



UNODC

United Nations Office on Drugs and Crime

**INTERNATIONAL QUALITY
ASSURANCE PROGRAMME (IQAP)**

**INTERNATIONAL COLLABORATIVE
EXERCISE (ICE)**

Summary Report

SEIZED MATERIAL

2011/1

Table of contents

Sample 1 Analysis	Page	5
Identified substances	Page	5
Statement of findings	Page	8
Identification methods	Page	14
False positives	Page	17
Z-Scores	Page	18
Sample 2 Analysis	Page	20
Identified substances	Page	20
Statement of findings	Page	23
Identification methods	Page	30
False positives	Page	33
Z-Scores	Page	34
Sample 3 Analysis	Page	36
Identified substances	Page	36
Statement of findings	Page	39
Identification methods	Page	45
False positives	Page	48
Z-Scores	Page	49
Sample 4 Analysis	Page	51
Identified substances	Page	51
Statement of findings	Page	53
Identification methods	Page	59
False positives	Page	62
Z-Scores	Page	63

Test Samples Information

Samples	Comments on samples
Sample 1	SM1 was prepared from a seizure of morphine containing 65% w/w morphine base (average % of 3 reference labs*) <small>*Note: The specifications from the commercial supplier of SM1 (46%) were inconsistent with the analytical results of both the reference and participating laboratories. As a result, the commercial supplier has been asked to address this issue.</small>
Sample 2	SM2 was prepared from a seizure of 3,4-methylenedioxyamphetamine (MDMA) containing 30% w/w MDMA base. The sample also contained lactose.
Sample 3	SM3 was prepared from a seizure of cocaine containing 74% w/w cocaine base.
Sample 4	SM4 was prepared from a seizure of amphetamine containing 2% w/w amphetamine base. The sample also contained caffeine and lactose.

Samples	Substances	Concentrations	Comments on substances
Sample 1	Morphine	65 %	
Sample 2	Lactose	0 %	Quantification not required
	3,4-Methylenedioxyamphetamine (MDMA)	30 %	
Sample 3	Cocaine	74 %	
Sample 4	Caffeine	0 %	Quantification not required
	Amphetamine	2 %	
	Lactose	0 %	quantification not required

This report contains the data received from laboratories participating in the current exercise. The results compiled in this report are not intended to be an overview of the quality of work and cannot be interpreted as such. These comments do not reflect the general state of the art within the profession.

Participant results are reported using a randomly assigned "WebCode". This code maintains participant's anonymity, provides linking of the various report sections, and will change with every report.

Introduction

UNODC International Collaborative Exercises (ICE)

An important element of the UNODC International Quality Assurance Programme (IQAP) is the implementation of the International Collaborative Exercises (ICE). The exercises allow laboratories, from both developing and developed countries, to continuously monitor their performance in drug testing on a truly global scale. This report provides information on analytical results of laboratories participating in Seized Materials (SM) group. In order to maintain confidentiality, the participating laboratories have been assigned random "WebCodes". These codes will change in every round. Two rounds are offered per year with each round presenting participants with four different test samples for analysis.

The analytical results returned by laboratories participating in ICE are evaluated by UNODC and a confidential report is provided to each laboratory on its own performance. Analytical results are reviewed by the UNODC's International Panel of Forensic Experts which oversees the implementation of these exercises, and offers guidance and support in addressing relevant quality issues. The exercises provide an overview of the performance and capacity of participating laboratories and enable UNODC to tailor technical support in the laboratory sector for greatest impact.

Comments from the International Panel of Forensic Experts

Participation of Laboratories

108 laboratories accepted invitations to participate in the analysis of the Seized Materials test samples from a total of 126 invitations sent to laboratories in 63 countries. Of these, 93 (86%) submitted the results of their analysis, with 90 (99%) using the ICE portal for return of results. The lower than usual number of results returned was in part due to delays with the receipt of import/export authorization from some participating laboratories and unforeseen delays with UNODC shipping the test samples, causing some participants to have insufficient time to respond, despite being given an extension to the submission deadline. The almost universal usage of the ICE portal is a high endorsement of its utility.

Qualitative Analysis

The results for the qualitative identification of the controlled substances were excellent for SM-1–SM-3, with 92% and 99% of participants correctly identifying morphine and 3,4-methylenedioxymetamphetamine (MDMA) in SM-1 and SM-2 respectively, and all correctly identifying cocaine in SM-3. However, although 90 (96%) of participants correctly identified the caffeine used as an additive in SM-4, only 75 (81%) of participants identified the amphetamine present. This is of some concern and should be further investigated by the participants with assistance from UNODC. There were 3 false positive identifications of adulterants in SM-1 and 1 false positive for heroin in each of SM-2 and SM-3.

Quantitative Analysis

The proportion of participants who carried out quantitative analysis, 43 (46%) for SM-1, 58 (62%) for SM-2, 68 (73%) for SM-3 and 50 (54%) for SM-4, continues to be encouraging. Some 91% of participants overall used GC-MS indicating the availability of a high level of technical expertise. A modified Z-score was used for the statistical examination of the quantitative results, as it is a robust method based on absolute deviations from the median of all participant values and is relatively insensitive to outliers. This showed that 39 (90%) of participants provided acceptable quantitative results with Z-scores within +/- 3.5 for morphine in SM-1, 49 (84%) for MDMA in SM-2, 62 (91%) for cocaine in SM-3 and 49 (98%) for amphetamine in SM-4. Participants with Z-scores outside acceptable limits should review their quantification procedures.

Codes and Abbreviations

(+) “positive”: Indicates that the analyte is identified; for presumptive tests (e.g. colour reactions), indicates that a positive reaction was obtained.

(-) “negative”: Indicates that the analyte is not identified.

(ANP): Analysis not performed.

Tech Code	Name
140	Colorimetric reactions
141	Marquis reagent (sulphuric acid, formaldehyde)
142	Cobalt thiocyanate
150	Thin Layer Chromatography
160	High Performance Liquid Chromatography
161	High Performance Liquid Chromatography with diode array detection
170	Gas Chromatography NPD
171	Gas Chromatography FID
172	Gas Chromatography ECD
180	Gas Chromatography/Mass Spectrometry
190	Fourier Transform Infrared Spectrometry
200	Spectrophotometry (visible, UV)
210	Others (specify)
211	NMR
220	Microcrystal test
230	Liquid chromatography/mass spectrometry
231	Liquid chromatography/tandem mass spectrometry



Sample 1 Analysis

Identified substances for Test Sample 1

Code	Identified Substances
0HNT8I	Morphine + Codeine
0X7YYF	Morphine, codeine
12YJHU	morphine and codeine
13V5T5	morphine, codeine
1FY6Q4	morphine, codeine
1Y4NDD	Morphine.HCl
26JFWA	Morphine and Codeine
20OPOV	Codeine and Morphine
3JI3QS	morphine hydrochloride and codein
4DCCOK	morphine
6DX8W8	Morphine and Codeine
6E6YEW	morphine
6GYTEB	Morphine, Codeine
6MT6U6	Morphine
6VVK5D	morphine -codeine
8AJJ4A	codeine and morphine
8IC8VW	morphine
9BAMOX	morphine
9GWMM8	morphine et procaïne
9Q4C69	morphine
AYW1Q0	Morphine hydrochloride, codeine
B3C1KO	morphine.HCL, codeine.HCl
BBJSV7	Morphine
BFFF7N	Morphine and Codeine
BYBBT2	Morphine Hcl
DD2LXF	morphine & codeine
DFTKCE	morphine and codeine
EPDABZ	Codeine,Morphine
EWCB6H	Morphine and Codeine
FCMBFL	Morphine
FMYFMM	morphine hydrochloride
GCRXV8	Morphine, codeine
GGXGOG	MORPHINE
GVL6Z	morphine, codeine
HS4B4J	morphine
IIIII	morphine, codeine
IM6IBS	Morphine
INIACN	morphine + codeine
ITO7UU	morphine, codeine
JCJWS3	morphine, codeine



Code	Identified Substances
JHDAGB	morphine + codeine
JI22BL	Codeine and morphine
JLJBJY	morphine, codeine
JVAQYY	MORPHINE
K1MWKQ	morphine HCl and codeine
KUKKBB	morphine
L9LPDN	Morphine
LGVPIM	Morfine and Codeine
MMMLHB	codeine and morphine
MRQMMM	Morphine
NEMLDG	Morphine, Codeine
NN6HIN	Morphine
NNSJN0	Morphine, Codeine
NUHULU	MORPHINE AND CODEINE
NY1FR6	morphine, codeine
OCYDND	Morphine
PLMZMM	morphine
PYSRN5	morphine and codeine
Q5QHD5	morphine, codeine
QQQR8W	Morphine and codeine
QW5UMG	Morphine
RC7H1J	Morphine & Codeine
RMAVOQ	Morphine and codeine
RQLQCZ	morphine
S1JJVJ	morphine + codeine
SAO3AJ	Morphine, Codeine
SCMCVK	Morphine and Codeine
SSIQIY	Morphine
STSS1S	Morphine,Codeine
T2DOCT	Morphine
T2T4TR	morphine, codeine
TE9ZIC	morphine
TFRN0F	morphine
TODTUT	morphine, codeine
TTTKCI	morphin,kodein
UX7R7E	Morphine, Codeine
UZ9BVU	morphine, codeine
WGW9UZ	Morphine, codeine
WOSLST	Morphine and Codeine
XGSP5D	Morphine
XQWYQ7	Morphine
XWGJJV	Morphine
XWTAWB	morphine, codéine
XXKLXX	morphine



Code	Identified Substances
XXXQSQ	taking representative sample
Z0BFVI	morphine
ZBZVSV	morphine, codeine
ZHUHHH	morphine, codeine



Statement of findings for Test Sample 1

Code	Morphine	
0HNT8I	+	
		SM1 contains Morphine HCl and Codeine HCl, with 72% Morphine base
0X7YYF	+	
		The sample contains morphine and codeine.
12YJHU	+	
		the sample was analyzed by GcMS, this sample also contains lactose
13V5T5	+	
		The powder contains the controlled drugs morphine (main ingredient) and codeine.
1FY6Q4	+	
1Y4NDD	+	
		The sample contains morphine hydrochloride, a substance contained in Annex I of the Order of 22/02/1990 as amended, establishing the list of compounds classified as narcotics.
26JFWA	+	
		Examination of the powder revealed the presence of Morphine
2OOPOV	+	
		On analysis, i found the sample "2011/1/SM-1" to contains Codeine and Morphine
3JI3QS	+	
		this sample contains morphine hydrochloride (63.6% as base) and codein.
4DCCOK	+	
		This sample is a mixture of morphine and codeine.
6DX8W8	+	
		Morphine: Marquis test and TLC and HPLC Codeine: TLC and HPLC
6E6YEW	+	
		my findings provide conclusive support for the view that the suspect powder contains morphine, a substance classified as a controlled drug
6GYTEB	+	
6MT6U6	+	
		On analysis, I found the substance to contain 64.1% (by weight) morphine.
6VVK5D	+	
8AJJ4A	+	
		But we didnt have the method and the stadards of this substances to measure the purity.



