



Synthetic Drug Analysis

Test No. 24-5041 Summary Report

Each sample pack consisted of two questioned samples containing powdered substances. Participants were asked to analyze these samples for the presence of synthetic drugs. Data were returned from 127 participants and are compiled into the following tables:

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This report contains the data received from the participants in this test. Since these participants are located in many countries around the world, and it is their option how the samples are to be used (e.g., training exercise, known or blind proficiency testing, research and development of new techniques, etc.), the results compiled in the Summary Report are not intended to be an overview of the quality of work performed in the profession and cannot be interpreted as such. The Summary Comments are included for the benefit of participants to assist with maintaining or enhancing the quality of their results. These comments are not intended to 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.

Manufacturer's Information

Each sample pack consisted of two items, one or both potentially containing synthetic substances. Participants were asked to examine the contents of each sample and determine if any synthetic substances were present.

SYNTHETIC SUBSTANCE INFORMATION: Item 1 contained a homogenous mixture of pentylone hydrochloride (HCl) and lidocaine. Pentylone is a synthetic cathinone and a Schedule I controlled substance in the United States.

SAMPLE PREPARATION: Each sample was portioned out into the appropriate sample size and placed into a glassine bag which was folded and secured with an item specific label. The folded glassine bag was placed into a small zip top bag, which was heat sealed and then placed into a pre-labeled envelope.

SAMPLE PACK ASSEMBLY: One of each item was placed into a pre-labeled sample pack envelope.

VERIFICATION: Predistribution results were consistent with each other and the manufacturer's preparation information. The following methods were used to examine the items: GC/MS, FTIR, and Raman.

Item	Synthetic Drug (Group)	Other Substance(s)	Form	Sample Size
1	Pentylone HCl (Cathinone)	Lidocaine	White powder	200 mg
2	No Synthetic Substance	Cornstarch	White powder	200 mg

Summary Comments

This test was designed to allow participants to assess their proficiency in the qualitative analysis of questioned samples that could contain synthetic substances. Each sample pack consisted of two items: Item 1 contained 200 mg of 5% pentylone hydrochloride (HCl), a synthetic cathinone, and Item 2 contained 200 mg of cornstarch. Pentylone is a Schedule I controlled substance in the United States. Refer to the Manufacturer's Information for preparation details.

Overall, 123 of 127 participants (97%) reported that pentylone was detected in Item 1 and that no synthetic substance was present in Item 2.

For Item 1, 112 of the 127 participants reported cathinone as the synthetic drug group while 13 reported that a synthetic substance was detected/identified but did not specify a group. Pentylone was reported by 123 participants, three reported a different drug, and one did not detect a synthetic substance. All 127 participants reported that no synthetic substances were present in Item 2.

The most utilized methods of analysis among participants were GC/MS, color tests, and FTIR.

Synthetic Drug Analysis (Item 1)

TABLE 1a - Item 1 Results
Item Contents: Pentylone HCl (Cathinone)

WebCode	Synthetic Drug Group Detected	Synthetic Drug Detected
2L44QE	Cathinone	Pentylone
334DAB	Cathinone	Pentylone
3HV9JG	Cathinone	pentylone
3X8L2E	Cathinone	Pentylone
426P77	Cathinone	Pentylone and/or bk-DMBDB and/or Eutylone and/or Analogues
42RXDP	Cathinone	Pentylone
472EMD	Cathinone	Pentylone
47KXU6	Cathinone	Pentylone or one of its isomers
4WVAWH	Cathinone	pentylone
69MF67	Cathinone	Pentylone
6GXGQ8	Cathinone	Pentylone
7E8XZT	Cathinone	Pentylone
7WM82U	Cathinone	Pentylone
8BZY37	Cathinone	Pentylone
8FVTZ8	Cathinone	Pentylone
9BEKC8	Cathinone	Pentylone
9FBATE	Cathinone	pentylone
9NQV3H	Cathinone	Pentylone
9P3JLH	Cathinone	Pentylone
A632MD	Cathinone	Pentylone
A97TXY	Cathinone	Pentylone
AHWD2C	Cathinone	Pentylone, or isomer
AJNAP7	Cathinone	Pentylone
ANVHKA	Cathinone	Eutylone
B4ANGZ	Cathinone	Pentylone
B8TMUU	Synthetic substance(s) detected/identified	Lidocaine and pentylone
BHRDDG	Synthetic substance(s) detected/identified	Pentylone
BLPWHZ	Cathinone	Pentylone
BP9WVV	Cathinone	Pentylone
BQJRHM	Cathinone	Pentylone

