satisfactory
9	0,76	-0,10	Satisfactory
20	0,80	-0,02	Satisfactory
34	0,81	0	Satisfactory
4	0,83	0,04	Satisfactory
17	0,83	0,04	Satisfactory
8	0,84	0,06	Satisfactory
30	0,90	0,19	Satisfactory
28	0,91	0,21	Satisfactory
13	0,93	0,25	Satisfactory
27	0,98	0,36	Satisfactory
1	1,00	0,40	Satisfactory

Lab. No.	BE (ng/mg)	Z-score	Result
37	1,00	0,40	Satisfactory
38	1,10	0,61	Satisfactory
7	1,12	0,65	Satisfactory
2	1,14	0,69	Satisfactory
26	1,20	0,82	Satisfactory
5	1,25	0,93	Satisfactory
11	1,27	0,97	Satisfactory
3	1,30	1,03	Satisfactory
22	1,32	1,07	Satisfactory
18	P		
35	P		
15	N		
36	N		
40	NA		
41	NA		
Average	0,79		
SD	0,30		
CV%	37,92		
Median	0,81		
Minimum	0,26		
Quartile 25	0,525		
Quartile 75	1		
Maximum	1,32		
Iqr	0,475		



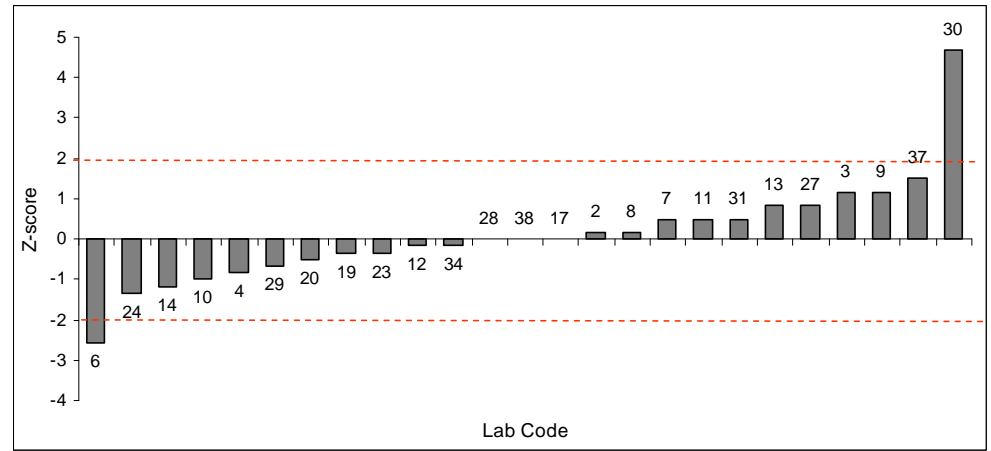