Code	Morphine	
8IC8VW	+	
		the substance was found to contain morphine.
9BAMOX	+	
		sample was dissolved in a MeOH/CHCl ₃ solution and was analyzed by GC-MS and its mass spectra was compared to the one collected on a 1 ppm fresh prepared solution of morphine. Sample contains also codeine
9GWMM8	+	
		After analysis, the sample was found to contain morphine and procaine
9Q4C69	+	
		found morphine with 62.6 % w/w and codeine
AYW1Q0	+	
		An amber glass vial containing brown powder. The brown powder contained morphine hydrochloride and codeine
B3C1KO	+	
		codeine - 6% (free base)
BBJSV7	+	
		The sample identified as 2011/1/SM-1 contains Morphine at 71.3% (percentage by weight)
BFFF7N	+	
		75% Morphine and additional 10% Codeine were found in the sample.
BYBBT2	+	
		Morphine HCl was detected with Morphine base purity of 74.17%.
DD2LXF	+	
		the sample contains morphine & codeine
DFTKCE	+	
		The sample is a mixture. The mixture contains morphine and codeine.
EPDABZ	+	
		A mixture of opiates (pasta)
EWCB6H	+	
		The sample 2011/1/SM-1 contains: Morphine base 65.41 % m/m and Codeine 11.04 % m/m.
EXIDG8	+	
FCMBFL	+	
		Morphine and Codeine
FMYFMM	+	
		content: 64.58 % (SD=0.12) as a base. Sample contains also codeine.



Code	Morphine	
GCRXV8	+	
GGXGOG	+	
		POWDER CONTAINING MORPHINE. ALSO DETECTED CODEINE.
GVLF6Z	+	
HS4B4J	+	
		morphine and codeine
I8WISI	+	
IIIEBI	+	
		N/A - Sample broken on receipt. Request to receive fresh sample. No fresh sample received.
IIILI	+	
		SM-1 contains morphine and codeine. Both are controlled in XXX.
IM6IBS	+	
INIACN	+	
		0.228 grams of brown powder, found to contain morphine and codeine.
ITO7UU	+	
		The sample contain morphine and codeine.
JCJWS3	+	
		morphine in the concentration 67.86%
JHDAGB	+	
		(weight) of powder containing morphine and codeine. I am satisfied that the morphine preparation in this case is not excepted from control. Morphine is a Class A drug.
JI22BL	+	
		The powder was analysed when it was found to contain codeine and morphine.
JLJBJY	+	
		The sample contains morphine, codeine was also detected.
JVAQYY	+	
		Sample 2011/1/SM-1 was found to contain controlled substance MORPHINE included in Table I of D.P.R. 309/90 (XXX Law on psycotropic substances) and a Schedule I drug under the Single Convention on Narcotic Drugs. Sample 2011/1/SM-1 was also found to contain CODEINE (Codeine tablets or preparations require a prescription in XXX).
JYGZEY	ANP	



Code	Morphine	
K1MWKQ	+	
		This sample contains morphine and codeine which are listed as controlled drug, according to the XX order, appendix I and II of February 22nd 1990
KUKKBB	+	
		mixture with codeine
L9LPDN	+	
		Codeine
LGVPIM	+	
		Morfine and Codeine and ion clorhidrate
MMMLHB	+	
		The sample was found to contain 12.5% (as base) of codeine and 65.3% (as base) of morphine.
MRQMMM	+	
		Detected both Morphine and Codeine by CG/MS and result for Morphine was confirmed by CG/FID in comparison to a standard sample.
NEMLDG	+	
		Sample 2011/1/SM-1 consists of beige powder. Morphine and codeine, prohibited substances included in the National Law for Narcotics 3459/2006, are found to be present in this sample.
NN6HIN	+	
		The powder contained morphine and codeine
NNSJN0	+	
		Sample 2001/1/SM-1, an off-beige, odorless powder, was found to contain Morphine and Codeine. Both are controlled substances under the National Narcotics Legislation (Narcotics Codex 3459/2006).
NUHULU	+	
		MORPHINE AND CODEINE
NY1FR6	+	
OCYDND	+	
		The test sample was analysed by colour test and Thin Layer Chromatography techniques and found to contain Morphine.
PLMZMM	+	
		found morphine, caffeine and codeine
PYSRN5	+	
		The powder was analysed and found to contain morphine and codeine.
Q5QHD5	+	
		morphine and codeine are present and identified by GC-MS. they were quantified by GD-FID upon a calibration curve performed with CRM and a n-alkane as internal standard



Code	Morphine	
QQQR8W	+	
		Color test : Marquis = purple violet, Mecke =dark green, Frochde = purple becoming grey TLC : TA and TE = morphine and codeine GC: morphine base = 71.83% and codeine GC-MS = morphine and codeine
QW5UMG	+	
RC7H1J	+	
		0.223g of Brown powder found to contain Codeine & Morphine. Morphine is controlled by the misuse of drugs act 1971 (as ammended) as a Class A drug. I am satisfied that possession is not exempted by virtue of the misuse of drugs regulations 2001. Codeine is controlled under the misuse of drugs act 1971 (as ammended) as a Class B drug. I am satisfied that possession is not exempted by virtue of the misuse of drugs regulatiuons 2001.
RMAVOQ	+	
RQLQCZ	+	
S1JJVJ	+	
SAO3AJ	+	
		CR, TLC, GC/FID,FTIR,
SCMCVK	+	
		Test Sample 2011/1/SM-1 was found to contain Morphine and Codeine.
SSIQIY	+	
		Codeine
STSS1S	+	
		Codeine 10.31% as base
T2DOCT	+	
		One glass bottle containing 0.22 grammes of a powder containing 0.15 grammes of morphine
T2T4TR	+	
		quantity not performed
TE9ZIC	+	
		we found morphine
TFRN0F	+	
		brownish powder, net weight 0,2329 g, containing 75,3% m/m of morphine. the sample was also found to contain codeine
TODTUT	+	
		also amount of codeine



Code	Morphine	
TTTKCI	+	
UX7R7E	+	
UZ9BVU	+	
WGW9UZ	+	Codeine at 10.7%
WOSLST	+	Morphine and Codeine detected in sample SM 1 but quantification not performed
WXD3HP	+	
XGSP5D	+	Morphine is on the list of controled substances by UN and domestic legal procedures
XQWYQ7	+	The powder contained morphine and codeine
XWGJJV	+	The sample is positive, it contains morphine.
XWTAWB	+	The sample contains morphine and codeine. Morphine is a narcotic substance included in the annex I of the amended decree of 22 February 1990, determining the list of classified narcotic substances .Codeine is a narcotic substance included in the annex II of the amended decreeof 22 February 1990, determining the list of classified narcotic substances.
XXKLXX	+	codeine
XXXQSQ	+	after screening test, dissolve the sample in suitable solvent, then injection in suitable instrument for confirmation and quantification
Z0BFVI	+	codeine
ZBZVSV	+	Sample contains percent of morphine base (hydrochloride form) and 12 percent of codeine base.
ZHUHHH	+	

Response Summary

Participants: 93

Morphine:

92



Identification methods for Test Sample 1

Legend: S ... used for Screening I ... used for Identification SI ... used for both

Analytical Technique Codes															
Code	140	141	142	150	160	161	170	171	180	190	200	211	230	231	210
0HNT8I				S					I	I					
0X7YYF		S							SI						
12YJHU	I			SI				I	I						
13V5T5				S					SI	I		I			
1FY6Q4		S	S						SI	I					
1Y4NDD		S	S						I	I					
26JFWA				S			SI		I						
2OOPOV		S	S	I	I				I						S Duquenois-levine Test
3JI3QS									I	I					
4DCCOK				S					I	I					
6DX8W8	SI	SI	SI	SI		I			I						
6E6YEW	S		S						I						SI hptlc
6GYTEB									SI						
6MT6U6	S	S	S						I	I					
6VVK5D		S	S						I	I					
8AJJ4A		S	S						I						S duquenis levin
8IC8VW								I	SI						
9BAMOX					I			I	SI						
9GWMM8	SI			I											
9Q4C69									SI						
AYW1Q0	S								I	SI					
B3C1KO									SI						S ATR, XRD
BBJSV7	S								I		I				
BPPF7N					I										S Axsym
BYBBT2	S								SI	I					
DD2LXF									SI						
DFTKCE	SI	S							I	I					
EPDABZ								SI	I						
EWCB6H						SI				SI					
EXIDG8	S							I	I						
FCMBFL	S	S	S						I	I	I				I XRD
FMYFMM		S	S	SI					I	I					
GCRXV8									SI						
GGXGOG	S			S				I	I						



Code	140	141	142	150	160	161	170	171	180	190	200	211	230	231	210
GVLF6Z								I	SI						
HS4B4J	SI	SI	SI	S				I	I						
I8WISI	S	S	S	I				I							
IIIEBI									I						
IIILLI		S				I		I	I						
IM6IBS									I	S					
INIACN		S	S						I						
ITO7UU		S		I					I						
JCJWS3						I			SI						
JHDAGB		S	S						I						
JI22BL		S							I						
JLJBJY		S		SI					I						
JVAQYY									I	S			SI		
JYGZEY														I	
K1MWKQ									I	I					
KUKKBB	S			I					I	I					
L9LPDN									SI						
LGVPIM								S	I	I					
MMMLHB									SI						I HPLC/ELSD
MRQMM M									I	SI	I				I Raman
NEMLDG	S	S		I				I	I						
NN6HIN		S	S						I	I					
NNSJN0		S	S						I						
NUHULU						SI	I		SI	I					
NY1FR6		S		SI					I						
OCYDND		S	S	I											I 210-A
PLMZMM		S	S	SI					I	I					
PYSRN5		S	S						I	I					
Q5QHD5					I	I			I	SI	I				
QQQR8W		S	S	I					I						
QW5UMG				I					SI						
RC7H1J		S	S						I						
RMAVOQ						I			SI	SI					
RQLQCZ		S		I					I						
S1JJVJ		S	S						I						
SAO3AJ	S	S	S						I	I	I				
SCMCVK		I		SI					I	I			I		
SSIQIY									SI	SI					
STSS1S						I			I						

Code	140	141	142	150	160	161	170	171	180	190	200	211	230	231	210
T2DOCT		S	S			I			SI	I					
T2T4TR									I	I					
TE9ZIC					I			I	SI						
TFRN0F	S	S	S					I	I	I					
TODTUT									SI				I		
TTTKCI	S		S	I					I						
UX7R7E				SI				I	I						
UZ9BVU		S	S					I	I						
WGW9UZ		S	S	I		I		I	SI	I					
WOSLST		S	S						I						
WXD3HP									SI	I					
XGSP5D									SI	I					
XQWYQ7		S	S						I	I					
XWGJJV	I			SI					I	I					
XWTAWB				I					SI	I					
XXKLXX				I					SI						
XXXQSQ		S		SI		I	I	I	I						
Z0BFVI									SI						
ZBZVSV		S		I					I	SI					
ZHUHHH		S		SI					I						