TABLE 1a - Item 1 Results
 Item Contents: Pentylone HCl (Cathinone)

WebCode	Synthetic Drug Group Detected	Synthetic Drug Detected
C8PHVC	Cathinone	Pentylone
C9GEJ7	Cathinone	Pentylone
CBMWH2	Cathinone	Pentylone
CL6HLB	Cathinone	Pentylone
D39A8C	Cathinone	Pentylone
DE6F3W	Cathinone	Pentylone
DH22RD	Cathinone	Pentylone
DTX8LC	Cathinone	Contains Pentylone
DUWBEM	Synthetic substance(s) detected/identified	Pentylone
DYMRPR	Synthetic substance(s) detected/identified	Lidocaine and pentylone
ED37LJ	Cathinone	Pentylone
EDLU4E	Cathinone	Pentylone
EHFQT6	Cathinone	pentylone
ER898D	Synthetic substance(s) detected/identified	Pentylone and Lidocaine
FDJJM2	Cathinone	PENTYLONE
FQ9HE4	Cathinone	1-(1,3-benzodioxol-5-yl)-2-(methylamino)-1-pentanone (pentylone) or an isomer of pentylone [Truncated by CTS. Original response moved to Additional Comments.].
FX6HPQ	Cathinone	Pentylone
G8CEB9	Cathinone	Pentylone
G94BY3	Cathinone	pentylone
GDGBWT	Cathinone	Most likely contains pentylone
GGXJKT	Cathinone	Pentylone or one of its isomers
GKWUE8	Cathinone	Pentylone
GMPQ32	Cathinone	Pentylone (and lidocaine)
GNW7A8	Cathinone	Pentylone
GQN2Y2	Cathinone	pentylone
H479BT	Cathinone	Pentylone
H6ENHY	Cathinone	Pentylone
HJGXL9	Cathinone	Pentylone
HRQLY7	Cathinone	Pentylone
HUHHNZ	Cathinone	pentylone

TABLE 1a - Item 1 Results
 Item Contents: Pentylone HCl (Cathinone)

WebCode	Synthetic Drug Group Detected	Synthetic Drug Detected
JL3Y62	Cathinone	Pentylone
JUCMHZ	No synthetic substance detected/identified	
JW4LWX	Cathinone	Pentylone
K37XL4	Synthetic substance(s) detected/identified	Lidocaine and pentylone
K6ANV4	Cathinone	pentylone
KA4KJU	Cathinone	Pentylone
KBJ44R	Cathinone	Pentylone
KKNWTL	Cathinone	pentylone hydrochloride
KV6V4N	Cathinone	pentylone or one of its isomers
L4EM9C	Phenethylamine	Pentylone
LFPXXN	Cathinone	Pentylone
LJ4RCZ	Cathinone	pentylone, or an isomer thereof
LUPYBP	Cathinone	pentylone
LXP8FY	Cathinone	Pentylone
LY68YN	Cathinone	Propylone
MENJNZ	Cathinone	pentylone
MYXEKD	Cathinone	Pentylone
N4LJN2	Cathinone	Pentylone
N7DH3Y	Cathinone	pentylone
NWMYNQ	Cathinone	Pentylone
P78PNN	Cathinone	Pentylone
PABL8R	Cathinone	Pentylone
PCBUC2	Cathinone	pentylone
PKTZBT	Cathinone	pentylone
QBYEFF	Cathinone	pentylone
QDLVXZ	Cathinone	Pentylone
QTEMH2	Synthetic substance(s) detected/identified	Pentylone
QXC4V	Cathinone	Pentylone
QY4ZKP	Cathinone	Pentylone
R8GE3K	Cathinone	Pentylone
RFND92	Synthetic substance(s) detected/identified	Pentylone
RJ93TD	Synthetic substance(s) detected/identified	Lidocaine and pentylone

TABLE 1a - Item 1 Results
 Item Contents: Pentylone HCl (Cathinone)