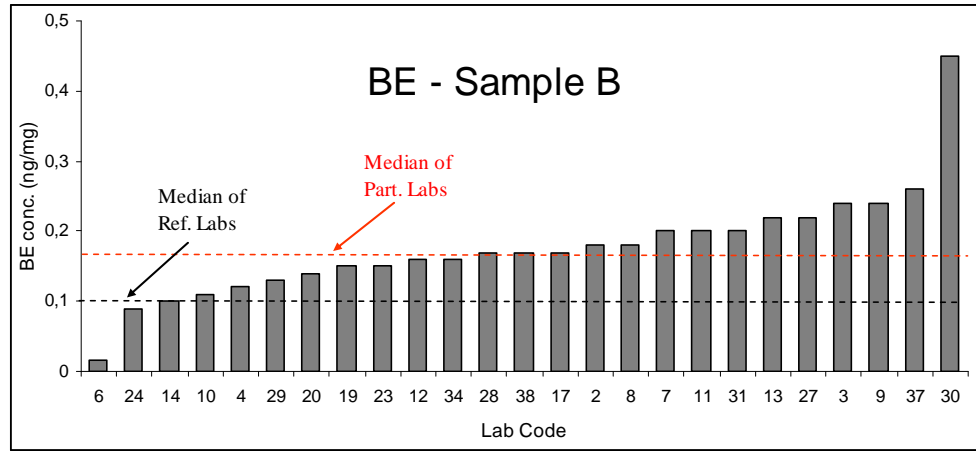
Lab. No.	THC (ng/mg)	Z-score	Result
27	0,0006	-1,43	Satisfactory
16	0,07	-1,00	Satisfactory
34	0,10	-0,81	Satisfactory
29	0,12	-0,69	Satisfactory
36	0,12	-0,69	Satisfactory
22	0,13	-0,62	Satisfactory
15	0,14	-0,56	Satisfactory
17	0,14	-0,56	Satisfactory
14	0,15	-0,50	Satisfactory
12	0,18	-0,31	Satisfactory
37	0,18	-0,31	Satisfactory
13	0,21	-0,12	Satisfactory
4	0,22	-0,06	Satisfactory
7	0,23	0	Satisfactory
10	0,24	0,06	Satisfactory
38	0,25	0,12	Satisfactory
21	0,26	0,19	Satisfactory
5	0,27	0,25	Satisfactory
20	0,29	0,37	Satisfactory
31	0,30	0,44	Satisfactory
33	0,30	0,44	Satisfactory
28	0,32	0,56	Satisfactory
23	0,33	0,62	Satisfactory
1	0,36	0,81	Satisfactory
19	0,37	0,87	Satisfactory
41	0,50	1,69	Satisfactory