Response Summary

Participants: 93

Section	140	141	142	150	160	161	170	171	180	190	200	211	230	231	210
Screening	18	40	30	17	0	2	1	2	30	7	0	0	1	0	4
	19.4%	43.0%	32.3%	18.3%	0.0%	2.2%	1.1%	2.2%	32.3%	7.5%	0.0%	0.0%	1.1%	0.0%	4.3%
Identification	6	3	2	26	5	11	4	21	85	37	2	1	3	1	6
	6.5%	3.2%	2.2%	28.0%	5.4%	11.8%	4.3%	22.6%	91.4%	39.8%	2.2%	1.1%	3.2%	1.1%	6.5%
# labs using this technique	20	41	30	32	5	11	4	22	85	39	2	1	3	1	9
	21.5%	44.1%	32.3%	34.4%	5.4%	11.8%	4.3%	23.7%	91.4%	41.9%	2.2%	1.1%	3.2%	1.1%	9.7%



False positives for Test Sample 1

Code	Name
12YJHU	Lactose
9GWMM8	Procaine
PLMZMM	Caffeine

Z-Scores for Test Sample 1

CODE	Morphine MAD: 4.9		
	Conc. *	AbsDev	ZScore
0HNT8I	72.0	4.5	0.6
3JI3QS	63.6	3.9	0.5
6GYTEB	89.8	22.3	3.1
6MT6U6	64.1	3.4	0.5
9BAMOX	73.3	5.8	0.8
9Q4C69	62.6	4.9	0.7
B3C1KO	64.0	3.5	0.5
BBJSV7	71.3	3.8	0.5
BPFF7N	75.0	7.5	1.0
BYBBT2	74.2	6.7	0.9
DD2LXF	84.3	16.8	2.3
EPDABZ	12.0	55.5	7.6
EWCB6H	65.4	2.1	0.3
EXIDG8	44.6	22.9	3.1
FMYFMM	64.6	2.9	0.4
GCRXV8	62.6	4.9	0.7
GVL6Z	52.1	15.4	2.1
HS4B4J	73.0	5.5	0.8
JCJWS3	67.9	0.4	0.0
JVAQYY	70.0	2.5	0.3
K1MWKQ	32.0	35.5	4.9
KUKKBB	57.0	10.5	1.4
L9LPDN	44.2	23.3	3.2
MMMLHB	65.3	2.2	0.3
MRQMMM	65.2	2.3	0.3
Q5QHD5	63.2	4.3	0.6
QQQR8W	71.8	4.3	0.6
QW5UMG	70.9	3.4	0.5
RMAVOQ	68.7	1.2	0.2
SAO3AJ	80.5	13.0	1.8
SCMCVK	39.5	28.0	3.8
SSIQIY	70.0	2.5	0.3
STSS1S	71.2	3.7	0.5
T2DOCT	66.0	1.5	0.2
TE9ZIC	75.2	7.7	1.1
TFRN0F	75.3	7.8	1.1
UX7R7E	83.1	15.6	2.1
UZ9BVU	52.0	15.5	2.1
WGW9UZ	70.4	2.9	0.4
WXD3HP	72.4	4.9	0.7
XXKLXX	45.9	21.7	3.0



CODE	Morphine MAD: 4.9		
	Conc. *	AbsDev	ZScore
XXXQSQ	2.5	65.0	8.9
ZBZVSV	66.3	1.2	0.2

*) Concentration: w/w %

Z-Score has been calculated as **modified Z-Score** as it is a robust method and therefore relatively insensitive to outliers.

Modified Z-Score = 0.6745 * AbsDev/MAD

AbsDev = Absolute value of the difference between a laboratory value and the median of all the laboratory values for the given drug;

MAD = median absolute deviation about the median.

Modified Z-scores with an absolute value of greater than 3.5 should be considered as potential outliers.

Reference:

Iglewicz, B. and Hoaglin, D. C.: 1993 How to Detect and Handle Outliers, American Society for Quality Control, Milwaukee, WI



Sample 2 Analysis

Identified substances for Test Sample 2

Code	Identified Substances
0HNT8I	MDMA
0X7YYF	MDMA
12YJHU	mdma
13V5T5	MDMA
1FY6Q4	MDMA
1Y4NDD	MDMA.HCI
26JFWA	MDMA
20OPOV	MDMA
3JI3QS	MDMA hydrochloride
4DCCOK	MDMA
6DX8W8	MDMA
6E6YEW	MDMA
6GYTEB	MDMA
6MT6U6	3,4-methylenedioxyamphetamine (MDMA)
6VVK5D	MDMA HCl
8AJJ4A	MDMA
8IC8VW	3,4 -methylenedioxyamphetamine (MDMA)
9BAMOX	MDMA
9GWMM8	MDMA
9Q4C69	MDMA
AYW1Q0	MDMA
B3C1KO	MDMA.HCI
BBJSV7	N-Methyl-3,4-methylenedioxyamphetamine (MDMA)
BPFF7N	MDMA
BYBBT2	34-Methylenedioxyamphetamine
DD2LXF	MDMA
DFTKCE	MDMA-HCl
EPDABZ	MDMA
EWCB6H	MDMA
FCMBFL	MDMA 30,35% as Base
FMYFMM	3,4-methylenedioxyamphetamine hydrochloride
GCRXV8	MDMA
GGXGOG	3,4-METHYLENEDIOXY-METHAMPHETAMINE (MDMA)
GVL6Z	MDMA
HS4B4J	MDMA
IIIIII	MDMA, lactose
IM6IBS	MDMA
INIACN	methylenedioxyamphetamine (MDMA)
ITO7UU	MDMA
JCJWS3	MDMA



Code	Identified Substances
JHDAGB	MDMA
JJ22BL	MDMA
JLBJY	MDMA
JVAQYY	3,4-Methylenedioxyamphetamine
JYGZEY	MDMA
K1MWKQ	MDMA
KUKKBB	MDMA
L9LPDN	3,4-methylenedioxyamphetamine (MDMA)
LGVPIM	N-metil, 3,4 metilendioxyamphetamine (MDMA))
MMMLHB	MDMA
MRQMMM	MDMA
NEMLDG	MDMA
NN6HIN	MDMA
NNSJN0	MDMA
NUHULU	MDMA
NY1FR6	MDMA
OCYDND	Heroin
PLMZMM	MDMA
PYSRN5	MDMA
Q5QHD5	MDMA
QQQR8W	MDMA
QW5UMG	MDMA
RC7H1J	Methylenedioxyamphetamine (MDMA)
RMAVOQ	MDMA
RQLQCZ	MDMA
S1JJVJ	MDMA
SAO3AJ	MDMA
SCMCVK	MDMA
SSIQIY	MDMA
STSS1S	Methylenedioxy-metamphetamine (MDMA)
T2DOCT	MDMA
T2T4TR	MDMA
TE9ZIC	MDMA
TFRN0F	3,4- MDMA
TODTUT	MDMA
TTTKCI	MDMA
UX7R7E	MDMA
UZ9BVU	3,4 methylenedioxy-metamphetamine (MDMA))
WGW9UZ	MDMA
WOSLST	3,4-methylenedioxy-metamphetamine (MDMA)
XGSP5D	MDMA
XQWYQ7	Methylenedioxyamphetamine
XWGJJV	MDMA
XWTAWB	MDMA,HCl



Code	Identified Substances
XXKLXX	MDMA
XXXQSQ	taking representative sample
Z0BFVI	MDMA, HCl
ZBZVSV	MDMA
ZHUHHH	MDMA



Statement of findings for Test Sample 2

Code	3,4-methylenedioxyamphetamine (MDMA)	Lactose	
0HNT8I	+	-	
	SM2 contains MDMA HCl with 31% MDMA base		
0X7YYF	+	+	
	The sample contains MDMA and lactose.		
12YJHU	+	-	
	the sample was analyzed by GcMS		
13V5T5	+	+	
	The powder contains the controlled substance 3,4-methylenedioxy-methamphetamine (MDMA) (29.9 % calculated as base). Additionally, lactose (42.3 %), talcum and cellulose were found.		
1FY6Q4	+	-	
1Y4NDD	+	+	
	The sample contains MDMA(methylenedioxy-methamphetamine). MDMA is narcotic substance contained in the modified Annex III of the decree of February 1990, establishing the list of narcotic substances.		
26JFWA	+	ANP	
	Examination of the powder revealed the presence of MDMA		
2OOPOV	+	-	
	On analysis, i found the sample "2011/1/SM-2" to contains MDMA		
3JI3QS	+	+	
	This sample contains MDMA hydrochloride (30.9 % as base), lactose and cellulose.		
4DCCOK	+	+	
	This sample is MDMA.		
6DX8W8	+	-	
	Simon Test and HPLC and GC-Mass		
6E6YEW	+	ANP	
	my findings provide conclusive support for the view that the suspect powder contains MDMA, a substance classified as a controlled drug		
6GYTEB	+	-	
6MT6U6	+	-	
	On analysis, I found the substance to contain 34.1% (by weight) MDMA.		
6VVK5D	+	+	
8AJJ4A	+	ANP	



Code	3,4-methylenedioxyamfetamine (MDMA)	Lactose	
8IC8VW	+	ANP	the substance was found to contain MDMA.
9BAMOX	+	+	sample was dissolved in a MeOH/CHCl ₃ solution and was analyzed by GC-MS and its mass spectra was compared to the one collected on a 1 ppm fresh prepared solution of 3,4-MDMA.
9GWMM8	+	-	l'échantillon 2011/1/SM-2 contient après notre analyse du MDMA
9Q4C69	+	ANP	found MDMA with 30.2 % w/w
AYW1Q0	+	+	An amber glass vial containing an off-white powder. The off-white powder contained an average purity of 33% of MDMA
B3C1KO	+	+	
BBJSV7	+	-	The white powder is N-Methyl-3,4-methylenedioxyamphetamine (MDMA) with a purity of 38.91% (percentage by weight)
BFFF7N	+	ANP	25% MDMA was found in the sample. Analysis for MBDB wasn't performed.
BYBBT2	+	ANP	3,4-Methylenedioxyamphetamine(MDMA) was detected with purity of 27.51%
DD2LXF	+	ANP	
DFTKCE	+	+	The sample contains a mixture of MDMA-HCl and lactose.
EPDABZ	+	ANP	Ecstasy
EWCB6H	+	+	The sample 2011/1/SM-2 contains: MDMA 32.66 % m/m and Lactose.
EXIDG8	+	ANP	
FCMBFL	+	+	MDMA hydrochloride, Lactose and Talc; purity MDMA 30,35% as BASE
FMYFMM	+	+	content of MDMA: 31.18% (SD=0.42) as a base. Sample contains also lactose.