WebCode	Synthetic Drug Group Detected	Synthetic Drug Detected
RPYFU2	Cathinone	Pentylone
T66WGU	Cathinone	Pentylone
T7FX3T	Cathinone	Pentylone
T89URM	Cathinone	Pentylone
TBAVRJ	Cathinone	Pentylone, or one of its isomers
TYU9FX	Synthetic substance(s) detected/identified	Pentylone
U2ZQET	Cathinone	pentylone or isomer of pentylone
U6H8AJ	Cathinone	Pentylone
UA8PLA	Cathinone	3',4'-Methylenedioxy-N-isopropylaminocathinone
UEPMFR	Cathinone	3,4-Methylenedioxy-alpha-methylaminopentiophenone (Pentylone)
UKCK3T	Cathinone	Xycaine & Pentylone
UMJV2H	Cathinone	Pentylone (bk-MBDP)
V8MZ2W	Synthetic substance(s) detected/identified	pentylone
V9EYFV	Cathinone	Pentylone
VG88ZL	Cathinone	pentylone
VW86NH	Cathinone	2-METHYLAMINO-1-(3,4-METHYLENEDIOXY PHENYL)PENTAN-1-ONE (PENTYLONE)
VZ3YLJ	Cathinone	Pentylone
WG8Q2U	Cathinone	Pentylone
XBBLKV	Synthetic substance(s) detected/identified	Pentylone
XCT9JD	Cathinone	bk-DMBDB and/or Eutylone and/or Pentylone and/or Associated analogues
XFQU9U	Cathinone	pentylone
XKKQXL	Cathinone	Pentylone
XTVCKU	Cathinone	Pentylone
XWBK9U	Synthetic substance(s) detected/identified	Pentylone
XWTTWN	Cathinone	Pentylone
XYKPLH	Cathinone	Pentylone
Y666PF	Cathinone	Pentylone
YFNLHL	Cathinone	pentylone/propylone or an isomer
YJLZ6C	Cathinone	Pentylone
YU8842	Cathinone	Pentylone
YVGD3M	Cathinone	Pentylone

TABLE 1a - Item 1 Results
Item Contents: Pentylone HCl (Cathinone)

WebCode	Synthetic Drug Group Detected	Synthetic Drug Detected
ZBBZBZ	Cathinone	Pentylone
ZPQ4TP	Cathinone	Pentylone
ZQ27EN	Cathinone	Pentylone, or an isomer of pentylone
ZWQHFC	Cathinone	Pentylone

Response Summary - Item 1		Participants: 127
Synthetic Drug Group Detected:	Cathinone:	112
	Synthetic substance(s) detected/identified:	13
	No synthetic substance(s) detected/identified:	1
	Other:	1
Synthetic Drug Detected:	Pentylone:	123
	Other:	4

Examination Methods (Item 1)

TABLE 1b

WebCode	GC	GC/MS	Color	FTIR	UV	TLC	LC	LC/MS	Micro	Other
2L44QE		✓	✓							
334DAB		✓	✓							
3HV9JG	✓	✓								TruNarc
3X8L2E		✓	✓							
426P77		✓	✓							
42RXP		✓	✓		✓					
472EMD		✓	✓							
47KXU6	✓	✓	✓							
4WVAWH		✓	✓	✓						Raman
69MF67		✓								
6GXGQ8		✓	✓	✓						
7E8XZT		✓	✓	✓						Lidocaine
7WM82U		✓		✓						
8BZY37		✓	✓							
8FVTZ8		✓	✓	✓						
9BEKC8		✓	✓							
9FBATE		✓					✓	✓		
9NQV3H		✓	✓							
9P3JLH		✓							✓	
A632MD		✓								
A97TXY	✓	✓		✓						
AHWD2C	✓	✓	✓							
AJNAP7		✓								
ANVHKA		✓	✓	✓						
B4ANGZ		✓								
B8TMUU		✓		✓						
BHRDDG		✓	✓	✓	✓					
BLPWHZ		✓	✓							
BP9WV		✓		✓						
BQJRHM		✓								
C8PHVC		✓	✓	✓	✓					
C9GEJ7		✓	✓							
CBMWH2		✓	✓	✓						Raman spectroscopy, GC-FTIR
CL6HLB		✓		✓						
D39A8C		✓	✓							
DE6F3W	✓	✓								