Lab. No.	THC (ng/mg)	Z-score	Result
26	0,63	2,50	Questionable
25	N		
32	N		
2	NA		
3	NA		
6	NA		
8	NA		
9	NA		
11	NA		
18	NA		
24	NA		
30	NA		
39	NA		
40	NA		
35	U		
Average	0,24		
SD	0,13		
CV%	54,96		
Median	0,23		
Minimum	0,0006		
Quartile 25	0,14		
Quartile 75	0,3		
Maximum	0,63		
Iqr	0,16		



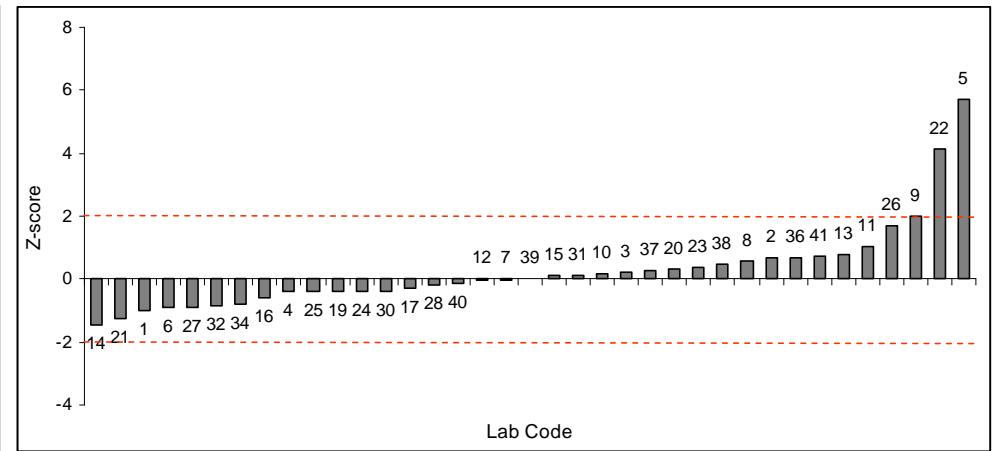
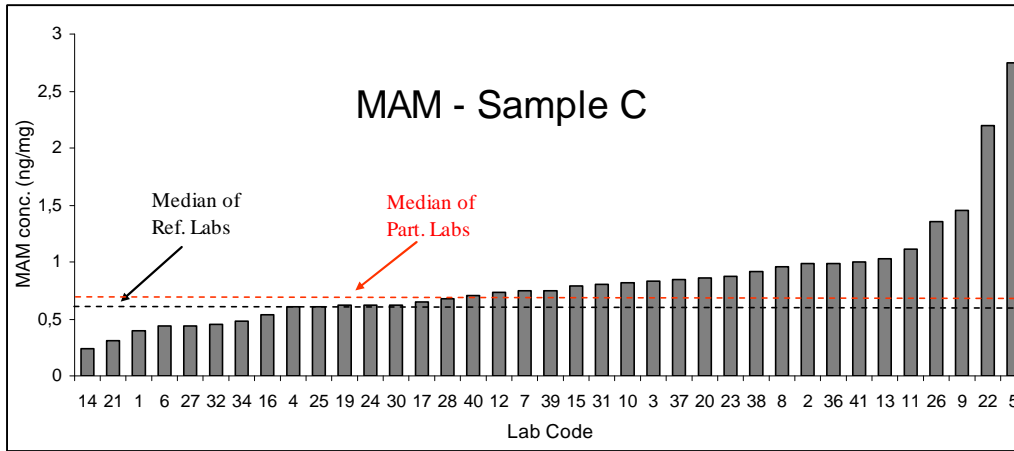
Lab. No.	Cocaine (ng/mg)	Z-score	Result
31	0,06	-1,93	Satisfactory
16	0,12	-1,10	Satisfactory
29	0,13	-0,96	Satisfactory
2	0,15	-0,69	Satisfactory
6	0,15	-0,69	Satisfactory
12	0,16	-0,55	Satisfactory
23	0,17	-0,41	Satisfactory
17	0,18	-0,27	Satisfactory
19	0,18	-0,27	Satisfactory
27	0,18	-0,27	Satisfactory
38	0,19	-0,14	Satisfactory
1	0,20	0	Satisfactory
24	0,20	0	Satisfactory
41	0,20	0	Satisfactory
4	0,21	0,14	Satisfactory
20	0,21	0,14	Satisfactory
34	0,21	0,14	Satisfactory
11	0,23	0,41	Satisfactory
28	0,23	0,41	Satisfactory
3	0,25	0,69	Satisfactory
7	0,25	0,69	Satisfactory
9	0,25	0,69	Satisfactory
13	0,30	1,38	Satisfactory
37	0,32	1,65	Satisfactory
10	0,36	2,21	Questionable
30	0,44	3,31	Unsatisfactory