Code	3,4-methylenedioxyamphetamine (MDMA)	Lactose	
GCRXV8	+	ANP	
GGXGOG	+	ANP	POWDER CONTAINING 3,4-METHYLENEDIOXY-METHAMPHETAMINE (MDMA). ALSO DETECTED TRACES OF PALMITIC ACID AND STEARIC ACID.
GVL6Z	+	ANP	
HS4B4J	+	+	MDMA, lactose
I8WISI	+	ANP	
IIIEBI	+	ANP	N/A - Sample broken on receipt. Request to receive fresh sample. No fresh sample received.
IIILI	+	+	SM-2 contains MDMA and lactose. MDMA is controlled in XXX
IM6IBS	+	+	
INIACN	+	ANP	0.194 grams of cream-coloured powder, found to contain MDMA.
ITO7UU	+	ANP	The sample contain MDMA.
JCJWS3	+	-	MDMA n the concentration 29.05%
JHDAGB	+	-	(weight) of powder containing methylenedioxyamphetamine. A Class A controlled drug
JI22BL	+	-	The powder was analysed when it was found to contain MDMA.
JLJBJY	+	ANP	The sample contains MDMA
JVAQYY	+	ANP	Sample 2011/1/SM-2 was found to contain controlled substance 3,4-Methylenedioxyamphetamine (MDMA) included in Table I of D.P.R. 309/90 (XXX Law on psycotropic substances) and Schedule I drug under the UN Convention on Psychotropic Substances 1971.
JYGZEY	+	ANP	



Code	3,4-methylenedioxyamphetamine (MDMA)	Lactose	
K1MWKQ	+	+	
	This sample contains MDMA which is listed as a controlled drug, according to the XXX order, appendix III of February 22nd 1990		
KUKKBB	+	ANP	
L9LPDN	+	ANP	
LGVPIM	+	-	N-metil, 3,4 metilendioxiamphetamine (MDMA) and ion clorhidrate
MMMLHB	+	+	The sample was found to contain lactose and 30.1% (as base) of MDMA.
MRQMMM	+	+	Detected MDMA by CG/MS and result confirmed by CG/FID in comparison to a standard sample. Lactose detected by IR and confirmed by Raman.
NEMLDG	+	ANP	Sample 2011/1/SM-2 consists of white powder. MDMA, a prohibited substance included in the National Law for Narcotics 3459/2006, is found to be present in this sample.
NN6HIN	+	+	The powder contained MDMA
NNSJN0	+	ANP	Sample 2001/1/SM-2, a white, odorless powder, was found to contain MDMA. This is a controlled substance under the National Narcotics Legislation (Narcotics Codex 3459/2006).
NUHULU	+	-	MDMA 31.57% AS BASE
NY1FR6	+	ANP	
OCYDND	-	+	The test sample was analysed by colour test and Thin Layer Chromatography techniques and found to contain Heroin.
PLMZMM	+	+	found MDMA and lactose
PYSRN5	+	-	The powder was analysed and found to contain methylenedioxyamphetamine (MDMA).
Q5QHD5	+	-	MDMA is present and identified by GC-MS. It was quantified by HPLC-DAD upon a calibration curve performed with CRM



Code	3,4-methylenedioxyamphetamine (MDMA)	Lactose	
QQQR8W	+	ANP	
	Color test :c Marquis = black , Simon = blue TLC : TA and TE = MDMA GC : MDMA base = 30.20% GC-MS = MDMA		
QW5UMG	+	ANP	
RC7H1J	+	ANP	
	0.226g of cream coloured powder found to contain MDMA. MDMA is controlled by the misuse of drugs act 1971 (as ammended) as a Class A drug.		
RMAVOQ	+	+	
RQLQCZ	+	-	
S1JJVJ	+	ANP	
SAO3AJ	+	+	
	Lactose. CR, TLC, GC/FID, FTIR		
SCMCVK	+	ANP	
	Test Sample 2011/1/SM-2 was found to contain MDMA.		
SSIQIY	+	+	
	Lactose		
STSS1S	+	ANP	
T2DOCT	+	+	
	1 glass bottle containing 0.23 grammes of a powder containing 0.07 grammes of 3,4-methylenedioxyamphetamine, being a compound structurally derived from N-alkyl-2-methylphenethylamine by substitution in the ring with an alkylendioxy substituent. 3,4-methylenedioxyamphetamine, abbreviated as MDMA, belongs to a group of commonly abused drugs known as "Ecstasy".		
T2T4TR	+	+	
	Lactose was identified		
TE9ZIC	+	+	
	In addition to MDMA, we found lactose		
TFRN0F	+	+	
	white powder, net weight 0,2356 g, containing 29,7% m/m of 3,4-MDMA. the sample was also found to contain lactose		
TODTUT	+	ANP	



Code	3,4-methylenedioxy-metamphetamine (MDMA)	Lactose	
TTTKCI	+	ANP	
UX7R7E	+	+	Besides we found Lactose.
UZ9BVU	+	ANP	
WGW9UZ	+	+	Lactose, cellulose
WOSLST	+	ANP	32.13% of 3,4-methylenedioxy-metamphetamine (MDMA) detected in sample SM 2 Measurement Uncertainty +/- 0.946
WXD3HP	+	+	
XGSP5D	+	-	MDMA is on the list of controlled substances by UN and domestic legal procedures
XQWYQ7	+	+	The powder contained MDMA
XWGJJV	+	+	The sample is positive, it contains MDMA.
XWTAWB	+	+	The sample contains MDMA hydrochloride in a mixture with lactose. MDMA is a narcotic contained in the modified Annex III of the national law of February 1990, establishing the list of narcotic substances.
XXKLXX	+	-	
XXXQSQ	+	ANP	after screening test, dissolve the sample in suitable solvent, then injection in suitable instrument for confirmation and quantification
Z0BFVI	+	+	lactose
ZBZVSV	+	ANP	Sample contains 30.31 percent of MDMA base (hydrochloride form)
ZHUHHH	+	ANP	



Response Summary

Participants: 93

3,4-methylenedioxyamphetamine (MDMA):	92
Lactose:	36



Identification methods for Test Sample 2

Legend: S ... used for Screening I ... used for Identification SI ... used for both

Analytical Technique Codes															
Code	140	141	142	150	160	161	170	171	180	190	200	211	230	231	210
0HNT8I				S					I	I					
0X7YYF		S							SI						
12YJHU	I			SI				I	I						
13V5T5				S					SI	I		I			
1FY6Q4		S	S						SI	I					
1Y4NDD		S	S						I	I					
26JFWA				S			SI		I						
2OOPOV		S	S	I	I				I						S Duquenois-levine Test
3JI3QS									I	I					
4DCCOK				S					I	I					
6DX8W8	SI	SI	SI	SI		I			I						
6E6YEW	S		S						I						SI hptlc
6GYTEB									SI						
6MT6U6	S	S	S						I	I					
6VVK5D		S	S						I	I					
8AJJ4A		S	S						I						S duquenis levin
8IC8VW								I	SI						
9BAMOX					I			I	SI						
9GWMM8	SI			I											
9Q4C69									SI						
AYW1Q0	S								I	SI					
B3C1KO									SI						S ATR, XRD
BBJSV7	S								I		I				
BPPF7N					I										S Axsym
BYBBT2	S								SI	I					
DD2LXF									SI						
DFTKCE	SI	S							I	I					
EPDABZ								SI	I						
EWCB6H						SI				SI					
EXIDG8	S							I	I						
FCMBFL	S	S	S						I	I	I				I XRD
FMYFMM		S	S	SI					I	I					
GCRXV8									SI						
GGXGOG	S			S				I	I						



Code	140	141	142	150	160	161	170	171	180	190	200	211	230	231	210
GVLF6Z								I	SI						
HS4B4J	SI	SI	SI	S				I	I						
I8WISI	S	S	S	I				I							
IIIEBI									I						
IIILLI		S				I		I	I						
IM6IBS									I	S					
INIACN		S	S						I						
ITO7UU		S		I					I						
JCJWS3						I			SI						
JHDAGB		S	S						I						
JI22BL		S							I						
JLJBJY		S		SI					I						
JVAQYY									I	S			SI		
JYGZEY														I	
K1MWKQ									I	I					
KUKKBB	S			I					I	I					
L9LPDN									SI						
LGVPIM								S	I	I					
MMMLHB									SI						I HPLC/ELSD
MRQMM M								I	SI	I					I Raman
NEMLDG	S	S		I			I	I							
NN6HIN		S	S						I	I					
NNSJN0		S	S						I						
NUHULU						SI	I		SI	I					
NY1FR6		S		SI					I						
OCYDND		S	S	I											I 210-A
PLMZMM		S	S	SI					I	I					
PYSRN5		S	S						I	I					
Q5QHD5					I	I		I	SI	I					
QQQR8W		S	S	I				I							
QW5UMG				I					SI						
RC7H1J		S	S						I						
RMAVOQ						I			SI	SI					
RQLQCZ		S		I					I						
S1JJVJ		S	S						I						
SAO3AJ	S	S	S					I	I	I					
SCMCVK		I		SI					I	I			I		
SSIQIY									SI	SI					
STSS1S						I			I						

Code	140	141	142	150	160	161	170	171	180	190	200	211	230	231	210
T2DOCT		S	S			I			SI	I					
T2T4TR									I	I					
TE9ZIC					I			I	SI						
TFRN0F	S	S	S					I	I	I					
TODTUT									SI				I		
TTTKCI	S		S	I					I						
UX7R7E				SI				I	I						
UZ9BVU		S	S					I	I						
WGW9UZ		S	S	I		I		I	SI	I					
WOSLST		S	S						I						
WXD3HP									SI	I					
XGSP5D									SI	I					
XQWYQ7		S	S						I	I					
XWGJJV	I			SI					I	I					
XWTAWB				I					SI	I					
XXKLXX				I					SI						
XXXQSQ		S		SI		I	I	I	I						
Z0BFVI									SI						
ZBZVSV		S		I					I	SI					
ZHUHHH		S		SI					I						

Response Summary

Participants: 93

Section	140	141	142	150	160	161	170	171	180	190	200	211	230	231	210
Screening	18	40	30	17	0	2	1	2	30	7	0	0	1	0	4
	19.4%	43.0%	32.3%	18.3%	0.0%	2.2%	1.1%	2.2%	32.3%	7.5%	0.0%	0.0%	1.1%	0.0%	4.3%
Identification	6	3	2	26	5	11	4	21	85	37	2	1	3	1	6
	6.5%	3.2%	2.2%	28.0%	5.4%	11.8%	4.3%	22.6%	91.4%	39.8%	2.2%	1.1%	3.2%	1.1%	6.5%
# labs using this technique	20	41	30	32	5	11	4	22	85	39	2	1	3	1	9
	21.5%	44.1%	32.3%	34.4%	5.4%	11.8%	4.3%	23.7%	91.4%	41.9%	2.2%	1.1%	3.2%	1.1%	9.7%



False positives for Test Sample 2

Code	Name
OCYDND	Heroin

Z-Scores for Test Sample 2

CODE	3,4-methylenedioxymetamphetamine (MDMA) MAD: 1.6		
	Conc. *	AbsDev	ZScore
0HNT8I	31.0	0.6	0.3
13V5T5	29.9	0.5	0.2
1FY6Q4	30.7	0.3	0.1
26JFWA	37.0	6.7	2.9
3JI3QS	30.9	0.5	0.2
4DCCOK	29.6	0.8	0.3
6GYTEB	32.0	1.7	0.7
6MT6U6	34.1	3.8	1.6
8IC8VW	27.4	3.0	1.3
9BAMOX	29.5	0.9	0.4
9Q4C69	30.2	0.2	0.1
AYW1Q0	33.0	2.7	1.2
B3C1KO	31.9	1.6	0.7
BBJSV7	38.9	8.6	3.7
BPFF7N	25.0	5.4	2.3
BYBBT2	27.5	2.8	1.2
DD2LXF	13.6	16.7	7.3
EWCB6H	32.7	2.3	1.0
EXIDG8	47.8	17.5	7.6
FCMBFL	30.4	0.0	0.0
FMYFMM	31.2	0.8	0.4
GCRXV8	38.6	8.3	3.6
GGXGOG	25.7	4.7	2.0
GVL6Z	21.5	8.9	3.9
HS4B4J	32.0	1.7	0.7
I8WISI	39.6	9.3	4.0
IIILI	29.0	1.4	0.6
JCJWS3	29.1	1.3	0.6
JVAQYY	29.0	1.4	0.6
K1MWKQ	30.0	0.4	0.2
KUKKBB	10.6	19.8	8.6
L9LPDN	32.8	2.5	1.1
LGVPIM	35.9	5.6	2.4
MMMLHB	30.1	0.3	0.1
MRQMMM	29.3	1.1	0.5
NNSJN0	33.0	2.7	1.2
NUHULU	31.6	1.2	0.5
Q5QHD5	29.0	1.4	0.6
QQQR8W	30.2	0.2	0.1