TABLE 1b - Item 1 Examination Methods

WebCode	GC	GC/MS	Color	FTIR	UV	TLC	LC	LC/MS	Micro	Other
DH22RD		✓	✓			✓				DART-TOF
DTX8LC	✓	✓		✓	✓					
DUWBEM		✓								SFC/MS
DYMRPR		✓		✓						RAMAN
ED37LJ		✓	✓							
EDLU4E		✓	✓							Retention Time
EHFQT6		✓								TruNarc
ER898D		✓		✓						
FDJJM2		✓	✓							
FQ9HE4		✓			✓		✓			Electronic balance for the weight
FX6HPQ	✓	✓		✓						
G8CEB9		✓	✓	✓	✓					Retention Time
G94BY3		✓	✓	✓						
GDGBWT		✓	✓	✓						
GGXJKT	✓	✓		✓						
GKWUE8		✓	✓							Retention Time
GMPQ32		✓		✓						
GNW7A8		✓	✓							
GQN2Y2		✓	✓							
H479BT		✓	✓							
H6ENHY		✓	✓	✓						
HJGXL9	✓	✓	✓	✓	✓					
HRQLY7		✓	✓							
HUHHNZ		✓	✓	✓						
JL3Y62		✓								TruNarc
JUCMHZ		✓	✓	✓						
JW4LWX		✓	✓							
K37XL4		✓								RAMAN
K6ANV4		✓						✓		GC/IR, LC/TOF-MS
KA4KJU		✓								
KBJ44R		✓	✓							
KKNWTL		✓		✓						
KV6V4N	✓	✓		✓						TruNarc, extractions
L4EM9C		✓								
LFPXXN	✓	✓								
LJ4RCZ	✓	✓	✓							
LUPYBP		✓	✓	✓						GC/FTIR
LXP8FY		✓	✓	✓				✓		

TABLE 1b - Item 1 Examination Methods

WebCode	GC	GC/MS	Color	FTIR	UV	TLC	LC	LC/MS	Micro	Other
LY68YN	✓	✓								TruNarc
MENJNZ		✓				✓	✓			
MYXEKD		✓	✓							
N4LJN2		✓	✓	✓						
N7DH3Y		✓				✓	✓			
NWMYNQ		✓	✓	✓						
P78PNN		✓	✓	✓						
PABL8R		✓	✓							
PCBUC2	✓	✓	✓			✓				DART-TOF
PKTZBT		✓	✓	✓						
QBYEFF		✓								
QDLVXZ	✓	✓	✓							RT
QTEMH2		✓		✓						
QXC4V		✓		✓						GCIR
QY4ZKP		✓	✓	✓						
R8GE3K		✓	✓							
RFND92		✓	✓	✓						
RJ93TD		✓		✓						
RPYFU2		✓	✓							Retention Time
T66WGU		✓								
T7FX3T		✓		✓						
T89URM		✓	✓							
TBAVRJ	✓	✓	✓	✓						
TYU9FX		✓	✓							
U2ZQET		✓		✓		✓	✓			
U6H8AJ		✓								LC/DAD
UA8PLA		✓								
UEPMFR		✓						✓		
UKCK3T		✓								
UMJV2H		✓	✓	✓						
V8MZ2W		✓		✓						
V9EYFV	✓	✓	✓	✓	✓					
VG88ZL		✓		✓				✓		LC/MS/QTOF
VV86NH		✓	✓	✓						
VZ3YLJ		✓								
WG8Q2U		✓	✓		✓					
XBBLKV		✓	✓							
XCT9JD		✓	✓							

TABLE 1b - Item 1 Examination Methods

WebCode	GC	GC/MS	Color	FTIR	UV	TLC	LC	LC/MS	Micro	Other
XFQU9U		✓		✓						
XKKQXL		✓	✓							
XTVCKU		✓	✓	✓	✓					
XWBK9U		✓		✓						
XWTTWN		✓	✓							
XYKPLH		✓		✓						Raman
Y666PF		✓	✓	✓						
YFNLHL		✓	✓	✓						
YJLZ6C	✓	✓		✓						RAMAN
YU8842		✓	✓							
YVGD3M		✓								
ZBBZBZ		✓								NMR
ZPQ4TP		✓	✓	✓	✓					
ZQ27EN	✓								✓	
ZWQHFC										✓

Response Summary										Total Participants: 127
	GC	GC/MS	Color	FTIR	UV	TLC	LC	LC/MS	Micro	
Participants	19	125	71	55	11	6	6	6	0	
Percent	15%	98%	56%	43%	9%	5%	5%	5%	0%	

Synthetic Drug Analysis (Item 2)