Lab. No.	Cocaine (ng/mg)	Z-score	Result
39	< LOQ		
8	P		
14	P		
18	P		
5	N		
15	N		
21	N		
22	N		
25	N		
26	N		
32	N		
33	N		
36	N		
40	NA		
35	U		
Average	0,21		
SD	0,07		
CV%	36,03		
Median	0,2		
Minimum	0,06		
Quartile 25	0,17		
Quartile 75	0,245		
Maximum	0,44		
Iqr	0,0725		



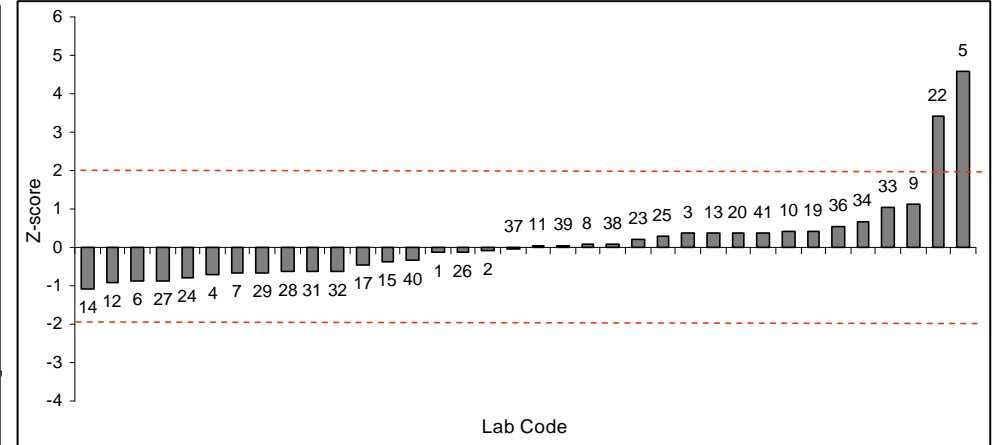
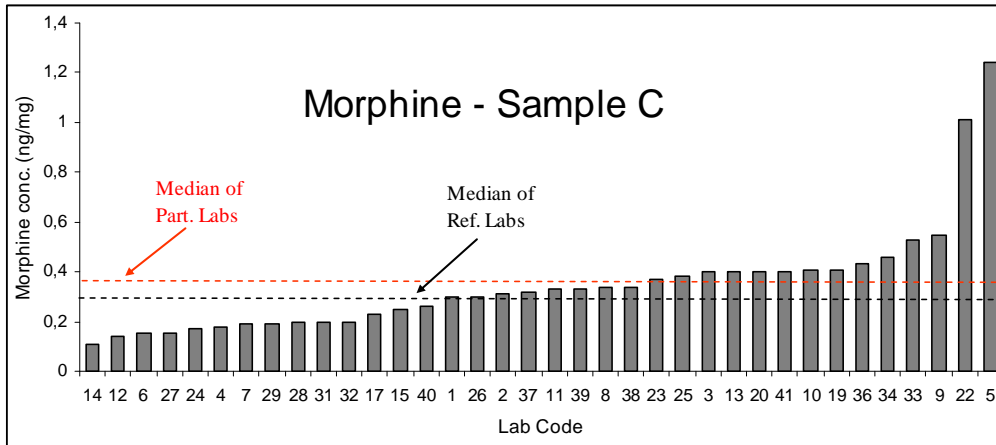
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6	0,015	-2,58	Questionable
24	0,09	-1,33	Satisfactory
14	0,10	-1,17	Satisfactory
10	0,11	-1,00	Satisfactory
4	0,12	-0,83	Satisfactory
29	0,13	-0,67	Satisfactory
20	0,14	-0,50	Satisfactory
19	0,15	-0,33	Satisfactory
23	0,15	-0,33	Satisfactory
12	0,16	-0,17	Satisfactory
34	0,16	-0,17	Satisfactory
28	0,17	0	Satisfactory
38	0,17	0	Satisfactory
17	0,17	0	Satisfactory
2	0,18	0,17	Satisfactory
8	0,18	0,17	Satisfactory
7	0,20	0,50	Satisfactory
11	0,20	0,50	Satisfactory
31	0,20	0,50	Satisfactory
13	0,22	0,83	Satisfactory
27	0,22	0,83	Satisfactory
3	0,24	1,17	Satisfactory
9	0,24	1,17	Satisfactory
37	0,26	1,50	Satisfactory
30	0,45	4,67	Unsatisfactory
39	< 0,05		

Lab. No.	BE (ng/mg)	Z-score	Result
18	P		
35	P		
1	N		
5	N		
15	N		
16	N		
21	N		
22	N		
25	N		
26	N		
32	N		
33	N		
36	N		
40	NA		
41	NA		
Average	0,18		
SD	0,07		
CV%	43,45		
Median	0,17		
Minimum	0,015		
Quartile 25	0,14		
Quartile 75	0,2		
Maximum	0,45		
Iqr	0,06		