CODE	3,4-methylenedioxymetamphetamine (MDMA) MAD: 1.6		
	Conc. *	AbsDev	ZScore
QW5UMG	30.4	0.0	0.0
RMAVOQ	37.0	6.7	2.9
SAO3AJ	37.8	7.5	3.3
SCMCVK	19.3	11.1	4.8
SSIQIY	30.5	0.1	0.1
STSS1S	31.2	0.8	0.4
T2DOCT	30.6	0.3	0.1
T2T4TR	28.5	1.9	0.8
TE9ZIC	30.4	0.1	0.0
TFRN0F	29.7	0.7	0.3
UX7R7E	34.2	3.9	1.7
UZ9BVU	28.2	2.2	0.9
WGW9UZ	26.8	3.6	1.5
WOSLST	32.1	1.8	0.8
WXD3HP	27.1	3.3	1.4
XXKLXX	28.0	2.4	1.0
XXXQSQ	22.0	8.4	3.6
Z0BFVI	30.0	0.4	0.2
ZBZVSV	30.3	0.0	0.0

*) Concentration: w/w %

Z-Score has been calculated as **modified Z-Score** as it is a robust method and therefore relatively insensitive to outliers.

Modified Z-Score = 0.6745 * AbsDev/MAD

AbsDev = Absolute value of the difference between a laboratory value and the median of all the laboratory values for the given drug;

MAD = median absolute deviation about the median.

Modified Z-scores with an absolute value of greater than 3.5 should be considered as potential outliers.

Reference:

Iglewicz, B. and Hoaglin, D. C.: 1993 How to Detect and Handle Outliers, American Society for Quality Control, Milwaukee, WI

Sample 3 Analysis

Identified substances for Test Sample 3

Code	Identified Substances
0HNT8I	Cocaine
0X7YYF	Cocaine
12YJHU	cocaine
13V5T5	cocaine
1FY6Q4	cocaine
1Y4NDD	Cocaine.HCl
26JFWA	Cocaine
20OPOV	Cocaine
3JI3QS	cocaine hydrochloride
4DCCOK	Cocaine
6DX8W8	Cocaine
6E6YEW	Cocaine
6GYTEB	Cocaine
6MT6U6	Cocaine
6VVK5D	Cocaine
8AJJ4A	cocaine
8IC8VW	Cocaine
9BAMOX	cocaine
9GWMM8	cocaïne et héroïne
9Q4C69	cocaine
AYW1Q0	Cocaine hydrochloride
B3C1KO	cocaine.HCl
BBJSV7	Cocaine
BPFF7N	Cocaine
BYBBT2	Cocaine HCl
DD2LXF	COCAINE
DFTKCE	cocaine HCl
EPDABZ	Cocaine
EWCB6H	Cocaine
FCMBFL	COCAINE 69,88% as Base
FMYFMM	cocaine hydrochloride
GCRXV8	Cocaine, Benzoyl ecgonine, Methyl ecgonine
GGXGOG	COCAINE
GVL6Z	cocaine
HS4B4J	cocaine
IIIEBI	Cocaine
IIILI	cocaine, mannitol
IM6IBS	Cocaine
INIACN	cocaine
ITO7UU	cocaine



Code	Identified Substances
JCJWS3	cocaine
JHDAGB	cocaine
JI22BL	Cocaine
JLJBJY	Cocaine
JVAQYY	COCAINE
JYGZEY	cocaine
K1MWKQ	Cocaine HCl
KUKKBB	cocaine
L9LPDN	Cocaine
LGVPIM	Cocaine
MMMLHB	cocaine
MRQMMM	Cocaine
NEMLDG	Cocaine
NN6HIN	Cocaine
NNSJN0	Cocaine
NUHULU	COCAINE
NY1FR6	cocaine
OCYDND	Cocaine
PLMZMM	cocaine
PYSRN5	Cocaine Hydrochloride
Q5QHD5	cocaine
QQQR8W	Cocaine
QW5UMG	Cocaine
RC7H1J	Cocaine
RMAVOQ	Cocaine
RQLQCZ	cocaine
S1JJVJ	cocaine
SA03AJ	Cocaine
SCMCVK	Cocaine
SSIQIY	Cocaine and cinnamoylcocaine 1 -2
STSS1S	Cocaine
T2DOCT	cocaine
T2T4TR	Cocaine
TE9ZIC	cocaine
TFRN0F	cocaine
TODTUT	COCAINE
TTTKCI	Cocain
UX7R7E	Cocaine
UZ9BVU	cocaine
WGW9UZ	Cocaine
WOSLST	Cocaine
XGSP5D	Cocaine
XQWYQ7	Cocaine
XWGJJV	Cocaine



Code	Identified Substances
XWTAWB	Cocaine HCl
XXKLXX	cocaine
XXXQSQ	taking representative sample
Z0BFVI	cocaïne, HCl
ZBZVSV	Cocaine
ZHUHHH	cocaine



Statement of findings for Test Sample 3

Code	Cocaine	
0HNT8I	+	
		SM3 contains Cocaine HCl with 71% Cocaine base
0X7YYF	+	
		The sample contains cocaine.
12YJHU	+	
		the sample was analyzed by GcMS, and was quantified by GCFID
13V5T5	+	
		The powder contains the controlled drug cocaine (72.5 % calculated as base). Additionally, the diluent mannitol and/or sorbitol was found.
1FY6Q4	+	
1Y4NDD	+	
		The sample contains cocaine hydrochloride. Cocaine is a narcotic substance contained in the modified Annex 1 of the decree of February 1990, establishing the list of narcotic substances.
26JFWA	+	
		Examination of the powder revealed the presence of Cocaine
2OOPOV	+	
		On analysis, i found the sample "2011/1/SM-3" to contains Cocaine
3JI3QS	+	
		This sample contains cocaine hydrochloride (72.5 % as base) and mannitol
4DCCOK	+	
		This sample is cocaine.
6DX8W8	+	
		Cobalt thiocyanate test and HPLC and GC-Mass
6E6YEW	+	
		my findings provide conclusive support for the view that 77% of the suspect powder is cocaine free base, a substance classified as a controlled drug
6GYTEB	+	
6MT6U6	+	
		On analysis, I found the substance to contain 70.8% (by weight) cocaine.
6VVK5D	+	
8AJJ4A	+	
		as we can find them always there are also methylecgonine, cis trans cinnamoylcocaine, benzoylecgonine etj



Code	Cocaine	
8IC8VW	+	
		the substance found to contain cocaine.
9BAMOX	+	
		sample was dissolved in a MeOH/CHCl ₃ solution and was analyzed by GC-MS and its mass spectra was compared to the one collected on a 1 ppm fresh prepared solution of cocaine.
9GWMM8	+	
		l'échantillon 2011/1/SM-3 contient de la cocaïne et de l'héroïne
9Q4C69	+	
		found cocaine with 78.2% w/w
AYW1Q0	+	
		An amber glass vial containing an off-white powder. The off-white powder contained an average of 71% of cocaine.
B3C1KO	+	
BBJSV7	+	
		The sample 2011/1/SM-3 is cocaine with a purity of 58%.
BFFF7N	+	
		66% Cocaine was found in the sample.
BYBBT2	+	
		Cocaine HCl was detected with cocaine base purity of 84.65%.
DD2LXF	+	
		COCAINE AND COCAINE -M AND TROPACOCAINE AND CINNAMOYL COCAINE ISOMER-2
DFTKCE	+	
		The sample contains cocaine hydrochloride with a purity of 68%.
EPDABZ	+	
		Cocaine
EWCB6H	+	
		The sample 2011/1/SM-3 contains: Cocaine 85.37 % m/m.
EXIDG8	+	
FCMBFL	+	
		Cocaine hydrochloride; purity Cocaine 69,88 as BASE; Anhidromethylecgonine, Methylecgonine, Tropacocaine, Cis and Trans cinnamoilcocaine
FMYFMM	+	
		content of cocaine: 69.51% (SD=0.12) as a base.
GCRXV8	+	



Code	Cocaine	
GGXGOG	+	
		POWDER CONTAINING COCAINE. ALSO DETECTED METHYL ECGONIDINE, METHYL ECGONINE, ECGONINE, TROPACOCAINE, NORCOCAINE, COCAETHYLENE AND CINNAMOYLCOCAINE.
GVL6Z	+	
HS4B4J	+	
		cocaine and benzoylecgonine
I8WISI	+	
IIIEBI	+	
		Powder found to contain cocaine. Wording: 'On analysis, I found the powder to contain cocaine.'
IIILI	+	
		SM-3 contains cocaine and mannitol. Cocaine is controlled in XXX.
IM6IBS	+	
INIACN	+	
		0.229 grams of cream-coloured powder, found to contain cocaine.
ITO7UU	+	
		The sample contain cocaine.
JCJWS3	+	
		cocaine n the concentration 68.60%
JHDAGB	+	
		(weight) of powder containing cocaine. A Class A controlled drug
JI22BL	+	
		The powder was analysed when it was found to contain Cocaine. A portion of the powder was further analysed when it was found to contain 71% w/w Cocaine.
JLJBJY	+	
		The sample contains cocaine.
JVAQYY	+	
		Sample 2011/1/SM-3 was found to contain controlled substance COCAINE included in Table I of D.P.R. 309/90 (XXX Law on psycotropic substances) and Schedule I drug under the UN Single Convention on Narcotic Drugs.
JYGZEY	+	
K1MWKQ	+	
		This sample contains cocaine which is listed as a controlled drug, according to the XXX order, appendix I of February 22nd 1990