TABLE 2a - Item 2 Results
Item Contents: No Synthetic Substance

WebCode	Synthetic Drug Group Detected	Synthetic Drug Detected
2L44QE	No synthetic substance detected/identified	
334DAB	No synthetic substance detected/identified	
3HV9JG	No synthetic substance detected/identified	
3X8L2E	No synthetic substance detected/identified	
426P77	No synthetic substance detected/identified	
42RXDP	No synthetic substance detected/identified	
472EMD	No synthetic substance detected/identified	
47KXU6	No synthetic substance detected/identified	
4WVAWH	No synthetic substance detected/identified	
69MF67	No synthetic substance detected/identified	
6GXGQ8	No synthetic substance detected/identified	
7E8XZT	No synthetic substance detected/identified	
7WM82U	No synthetic substance detected/identified	
8BZY37	No synthetic substance detected/identified	
8FVTZ8	No synthetic substance detected/identified	
9BEKC8	No synthetic substance detected/identified	
9FBATE	No synthetic substance detected/identified	
9NQV3H	No synthetic substance detected/identified	
9P3JLH	No synthetic substance detected/identified	
A632MD	No synthetic substance detected/identified	
A97TXY	No synthetic substance detected/identified	
AHWD2C	No synthetic substance detected/identified	
AJNAP7	No synthetic substance detected/identified	
ANVHKA	No synthetic substance detected/identified	
B4ANGZ	No synthetic substance detected/identified	
B8TMUU	No synthetic substance detected/identified	
BHRDDG	No synthetic substance detected/identified	
BLPWHZ	No synthetic substance detected/identified	
BP9WWW	No synthetic substance detected/identified	
BQJRHM	No synthetic substance detected/identified	
C8PHVC	No synthetic substance detected/identified	

TABLE 2a - Item 2 Results
 Item Contents: No Synthetic Substance

WebCode	Synthetic Drug Group Detected	Synthetic Drug Detected
C9GEJ7	No synthetic substance detected/identified	
CBMWH2	No synthetic substance detected/identified	
CL6HLB	No synthetic substance detected/identified	
D39A8C	No synthetic substance detected/identified	
DE6F3W	No synthetic substance detected/identified	
DH22RD	No synthetic substance detected/identified	
DTX8LC	No synthetic substance detected/identified	
DUWBEM	No synthetic substance detected/identified	
DYMRPR	No synthetic substance detected/identified	
ED37LJ	No synthetic substance detected/identified	
EDLU4E	No synthetic substance detected/identified	
EHFQT6	No synthetic substance detected/identified	
ER898D	No synthetic substance detected/identified	
FDJJM2	No synthetic substance detected/identified	
FQ9HE4	No synthetic substance detected/identified	
FX6HPQ	No synthetic substance detected/identified	
G8CEB9	No synthetic substance detected/identified	
G94BY3	No synthetic substance detected/identified	
GDGBWT	No synthetic substance detected/identified	
GGXJKT	No synthetic substance detected/identified	
GKWUE8	No synthetic substance detected/identified	
GMPQ32	No synthetic substance detected/identified	
GNW7A8	No synthetic substance detected/identified	
GQN2Y2	No synthetic substance detected/identified	
H479BT	No synthetic substance detected/identified	
H6ENHY	No synthetic substance detected/identified	
HJGXL9	No synthetic substance detected/identified	
HRQLY7	No synthetic substance detected/identified	
HUHHNZ	No synthetic substance detected/identified	
JL3Y62	No synthetic substance detected/identified	
JUCMHZ	No synthetic substance detected/identified	
JW4LWX	No synthetic substance detected/identified	