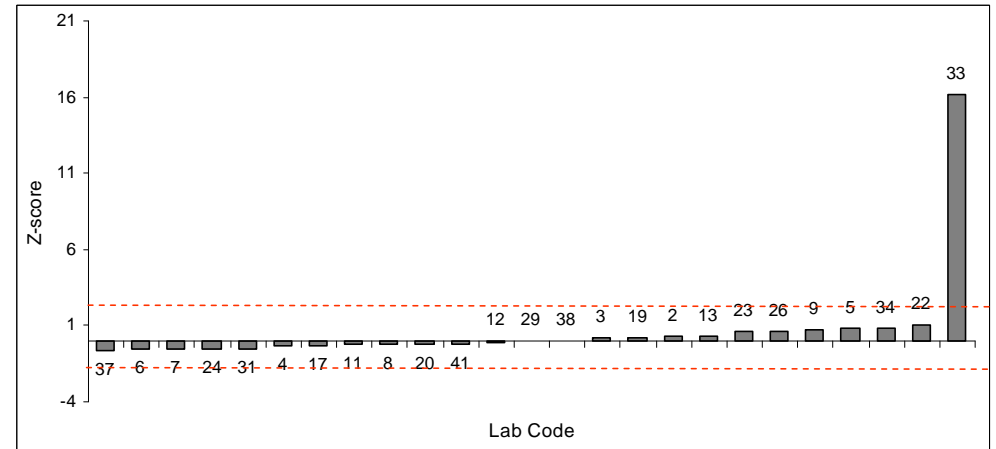
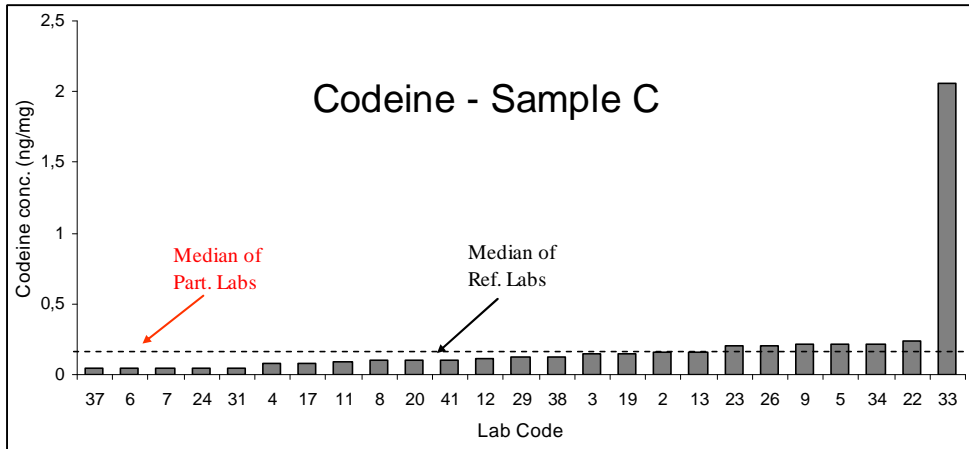
Lab. No.	MAM (ng/mg)	Z-score	Result
14	0,24	-1,46	Satisfactory
21	0,31	-1,26	Satisfactory
1	0,40	-1,00	Satisfactory
6	0,43	-0,91	Satisfactory
27	0,44	-0,88	Satisfactory
32	0,45	-0,86	Satisfactory
34	0,48	-0,77	Satisfactory
16	0,54	-0,60	Satisfactory
4	0,61	-0,40	Satisfactory
25	0,61	-0,40	Satisfactory
19	0,62	-0,37	Satisfactory
24	0,62	-0,37	Satisfactory
30	0,62	-0,37	Satisfactory
17	0,65	-0,28	Satisfactory
28	0,68	-0,20	Satisfactory
40	0,70	-0,14	Satisfactory
12	0,73	-0,06	Satisfactory
7	0,74	-0,03	Satisfactory
39	0,75	0	Satisfactory
15	0,79	0,11	Satisfactory
31	0,80	0,14	Satisfactory
10	0,81	0,17	Satisfactory
3	0,83	0,23	Satisfactory
37	0,85	0,28	Satisfactory
20	0,86	0,31	Satisfactory
23	0,88	0,37	Satisfactory

Lab. No.	MAM (ng/mg)	Z-score	Result
38	0,92	0,48	Satisfactory
8	0,96	0,60	Satisfactory
2	0,98	0,66	Satisfactory
36	0,99	0,68	Satisfactory
41	1,00	0,71	Satisfactory
13	1,03	0,80	Satisfactory
11	1,11	1,03	Satisfactory
26	1,35	1,71	Satisfactory
9	1,45	2,00	Questionable
22	2,20	4,14	Unsatisfactory
5	2,75	5,71	Unsatisfactory
29	P		
35	P		
33	N		
18	NA		
Average	0,84		
SD	0,47		
CV%	55,97		
Median	0,75		
Minimum	0,24		
Quartile 25	0,61		
Quartile 75	0,96		
Maximum	2,75		
Iqr	0,35		