Code	Cocaine	
KUKKBB	+	
L9LPDN	+	
		Ecgonine methel ester, cis-Cinnamoylcocaine
LGVPIM	+	
		cocaine and ion clorhidrate
MMMLHB	+	
		The sample was found to contain mannitol and 71.2% (as base) of cocaine.
MRQMMM	+	
		Detected Cocaine and both trans and cis cinnamoylcocaine by CG/MS. Results were confirmed by CG/FID in comparison to standard samples.
NEMLDG	+	
		Sample 2011/1/SM-3 consists of white powder. Cocaine, a prohibited substance included in the National Law for Narcotics 3459/2006, is found to be present in this sample.
NN6HIN	+	
		The powder contained average of 76% of cocaine.
NNSJN0	+	
		Sample 2001/1/SM-3, a white powder with a slight acidic odor, was found to contain Cocaine. This is a controlled substance under the National Narcotics Legislation (Narcotics Codex 3459/2006).
NUHULU	+	
		COCAINE 73.08% AS BASE
NY1FR6	+	
OCYDND	+	
		The test sample was analysed by colour test and Thin Layer Chromatography techniques and found to contain Cocaine.
PLMZMM	+	
		found cocaine
PYSRN5	+	
		The powder was analysed and found to contain cocaine hydrochloride.
Q5QHD5	+	
		cocaine is present and identified by GC-MS. It was also quantified by GD-FID upon a calibration curve performed with CRM and a n-alkane as internal standard
QQQR8W	+	
		Color test : Cobalt thiocyanate = blue TLC : TA and TE = Cocaine GC: Cocaine base = 72.40% GC-MS + cocaine
QW5UMG	+	



Code	Cocaine	
RC7H1J	+	
		0.227g of cream coloured powder found to contain Cocaine. Cocaine is controlled by the misuse of drugs act 1971 (as ammended) as a Class A drug.
RMAVOQ	+	
RQLQCZ	+	
S1JJVJ	+	
SAO3AJ	+	
		CR, TLC, GC/FID, FTIR
SCMCVK	+	
		Test Sample 2011/1/SM-3 was found to contain Cocaine.
SSIQIY	+	
		Manitol
STSS1S	+	
		Tropacocaine, Methylecgonine, cis and trans cinnamoylcocine
T2DOCT	+	
		One glass bottle containing 0.21 grammes of a powder containing 0.16 grammes of cocaine.
T2T4TR	+	
TE9ZIC	+	
		we found cocaine
TFRN0F	+	
		white powder, net weight 0,2321 g, containing 73,0 % m/m of cocaine
TODTUT	+	
		also small amounts of methylecgonine and cinnamoylcocaine
TTTKCI	+	
UX7R7E	+	
		Besides we found Methylecgonine and Cinnamoylcocaine
UZ9BVU	+	
WGW9UZ	+	
		Cocaine-M; cocaïne-M artefact-H2O; Tropacocaine, Norcocaine, cis-cinnamoylcocaine, trans-cinnamoylcocaine, benzoylecgonine, aminophenazone.



Code	Cocaine	
WOSLST	+	
		Cocaine detected in sample SM 3 but quantification not performed
WXD3HP	+	
XGSP5D	+	
		Cocaine is on the list of controlled substances by UN and domestic legal procedures
XQWYQ7	+	
		The powder contained average of 67% cocaine
XWGJJV	+	
		The sample is positive, it contains cocaine.
XWTAWB	+	
		The sample contains cocaine hydrochloride consisting of 65% cocaine in a mixture with mannitol. Cocaine is a narcotic substance included in the annex I of the amended decree of 22 February 1990, determining the list of classified narcotic substances.
XXKLXX	+	
		methylecgonine, cis-cinnamoylcocaine, tropacocaine, 2-carbomethoxy-8-methyl-8-azabicyclo[3.2.1]oct-2-ene
XXXQSQ	+	
		after screening test, dissolve the sample in suitable solvent, then injection in suitable instrument for confirmation and quantification
Z0BFVI	+	
		sorbitol or mannitol
ZBZVSV	+	
		Sample contains 71.40 percent of cocaine base (hydrochloride form)
ZHUHHH	+	

Response Summary

Participants: 93

Cocaine:	93
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Identification methods for Test Sample 3

Legend: S ... used for Screening I ... used for Identification SI ... used for both

Analytical Technique Codes															
Code	140	141	142	150	160	161	170	171	180	190	200	211	230	231	210
0HNT8I				S					I	I					
0X7YYF		S							SI						
12YJHU	I			SI				I	I						
13V5T5				S					SI	I		I			
1FY6Q4		S	S						SI	I					
1Y4NDD		S	S						I	I					
26JFWA				S			SI		I						
2OOPOV		S	S	I	I				I						S Duquenois-levine Test
3JI3QS									I	I					
4DCCOK				S					I	I					
6DX8W8	SI	SI	SI	SI		I			I						
6E6YEW	S		S						I						SI hptlc
6GYTEB									SI						
6MT6U6	S	S	S						I	I					
6VVK5D		S	S						I	I					
8AJJ4A		S	S						I						S duquenis levin
8IC8VW								I	SI						
9BAMOX					I			I	SI						
9GWMM8	SI			I											
9Q4C69									SI						
AYW1Q0	S								I	SI					
B3C1KO									SI						S ATR, XRD
BBJSV7	S								I		I				
BPPF7N					I										S Axsym
BYBBT2	S								SI	I					
DD2LXF									SI						
DFTKCE	SI	S							I	I					
EPDABZ								SI	I						
EWCB6H						SI				SI					
EXIDG8	S							I	I						
FCMBFL	S	S	S						I	I	I				I XRD
FMYFMM		S	S	SI					I	I					
GCRXV8									SI						
GGXGOG	S			S				I	I						



Code	140	141	142	150	160	161	170	171	180	190	200	211	230	231	210
GVLF6Z								I	SI						
HS4B4J	SI	SI	SI	S				I	I						
I8WISI	S	S	S	I				I							
IIIEBI									I						
IIILLI		S				I		I	I						
IM6IBS									I	S					
INIACN		S	S						I						
ITO7UU		S		I					I						
JCJWS3						I			SI						
JHDAGB		S	S						I						
JI22BL		S							I						
JLJBJY		S		SI					I						
JVAQYY									I	S			SI		
JYGZEY														I	
K1MWKQ									I	I					
KUKKBB	S			I					I	I					
L9LPDN									SI						
LGVPIM								S	I	I					
MMMLHB									SI						I HPLC/ELSD
MRQMM M									I	SI	I				I Raman
NEMLDG	S	S		I			I	I							
NN6HIN		S	S						I	I					
NNSJN0		S	S						I						
NUHULU						SI	I		SI	I					
NY1FR6		S		SI					I						
OCYDND		S	S	I											I 210-A
PLMZMM		S	S	SI					I	I					
PYSRN5		S	S						I	I					
Q5QHD5					I	I		I	SI	I					
QQQR8W		S	S	I				I							
QW5UMG				I					SI						
RC7H1J		S	S						I						
RMAVOQ						I			SI	SI					
RQLQCZ		S		I					I						
S1JJVJ		S	S						I						
SAO3AJ	S	S	S					I	I	I					
SCMCVK		I		SI					I	I			I		
SSIQIY									SI	SI					
STSS1S						I			I						

Code	140	141	142	150	160	161	170	171	180	190	200	211	230	231	210
T2DOCT		S	S			I			SI	I					
T2T4TR									I	I					
TE9ZIC					I			I	SI						
TFRN0F	S	S	S					I	I	I					
TODTUT									SI				I		
TTTKCI	S		S	I					I						
UX7R7E				SI				I	I						
UZ9BVU		S	S					I	I						
WGW9UZ		S	S	I		I		I	SI	I					
WOSLST		S	S						I						
WXD3HP									SI	I					
XGSP5D									SI	I					
XQWYQ7		S	S						I	I					
XWGJJV	I			SI					I	I					
XWTAWB				I					SI	I					
XXKLXX				I					SI						
XXXQSQ		S		SI		I	I	I	I						
Z0BFVI									SI						
ZBZVSV		S		I					I	SI					
ZHUHHH		S		SI					I						

Response Summary

Participants: 93

Section	140	141	142	150	160	161	170	171	180	190	200	211	230	231	210
Screening	18	40	30	17	0	2	1	2	30	7	0	0	1	0	4
	19.4%	43.0%	32.3%	18.3%	0.0%	2.2%	1.1%	2.2%	32.3%	7.5%	0.0%	0.0%	1.1%	0.0%	4.3%
Identification	6	3	2	26	5	11	4	21	85	37	2	1	3	1	6
	6.5%	3.2%	2.2%	28.0%	5.4%	11.8%	4.3%	22.6%	91.4%	39.8%	2.2%	1.1%	3.2%	1.1%	6.5%
# labs using this technique	20	41	30	32	5	11	4	22	85	39	2	1	3	1	9
	21.5%	44.1%	32.3%	34.4%	5.4%	11.8%	4.3%	23.7%	91.4%	41.9%	2.2%	1.1%	3.2%	1.1%	9.7%



False positives for Test Sample 3

Code	Name
9GWMM8	Heroin

**Z-Scores for Test Sample 3**

CODE	Cocaine MAD: 3.0		
	Conc. *	AbsDev	ZScore
0HNT8I	71.0	1.5	0.3
12YJHU	70.0	2.5	0.6
13V5T5	72.5	0.0	0.0
1FY6Q4	71.9	0.6	0.1
1Y4NDD	75.0	2.5	0.6
26JFWA	84.0	11.5	2.6
3JI3QS	72.5	0.0	0.0
4DCCOK	73.4	0.9	0.2
6E6YEW	77.0	4.5	1.0
6GYTEB	53.2	19.3	4.4
6MT6U6	70.8	1.7	0.4
8AJJ4A	74.8	2.3	0.5
8IC8VW	74.5	2.0	0.5
9BAMOX	77.9	5.4	1.2
9Q4C69	78.2	5.7	1.3
AYW1Q0	71.0	1.5	0.3
B3C1KO	74.0	1.5	0.3
BBJSV7	58.0	14.5	3.3
BPFF7N	66.0	6.5	1.5
BYBBT2	84.7	12.2	2.7
DD2LXF	42.8	29.7	6.7
DFTKCE	68.0	4.5	1.0
EPDABZ	10.0	62.5	14.1
EWCB6H	85.4	12.9	2.9
EXIDG8	69.8	2.7	0.6
FCMBFL	69.9	2.6	0.6
FMYFMM	69.5	3.0	0.7
GCRXV8	87.2	14.7	3.3
GGXGOG	69.3	3.2	0.7
GVL6Z	68.1	4.4	1.0
HS4B4J	75.0	2.5	0.6
IIILI	63.0	9.5	2.1
IM6IBS	67.0	5.5	1.2
JCJWS3	68.6	3.9	0.9
JJ22BL	71.0	1.5	0.3
JVAQYY	77.0	4.5	1.0
K1MWKQ	78.0	5.5	1.2
KUKKBB	1.0	71.5	16.1
L9LPDN	74.2	1.7	0.4
LGVPIM	76.5	4.0	0.9
MMMLHB	71.2	1.3	0.3

CODE	Cocaine MAD: 3.0		
	Conc. *	AbsDev	ZScore
MRQMMM	66.1	6.4	1.4
NN6HIN	76.0	3.5	0.8
NNSJN0	72.8	0.3	0.1
NUHULU	73.1	0.6	0.1
Q5QHD5	68.9	3.6	0.8
QQQR8W	72.4	0.1	0.0
QW5UMG	71.2	1.3	0.3
RC7H1J	71.0	1.5	0.3
RMAVOQ	77.0	4.5	1.0
SAO3AJ	74.8	2.3	0.5
SCMCVK	76.8	4.3	1.0
SSIQIY	71.4	1.1	0.2
STSS1S	74.2	1.7	0.4
T2DOCT	76.0	3.5	0.8
T2T4TR	70.5	2.0	0.5
TE9ZIC	72.4	0.1	0.0
TFRN0F	73.0	0.5	0.1
UX7R7E	95.8	23.3	5.3
UZ9BVU	67.0	5.5	1.2
WGW9UZ	69.2	3.3	0.7
WXD3HP	69.0	3.5	0.8
XQWYQ7	67.0	5.5	1.2
XWTAWB	65.0	7.5	1.7
XXKLXX	73.5	1.0	0.2
XXXQSQ	26.0	46.5	10.5
Z0BFVI	77.0	4.5	1.0
ZBZVSV	71.4	1.1	0.2

*) Concentration: w/w %

Z-Score has been calculated as **modified Z-Score** as it is a robust method and therefore relatively insensitive to outliers.