TABLE 2a - Item 2 Results
 Item Contents: No Synthetic Substance

WebCode	Synthetic Drug Group Detected	Synthetic Drug Detected
K37XL4	No synthetic substance detected/identified	
K6ANV4	No synthetic substance detected/identified	
KA4KJU	No synthetic substance detected/identified	
KBJ44R	No synthetic substance detected/identified	
KKNWTL	No synthetic substance detected/identified	
KV6V4N	No synthetic substance detected/identified	
L4EM9C	No synthetic substance detected/identified	
LFPXXN	No synthetic substance detected/identified	
LJ4RCZ	No synthetic substance detected/identified	
LUPYBP	No synthetic substance detected/identified	
LXP8FY	No synthetic substance detected/identified	
LY68YN	No synthetic substance detected/identified	
MENJNZ	No synthetic substance detected/identified	
MYXEKD	No synthetic substance detected/identified	
N4LJN2	No synthetic substance detected/identified	
N7DH3Y	No synthetic substance detected/identified	
NWMYNQ	No synthetic substance detected/identified	
P78PNN	No synthetic substance detected/identified	
PABL8R	No synthetic substance detected/identified	
PCBUC2	No synthetic substance detected/identified	
PKTZBT	No synthetic substance detected/identified	
QBYEFF	No synthetic substance detected/identified	
QDLVXZ	No synthetic substance detected/identified	
QTEMH2	No synthetic substance detected/identified	
QXC4W	No synthetic substance detected/identified	
QY4ZKP	No synthetic substance detected/identified	
R8GE3K	No synthetic substance detected/identified	
RFND92	No synthetic substance detected/identified	
RJ93TD	No synthetic substance detected/identified	
RPYFU2	No synthetic substance detected/identified	
T66WGU	No synthetic substance detected/identified	
T7FX3T	No synthetic substance detected/identified	

TABLE 2a - Item 2 Results
Item Contents: No Synthetic Substance

WebCode	Synthetic Drug Group Detected	Synthetic Drug Detected
T89URM	No synthetic substance detected/identified	
TBAVRJ	No synthetic substance detected/identified	
TYU9FX	No synthetic substance detected/identified	
U2ZQET	No synthetic substance detected/identified	
U6H8AJ	No synthetic substance detected/identified	
UA8PLA	No synthetic substance detected/identified	
UEPMFR	No synthetic substance detected/identified	
UKCK3T	No synthetic substance detected/identified	
UMJV2H	No synthetic substance detected/identified	
V8MZ2W	No synthetic substance detected/identified	
V9EYFV	No synthetic substance detected/identified	
VG88ZL	No synthetic substance detected/identified	
VW86NH	No synthetic substance detected/identified	
VZ3YLJ	No synthetic substance detected/identified	
WG8Q2U	No synthetic substance detected/identified	
XBBLKV	No synthetic substance detected/identified	
XCT9JD	No synthetic substance detected/identified	
XFQU9U	No synthetic substance detected/identified	
XKKQXL	No synthetic substance detected/identified	
XTVCKU	No synthetic substance detected/identified	
XWBK9U	No synthetic substance detected/identified	
XWTTWN	No synthetic substance detected/identified	
XYKPLH	No synthetic substance detected/identified	
Y666PF	No synthetic substance detected/identified	
YFNLHL	No synthetic substance detected/identified	
YJLZ6C	No synthetic substance detected/identified	
YU8842	No synthetic substance detected/identified	
YVGD3M	No synthetic substance detected/identified	
ZBBZBZ	No synthetic substance detected/identified	
ZPQ4TP	No synthetic substance detected/identified	
ZQ27EN	No synthetic substance detected/identified	
ZWQHFC	No synthetic substance detected/identified	

Response Summary - Item 2		Participants: 127
	Synthetic substance(s) detected/identified:	0
	No synthetic substance(s) detected/identified:	127
	Other:	0

Examination Methods (Item 2)

TABLE 2b

WebCode	GC	GC/MS	Color	FTIR	UV	TLC	LC	LC/MS	Micro	Other
2L44QE		✓	✓							
334DAB		✓	✓							
3HV9JG	✓	✓								TruNarc
3X8L2E		✓	✓							
426P77		✓	✓							
42RXP		✓	✓		✓					
472EMD		✓	✓	✓						
47KXU6		✓	✓	✓						
4WVAWH		✓	✓	✓						Raman
69MF67		✓								
6GXGQ8		✓	✓	✓						
7E8XZT		✓	✓	✓						
7WM82U		✓		✓						
8BZY37		✓	✓							
8FVTZ8		✓		✓						
9BEKC8		✓	✓	✓						
9FBATE							✓	✓		
9NQV3H		✓	✓		✓					
9P3JLH		✓							✓	
A632MD		✓								
A97TXY	✓	✓		✓						
AHWD2C	✓	✓	✓							
AJNAP7		✓								
ANVHKA		✓	✓	✓						
B4ANGZ		✓								
B8TMUU		✓		✓						
BHRDDG		✓	✓	✓	✓					
BLPWHZ		✓	✓							
BP9WV		✓		✓						
BQJRHM		✓								
C8PHVC		✓	✓	✓	✓					
C9GEJ7		✓	✓	✓						
CBMWH2		✓	✓	✓						Raman spectroscopy, GC-FTIR
CL6HLB		✓		✓					✓	
D39A8C		✓	✓							
DE6F3W	✓	✓								