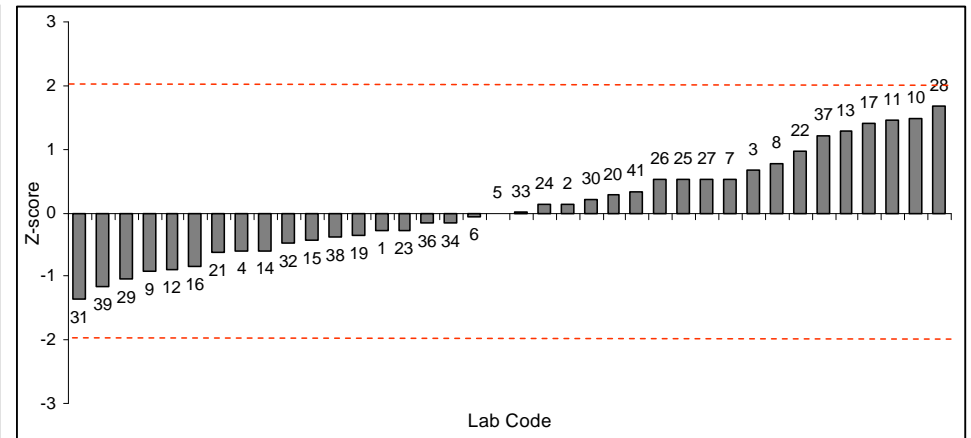
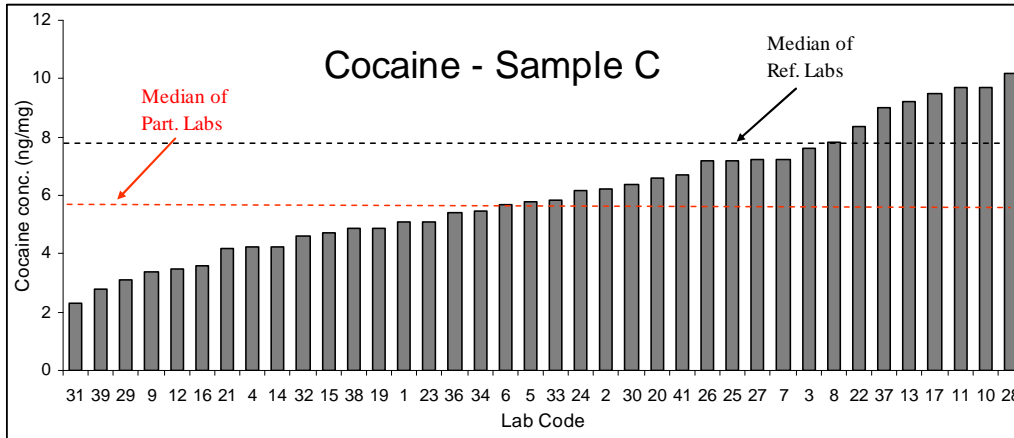
Lab. No.	Morphine (ng/mg)	Z-score	Result
14	0,11	-1,07	Satisfactory
12	0,14	-0,92	Satisfactory
6	0,15	-0,87	Satisfactory
27	0,15	-0,87	Satisfactory
24	0,17	-0,77	Satisfactory
4	0,18	-0,72	Satisfactory
7	0,19	-0,67	Satisfactory
29	0,19	-0,67	Satisfactory
28	0,20	-0,62	Satisfactory
31	0,20	-0,62	Satisfactory
32	0,20	-0,62	Satisfactory
17	0,23	-0,47	Satisfactory
15	0,25	-0,37	Satisfactory
40	0,26	-0,32	Satisfactory
1	0,30	-0,12	Satisfactory
26	0,30	-0,12	Satisfactory
2	0,31	-0,07	Satisfactory
37	0,32	-0,02	Satisfactory
11	0,33	0,02	Satisfactory
39	0,33	0,02	Satisfactory
8	0,34	0,07	Satisfactory
38	0,34	0,07	Satisfactory
23	0,37	0,22	Satisfactory
25	0,38	0,27	Satisfactory
3	0,40	0,37	Satisfactory
13	0,40	0,37	Satisfactory

Lab. No.	Morphine (ng/mg)	Z-score	Result
20	0,40	0,37	Satisfactory
41	0,40	0,37	Satisfactory
10	0,41	0,42	Satisfactory
19	0,41	0,42	Satisfactory
36	0,43	0,52	Satisfactory
34	0,46	0,67	Satisfactory
33	0,53	1,02	Satisfactory
9	0,55	1,12	Satisfactory
22	1,01	3,42	Unsatisfactory
5	1,24	4,57	Unsatisfactory
30	< 0'60		
35	U		
21	N		
18	NA		
16	NR		
Average	0,35		
SD	0,22		
CV%	62,91		
Median	0,32		
Minimum	0,11		
Quartile 25	0,2		
Quartile 75	0,4		
Maximum	1,24		
Iqr	0,2		