Modified Z-Score = 0.6745 * AbsDev/MAD

AbsDev = Absolute value of the difference between a laboratory value and the median of all the laboratory values for the given drug;

MAD = median absolute deviation about the median.

Modified Z-scores with an absolute value of greater than 3.5 should be considered as potential outliers.

Reference:

Iglewicz, B. and Hoaglin, D. C.: 1993 How to Detect and Handle Outliers, American Society for Quality Control, Milwaukee, WI



Sample 4 Analysis

Identified substances for Test Sample 4

Code	Identified Substances
0HNT8I	Amfetamine + Caffeine + Lactose
12YJHU	this sample doesn't have illicit drugs, but contains caffeine
13V5T5	amphetamine
1FY6Q4	amphetamine
1Y4NDD	Amphétamine
26JFWA	Amfetamine and Caffeine
20OPOV	Amphetamine
3JI3QS	amfetamine sulfate
4DCCOK	amphetamine
6GYTEB	Amphetamine
6MT6U6	Amphetamine
6VVK5D	amphetamine sulfate
8AJJ4A	amphetamine
8IC8VW	Amfetamine and caffeine
9BAMOX	amfetamine
9GWMM8	caféine
9Q4C69	amfetamine
AYW1Q0	Amphetamine
B3C1KO	amphetamine
BBJSV7	Amfetamine
BFFF7N	Caffeine
DD2LXF	AMPHETAMINE
EPDABZ	Amphetamine
EWCB6H	Amphetamine
FCMBFL	Amfetamine 2,96% as Base
FMYFMM	amphetamine sulphate
GCRXV8	Amphetamine
GGXGOG	AMPHETAMINE
GVL6Z	Amphetamine
HS4B4J	amphetamine
IIIEBI	Amphetamine, Caffeine
IIILI	amphetamine, caffeine, lactose
IM6IBS	Amfetamine
INIACN	amphetamine
ITO7UU	amphetamine
JCJWS3	amphetamine
JHDAGB	amphetamine
JI22BL	Amphetamine
JLBJY	Amfetamine
JVAQYY	AMPHETAMINE



Code	Identified Substances
JYGZEY	amfetamine
K1MWKQ	amfetamine
KUKKBB	amphetamine
L9LPDN	Amfetamine
LGVPIM	amphetamiene, cafeine
MMMLHB	amfetamine
MRQMMM	Amphetamine
NEMLDG	Amfetamine
NN6HIN	Amphetamine
NNSJN0	Amphetamine
NUHULU	AMFETAMINE
NY1FR6	amphetamine
OCYDND	Lactose
PLMZMM	/
PYSRN5	Amphetamine
Q5QHD5	amphetamine
QQQR8W	Amphetamine and caffeine
QW5UMG	Amfetamine
RC7H1J	Amphetamine
RMAVOQ	AMFETAMINE
RQLQCZ	amfetamine
S1JJVJ	amphetamine + caffeine
SAO3AJ	Amphetamine
SCMCVK	Amphetamine and Caffeine
STSS1S	Caffeine
T2DOCT	amphetamine
T2T4TR	amphetamine
TE9ZIC	amfetamine
TODTUT	amphetamine
TTTKCI	Caffein
UX7R7E	Amphetamine
UZ9BVU	amfetamine
WGW9UZ	amfetamine
WOSLST	Caffeine
XGSP5D	Amphetamine
XQWYQ7	Amphetamine
XWGJJV	-
XWTAWB	Amphétamine
XXKLXX	amfetamine
Z0BFVI	amfetamine sulfate
ZBZVSV	Amfetamine
ZHUHHH	amfetamine



Statement of findings for Test Sample 4

Code	Amfetamine	Caffeine	Lactose	
0HNT8I	+	+	+	
	SM4 contains Amfetamine sulphate, Caffeine and Lactose, with 2.5% Amfetamine base			
0X7YYF	-	+	+	
	The sample contains caffeine and lactose.			
12YJHU	-	+	-	
	the sample was analyzed by GcMS and TLC			
13V5T5	+	+	+	
	The powder contains the controlled drug amphetamine (2.2 % calculated as base. Additionally, the cutting agents caffeine (61.3 %) and lactose (29.4 %) were found.			
1FY6Q4	+	+	ANP	
1Y4NDD	+	+	+	
	The sample contains amphetamine, a narcotic substance included in the annex III of the amended decree of 22 February 1990, determining the list of classified narcotic substances			
26JFWA	+	+	ANP	
	Examination of the powder revealed the presence of Amfetamine			
2OOPOV	+	+	-	
	On analysis, i found the sample "2011/1/SM-4" to contains Amphetamine and Caffeine			
3JI3QS	+	+	+	
	This sample contains amfetamine sulfate (2.4 % as base), caffeine (63.9 %) and lactose.			
4DCCOK	+	+	+	
	This sample is amphetamine.			
6DX8W8	-	+	-	
6E6YEW	-	+	ANP	
	my findings provide conclusive support for the view that the suspect powder does not contain any controlled drug, which can be detected in our laboratory			
6GYTEB	+	+	-	
6MT6U6	+	+	-	
	On analysis, I found the substance to contain 2.3% (by weight) amphetamine and caffeine.			
6VVK5D	+	+	+	
8AJJ4A	+	+	ANP	
	also we find the adulterant caffeine			



Code	Amfetamine	Caffeine	Lactose	
8IC8VW	+	+	ANP	the substance found to contain amfetamine and caffeine.
9BAMOX	+	+	+	sample was dissolved in a MeOH/CHCl ₃ solution and was analyzed by GC-MS and its mass spectra was compared to the one collected on a 1 ppm fresh prepared solution of D,L-amfetamine.
9GWMM8	-	+	-	After our analysis, the sample 2011/1/SM-4 was found to contain caffeine
9Q4C69	+	+	ANP	found amfetamine with 2.9 % w/w
AYW1Q0	+	+	ANP	an amber glass vial containing an off-white powder containing amphetamine.
B3C1KO	+	+	+	main compound was caffeine, no possibility to identify kind of salt
BBJSV7	+	+	ANP	The sample identified as 2011/1/SM-4 contains amfetamine at 3.63%
BFFF7N	-	+	ANP	Caffeine was found in the sample.
BYBBT2	-	+	ANP	Only Caffeine was detected. No quantification was performed.
DD2LXF	+	+	ANP	AMPHETAMINE AND CAFFEINE
DFTKCE	ANP	+	+	It was found a mixture of caffeine and lactose.
EPDABZ	+	+	ANP	A mixture of caffeine and amphetamine
EWCB6H	+	+	-	The sample 2011/1/SM-4 contains: Amphetamine 2.78 % m/m and Caffeine 67.82 % m/m.
EXIDG8	+	+	ANP	
FCMBFL	+	+	+	Amfetamina Sulphate, Caffeine and Lactose; purity Amfetamine 2,96% as BASE
FMYFMM	+	+	+	content of amphetamine: 2.8% (SD=0.11) as a base. Sample contain also lactose and caffeine
GCRXV8	+	+	ANP	caffeine was detected.

Code	Amfetamine	Caffeine	Lactose	
GGXGOG	+	+	ANP	
	POWDER CONTAINING AMPHETAMINE. ALSO DETECTED CAFFEINE.			
GVL6Z	+	+	ANP	
HS4B4J	+	+	+	
	amphetamine, caffeine, lactose			
I8WISI	ANP	+	ANP	
IIIEBI	+	+	ANP	
	Powder found to contain amphetamine and caffeine. 'On analysis, I found the powder to contain amphetamine.'			
IIILI	+	+	+	
	SM-4 contains amphetamine, caffeine and lactose. Amphetamine is controlled in XXX.			
IM6IBS	+	+	-	
INIACN	+	+	ANP	
	0.204 grams of cream-coloured powder found to contain amphetamine.			
ITO7UU	+	+	ANP	
	The sample contain amphetamine and caffeine.			
JCJWS3	+	+	-	
	amphetamine n the concentration 2.78%			
JHDAGB	+	+	-	
	(weight) of powder containing amphetamine. A Class B controlled drug.			
JI22BL	+	+	-	
	The powder was analysed when it was found to contain Amphetamine. A portion of the powder was further analysed when it was found to contain 3% w/w Amphetamine.			
JLJBJY	+	+	ANP	
	The sample contains amfetamine. Caffeine was also detected.			
JVAQYY	+	+	ANP	
	Sample 2011/1/SM-4 was found to contain controlled substance AMPHETAMINE included in Table I of D.P.R. 309/90 (XXX Law on psycotropic substances) and Schedule II drug under the Convention on Psychotropic Substances. Sample 2011/1/SM-4 was also found to contain CAFFEINE (not controlled).			
JYGZEY	+	ANP	ANP	
K1MWKQ	+	+	-	
	This sample contains amfetamine which is listed as a controlled drug, according to the XXX order, appendix III of February 22nd 1990			



Code	Amfetamine	Caffeine	Lactose	
KUKKBB	+	+	-	
	mixture with caffeine			
L9LPDN	+	+	ANP	
	Cofeine			
LGVPIIM	+	+	-	
	amphetamiene, cafeine			
MMMLHB	+	+	+	
	The sample was found to contain caffeine, lactose and amfetamine.			
MRQMMM	+	+	+	
	Detected Amphetamine by CG/MS and result confirmed by CG/FID in comparison to a standard sample. Caffeine detected by CG/MS. Lactose detected by IR and confirmed by Raman.			
NEMLDG	+	+	ANP	
	Sample 2011/1/SM-4 consists of white powder. Amfetamine, a prohibited substance included in the National Law for Narcotics 3459/2006, is found to be present in this sample.			
NN6HIN	+	+	-	
	The powder contained average of 3% amphetamine.			
NNSJN0	+	+	ANP	
	Sample 2001/1/SM-4, a white, odorless powder, was found to contain Amphetamine. This is a controlled substance under the National Narcotics Legislation (Narcotics Codex 3459/2006).			
NUHULU	+	+	-	
	AMFETAMINE 2.70% AS BASE IN CAFFEINE			
NY1FR6	+	+	ANP	
	Caffeine was also detected.			
OCYDND	-	-	+	
	The test sample was analysed by colour test and Thin Layer Chromatography techniques and found to contain Lactose.			
PLMZMM	-	+	+	
	found cofeine and lactose			
PYSRN5	+	+	-	
	The powder was analysed and found to contian amphetamine.			
Q5QHD5	+	+	-	
	amphetamine is present and identified by GC-MS. It was also quantified by HPLC-DAD upon a calibration curve performed with CRM. Caffeine is also present as adulterant			
QQQR8W	+	+	ANP	
	Color test :Marquis = orange turning to brown, Simon = pink to cherry-red TLC: TA and TE - amphetamine and caffeine GC : amphetamine base = 2.73% and caffeine			
QW5UMG	+	+	ANP	