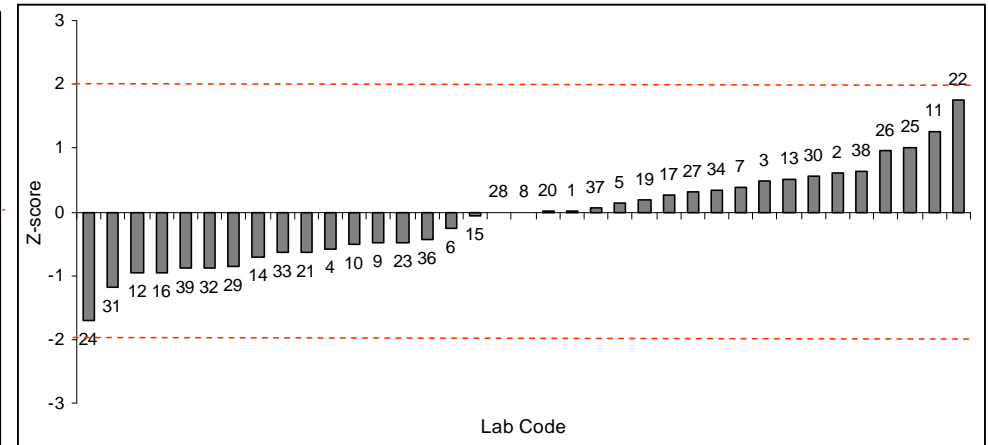
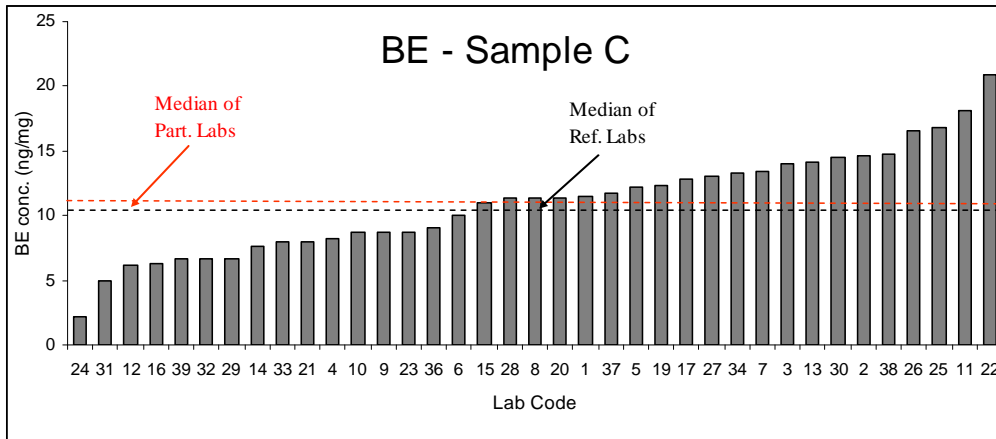
Lab. No.	Codeine (ng/mg)	Z-score	Result
37	0,04	-0,67	Satisfactory
6	0,05	-0,58	Satisfactory
7	0,05	-0,58	Satisfactory
24	0,05	-0,58	Satisfactory
31	0,05	-0,58	Satisfactory
4	0,08	-0,33	Satisfactory
17	0,08	-0,33	Satisfactory
11	0,09	-0,25	Satisfactory
8	0,10	-0,17	Satisfactory
20	0,10	-0,17	Satisfactory
41	0,10	-0,17	Satisfactory
12	0,11	-0,08	Satisfactory
29	0,12	0	Satisfactory
38	0,12	0	Satisfactory
3	0,15	0,25	Satisfactory
19	0,15	0,25	Satisfactory
2	0,16	0,33	Satisfactory
13	0,16	0,33	Satisfactory
23	0,20	0,67	Satisfactory
26	0,20	0,67	Satisfactory
9	0,21	0,75	Satisfactory
5	0,22	0,83	Satisfactory
34	0,22	0,83	Satisfactory
22	0,24	1,00	Satisfactory
33	2,06	16,17	Unsatisfactory
39	<0,2		

Lab. No.	Codeine (ng/mg)	Z-score	Result
14	P		
1	N		
10	N		
15	N		
21	N		
25	N		
27	N		
28	N		
30	N		
32	N		
36	N		
40	N		
18	NA		
16	NR		
35	U		
Average	0,20		
SD	0,38		
CV%	187,63		
Median	0,12		
Minimum	0,04		
Quartile 25	0,08		
Quartile 75	0,2		
Maximum	2,06		
Iqr	0,12		