Code	Amfetamine	Caffeine	Lactose	
RC7H1J	+	+	ANP	
	0.188g of off white powder found to contain Amphetamine. Amphetamine is controlled by the misuse of drugs act 1971 (as ammended) as a Class B drug.			
RMAVOQ	+	+	+	
RQLQCZ	+	+	-	
S1JJVJ	+	+	ANP	
SAO3AJ	+	+	+	
	Lactose, Caffeine. CR, TLC, GC/FID, GC/MS, FTIR			
SCMCVK	+	+	ANP	
	Test Sample 2011/1/SM-4 was found to contain Amphetamine and Caffeine.			
SSIQIY	-	+	+	
	Caffeine and lactose			
STSS1S	-	+	ANP	
T2DOCT	+	+	ANP	
	1 glass bottle containing 0.20 grammes of a powder containing 5 milligrammes of amphetamine.			
T2T4TR	+	+	+	
	Caffeine and Lactose were identified			
TE9ZIC	+	+	+	
	In addition to amfetamine, we found caffeine and lactose			
TFRN0F	-	+	+	
	white powder, net weight 0,2057 g, not containing controlled drugs. the sample was also found to contain 68% m/m of caffeine and lactose			
TODTUT	+	+	ANP	
	caffeine			
TTTKCI	-	+	ANP	
UX7R7E	+	+	+	
	Besides we found Caffeine and Lactose			
UZ9BVU	+	+	ANP	
WGW9UZ	+	+	+	
	cafeine, lactose			



Code	Amfetamine	Caffeine	Lactose	
WOSLST	ANP	+	ANP	
	Caffeine detected in sample SM 4 but quantification not performed			
WXD3HP	+	+	+	
XGSP5D	+	+	-	
	Amphetamine is on the list of controled substances by UN and domestic legal procedures			
XQWYQ7	+	+	-	
	The powder contained average of 3% amphetamine			
XWGJJV	-	+	-	
	The sample is negative, it contains only caffeine.			
XWTAWB	+	+	+	
	The sample contains amphetamine sulphate in a mixture with caffeine and lactose. Amphetamine is a narcotic substance included in the annex III of the amended decree of 22 February 1990, determining the list of classified narcotic substances.			
XXKLXX	+	+	-	
	caffeine			
XXXQSQ	-	-	ANP	
Z0BFVI	+	+	+	
	cafeine lactose			
ZBZVSV	+	+	ANP	
	Sample contains 2.82 percent of amfetamine base			
ZHUHHH	+	+	ANP	
	coffeine also detected			

Response Summary

Participants: 93

Amfetamine:	75
Caffeine:	90
Lactose:	29



Identification methods for Test Sample 4

Legend: S ... used for Screening I ... used for Identification SI ... used for both

Analytical Technique Codes															
Code	140	141	142	150	160	161	170	171	180	190	200	211	230	231	210
0HNT8I				S					I	I					
0X7YYF		S							SI						
12YJHU	I			SI				I	I						
13V5T5				S					SI	I		I			
1FY6Q4		S	S						SI	I					
1Y4NDD		S	S						I	I					
26JFWA				S			SI		I						
2OOPOV		S	S	I	I				I						S Duquenois-levine Test
3JI3QS									I	I					
4DCCOK				S					I	I					
6DX8W8	SI	SI	SI	SI		I			I						
6E6YEW	S		S						I						SI hptlc
6GYTEB									SI						
6MT6U6	S	S	S						I	I					
6VVK5D		S	S						I	I					
8AJJ4A		S	S						I						S duquenis levin
8IC8VW								I	SI						
9BAMOX					I			I	SI						
9GWMM8	SI			I											
9Q4C69									SI						
AYW1Q0	S								I	SI					
B3C1KO									SI						S ATR, XRD
BBJSV7	S								I		I				
BPFF7N					I										S Axsym
BYBBT2	S								SI	I					
DD2LXF									SI						
DFTKCE	SI	S							I	I					
EPDABZ								SI	I						
EWCB6H						SI				SI					
EXIDG8	S							I	I						
FCMBFL	S	S	S						I	I	I				I XRD
FMYFMM		S	S	SI					I	I					
GCRXV8									SI						
GGXGOG	S			S				I	I						



Code	140	141	142	150	160	161	170	171	180	190	200	211	230	231	210
GVLF6Z								I	SI						
HS4B4J	SI	SI	SI	S				I	I						
I8WISI	S	S	S	I				I							
IIIEBI									I						
IIILLI		S				I		I	I						
IM6IBS									I	S					
INIACN		S	S						I						
ITO7UU		S		I					I						
JCJWS3						I			SI						
JHDAGB		S	S						I						
JI22BL		S							I						
JLJBJY		S		SI					I						
JVAQYY									I	S			SI		
JYGZEY														I	
K1MWKQ									I	I					
KUKKBB	S			I					I	I					
L9LPDN									SI						
LGVPIM								S	I	I					
MMMLHB									SI						I HPLC/ELSD
MRQMM M								I	SI	I					I Raman
NEMLDG	S	S		I			I	I							
NN6HIN		S	S						I	I					
NNSJN0		S	S						I						
NUHULU						SI	I		SI	I					
NY1FR6		S		SI					I						
OCYDND		S	S	I											I 210-A
PLMZMM		S	S	SI					I	I					
PYSRN5		S	S						I	I					
Q5QHD5					I	I		I	SI	I					
QQQR8W		S	S	I				I							
QW5UMG				I					SI						
RC7H1J		S	S						I						
RMAVOQ						I			SI	SI					
RQLQCZ		S		I					I						
S1JJVJ		S	S						I						
SAO3AJ	S	S	S					I	I	I					
SCMCVK		I		SI					I	I			I		
SSIQIY									SI	SI					
STSS1S						I			I						



Code	140	141	142	150	160	161	170	171	180	190	200	211	230	231	210
T2DOCT		S	S			I			SI	I					
T2T4TR									I	I					
TE9ZIC					I			I	SI						
TFRN0F	S	S	S					I	I	I					
TODTUT									SI				I		
TTTKCI	S		S	I					I						
UX7R7E				SI				I	I						
UZ9BVU		S	S					I	I						
WGW9UZ		S	S	I		I		I	SI	I					
WOSLST		S	S						I						
WXD3HP									SI	I					
XGSP5D									SI	I					
XQWYQ7		S	S						I	I					
XWGJJV	I			SI					I	I					
XWTAWB				I					SI	I					
XXKLXX				I					SI						
XXXQSQ		S		SI		I	I	I	I						
Z0BFVI									SI						
ZBZVSV		S		I					I	SI					
ZHUHHH		S		SI					I						

Response Summary

Participants: 93

Section	140	141	142	150	160	161	170	171	180	190	200	211	230	231	210
Screening	18	40	30	17	0	2	1	2	30	7	0	0	1	0	4
	19.4%	43.0%	32.3%	18.3%	0.0%	2.2%	1.1%	2.2%	32.3%	7.5%	0.0%	0.0%	1.1%	0.0%	4.3%
Identification	6	3	2	26	5	11	4	21	85	37	2	1	3	1	6
	6.5%	3.2%	2.2%	28.0%	5.4%	11.8%	4.3%	22.6%	91.4%	39.8%	2.2%	1.1%	3.2%	1.1%	6.5%
# labs using this technique	20	41	30	32	5	11	4	22	85	39	2	1	3	1	9
	21.5%	44.1%	32.3%	34.4%	5.4%	11.8%	4.3%	23.7%	91.4%	41.9%	2.2%	1.1%	3.2%	1.1%	9.7%



False positives for Test Sample 4

no false positives found

**Z-Scores for Test Sample 4**

CODE	Amfetamine MAD: 0.4		
	Conc. *	AbsDev	ZScore
0HNT8I	2.5	0.2	0.3
13V5T5	2.2	0.5	0.8
1FY6Q4	3.3	0.6	0.9
26JFWA	1.7	1.0	1.7
3JI3QS	2.4	0.3	0.5
4DCCOK	2.7	0.0	0.0
6GYTEB	2.1	0.6	1.1
6MT6U6	2.3	0.4	0.7
8AJJ4A	2.8	0.1	0.1
9BAMOX	2.8	0.1	0.2
9Q4C69	2.9	0.2	0.3
B3C1KO	3.0	0.3	0.5
BBJSV7	3.6	0.9	1.6
DD2LXF	1.9	0.8	1.4
EWCB6H	2.8	0.1	0.1
EXIDG8	1.9	0.8	1.4
FCMBFL	3.0	0.3	0.4
FMYFMM	2.8	0.1	0.2
GCRXV8	4.6	1.9	3.2
GVL6Z	1.6	1.1	1.9
HS4B4J	2.0	0.7	1.2
IIIIII	2.0	0.7	1.2
JCJWS3	2.8	0.1	0.1
JI22BL	3.0	0.3	0.5
JVAQYY	4.8	2.1	3.5
K1MWKQ	3.0	0.3	0.5
KUKKBB	1.6	1.1	1.9
L9LPDN	2.3	0.4	0.7
LGVPIM	2.6	0.1	0.2
MRQMMM	1.7	1.0	1.7
NN6HIN	3.0	0.3	0.5
NNSJN0	2.7	0.0	0.0
NUHULU	2.7	0.0	0.0
Q5QHD5	2.6	0.1	0.2
QQQR8W	2.7	0.0	0.1
QW5UMG	3.8	1.1	1.8
RC7H1J	2.0	0.7	1.2
RMAVOQ	4.0	1.3	2.2
SAO3AJ	1.6	1.1	1.9
T2DOCT	2.6	0.1	0.2
T2T4TR	2.8	0.1	0.2



CODE	Amfetamine MAD: 0.4		
	Conc. *	AbsDev	ZScore
TE9ZIC	2.8	0.1	0.2
UX7R7E	2.7	0.0	0.0
UZ9BVU	2.1	0.6	1.0
WGW9UZ	3.1	0.4	0.7
WXD3HP	2.6	0.1	0.2
XQWYQ7	3.0	0.3	0.5
XXKLXX	2.2	0.5	0.8
Z0BFVI	2.5	0.2	0.3
ZBZVSV	2.8	0.1	0.2

*) Concentration: w/w %

Z-Score has been calculated as **modified Z-Score** as it is a robust method and therefore relatively insensitive to outliers.

Modified Z-Score = 0.6745 * AbsDev/MAD

AbsDev = Absolute value of the difference between a laboratory value and the median of all the laboratory values for the given drug;

MAD = median absolute deviation about the median.

Modified Z-scores with an absolute value of greater than 3.5 should be considered as potential outliers.

Reference:

Iglewicz, B. and Hoaglin, D. C.: 1993 How to Detect and Handle Outliers, American Society for Quality Control, Milwaukee, WI



UNODC

United Nations Office on Drugs and Crime

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