Lab. No.	Cocaine (ng/mg)	Z-score	Result
31	2,30	-1,35	Satisfactory
39	2,80	-1,16	Satisfactory
29	3,13	-1,03	Satisfactory
9	3,40	-0,93	Satisfactory
12	3,50	-0,89	Satisfactory
16	3,60	-0,85	Satisfactory
21	4,20	-0,62	Satisfactory
4	4,25	-0,60	Satisfactory
14	4,25	-0,60	Satisfactory
32	4,59	-0,47	Satisfactory
15	4,70	-0,43	Satisfactory
38	4,86	-0,37	Satisfactory
19	4,88	-0,36	Satisfactory
1	5,10	-0,28	Satisfactory
23	5,10	-0,28	Satisfactory
36	5,39	-0,17	Satisfactory
34	5,44	-0,15	Satisfactory
6	5,70	-0,05	Satisfactory
5	5,81	-0,01	Satisfactory
33	5,85	0,01	Satisfactory
24	6,18	0,13	Satisfactory
2	6,20	0,14	Satisfactory
30	6,35	0,20	Satisfactory
20	6,57	0,28	Satisfactory
41	6,70	0,33	Satisfactory
26	7,18	0,51	Satisfactory

Lab. No.	Cocaine (ng/mg)	Z-score	Result
25	7,20	0,52	Satisfactory
27	7,23	0,53	Satisfactory
7	7,24	0,54	Satisfactory
3	7,60	0,67	Satisfactory
8	7,84	0,77	Satisfactory
22	8,34	0,96	Satisfactory
37	9,00	1,21	Satisfactory
13	9,20	1,29	Satisfactory
17	9,50	1,40	Satisfactory
11	9,67	1,46	Satisfactory
10	9,69	1,47	Satisfactory
28	10,20	1,67	Satisfactory
18	P		
35	P		
40	NA		
Average	6,07		
SD	2,07		
CV%	34,14		
Median	5,83		
Minimum	2,3		
Quartile 25	4,62		
Quartile 75	7,24		
Maximum	10,2		
Iqr	2,62		



Lab. No.	BE (ng/mg)	Z-score	Result
24	2,20	-1,70	Satisfactory
31	5,00	-1,18	Satisfactory
12	6,20	-0,96	Satisfactory
16	6,26	-0,95	Satisfactory
39	6,60	-0,88	Satisfactory
32	6,63	-0,88	Satisfactory
29	6,67	-0,87	Satisfactory
14	7,58	-0,70	Satisfactory
33	7,95	-0,63	Satisfactory
21	8,00	-0,62	Satisfactory
4	8,20	-0,59	Satisfactory
10	8,66	-0,50	Satisfactory
9	8,70	-0,49	Satisfactory
23	8,75	-0,48	Satisfactory
36	9,03	-0,43	Satisfactory
6	10,00	-0,25	Satisfactory
15	11,00	-0,07	Satisfactory
28	11,30	-0,01	Satisfactory
8	11,37	0	Satisfactory
20	11,40	0,01	Satisfactory
1	11,50	0,02	Satisfactory
37	11,70	0,06	Satisfactory
5	12,14	0,14	Satisfactory
19	12,35	0,18	Satisfactory
17	12,80	0,26	Satisfactory
27	13,00	0,30	Satisfactory

Lab. No.	Cocaine (ng/mg)	Z-score	Result
34	13,25	0,35	Satisfactory
7	13,40	0,37	Satisfactory
3	14,00	0,49	Satisfactory
13	14,10	0,50	Satisfactory
30	14,44	0,57	Satisfactory
2	14,60	0,60	Satisfactory
38	14,79	0,63	Satisfactory
26	16,51	0,95	Satisfactory
25	16,83	1,01	Satisfactory
11	18,17	1,26	Satisfactory
22	20,84	1,75	Satisfactory
18	P		
35	P		
40	NA		
41	NA		
Average	10,97		
SD	3,91		
CV%	35,69		
Median	11,37		
Minimum	2,2		
Quartile 25	8		
Quartile 75	13,4		
Maximum	20,84		
Iqr	5,4		