TABLE 2b - Item 2 Examination Methods

WebCode	GC	GC/MS	Color	FTIR	UV	TLC	LC	LC/MS	Micro	Other
DH22RD			✓			✓				DART-TOF
DTX8LC	✓	✓		✓	✓					
DUWBEM		✓								SFC/MS
DYMRPR		✓		✓						RAMAN
ED37LJ		✓	✓							
EDLU4E		✓	✓							
EHFQT6		✓								TruNarc
ER898D		✓		✓						
FDJJM2		✓	✓							
FQ9HE4		✓			✓					Electronic balance for the weight
FX6HPQ	✓	✓		✓						
G8CEB9		✓	✓	✓	✓					
G94BY3		✓	✓	✓						
GDGBWT		✓	✓	✓					✓	
GGXJKT	✓	✓		✓						
GKWUE8		✓	✓		✓					
GMPQ32		✓		✓						
GNW7A8		✓	✓	✓						
GQN2Y2		✓	✓							
H479BT		✓	✓	✓						
H6ENHY		✓	✓	✓						
HJGXL9		✓	✓	✓	✓					
HRQLY7		✓	✓							
HUHHNZ		✓	✓	✓						
JL3Y62		✓								TruNarc
JUCMHZ		✓	✓	✓						
JW4LWX		✓	✓							
K37XL4		✓								RAMAN
K6ANV4		✓		✓						LC/TOF-MS
KA4KJU		✓								
KBJ44R		✓	✓							
KKNWTL		✓		✓						
KV6V4N	✓	✓								TruNarc, extractions
L4EM9C		✓								
LFPXXN	✓	✓								
LJ4RCZ	✓	✓	✓							
LUPYBP		✓	✓	✓						
LXP8FY		✓	✓	✓					✓	

TABLE 2b - Item 2 Examination Methods

WebCode	GC	GC/MS	Color	FTIR	UV	TLC	LC	LC/MS	Micro	Other
LY68YN	✓	✓								
MENJNZ		✓				✓	✓			
MYXEKD		✓	✓							
N4LJN2		✓	✓	✓						
N7DH3Y		✓				✓	✓			
NWMYNQ		✓	✓	✓						
P78PNN		✓	✓	✓						
PABL8R		✓	✓							
PCBUC2			✓			✓				DART-TOF
PKTZBT		✓	✓	✓						
QBYEFF		✓		✓						
QDLVXZ		✓	✓	✓						
QTEMH2		✓		✓						✓
QXC4V		✓		✓						
QY4ZKP		✓	✓	✓						
R8GE3K		✓	✓							
RFND92		✓	✓	✓						
RJ93TD		✓		✓						
RPYFU2		✓	✓	✓	✓					
T66WGU		✓								
T7FX3T		✓	✓		✓					
T89URM		✓	✓							
TBAVRJ	✓	✓	✓	✓						
TYU9FX		✓	✓	✓						
U2ZQET		✓		✓		✓	✓			
U6H8AJ		✓								LC/DAD
UA8PLA		✓								
UEPMFR		✓		✓						
UKCK3T		✓								
UMJV2H		✓	✓	✓						
V8MZ2W		✓		✓						
V9EYFV		✓	✓	✓	✓					
VG88ZL		✓		✓				✓		LC/MS/QTOF
VV86NH		✓	✓	✓						
VZ3YLJ		✓								
WG8Q2U		✓	✓		✓					
XBBLKV		✓	✓							
XCT9JD		✓	✓							

TABLE 2b - Item 2 Examination Methods

WebCode	GC	GC/MS	Color	FTIR	UV	TLC	LC	LC/MS	Micro	Other
XFQU9U		✓		✓						
XKKQXL		✓	✓							
XTVCKU		✓	✓	✓	✓					
XWBK9U		✓		✓						
XWTTWN		✓	✓							
XYKPLH		✓		✓						Raman
Y666PF		✓	✓	✓						
YFNLHL		✓	✓	✓						
YJLZ6C		✓		✓						RAMAN
YU8842		✓	✓							
YVGD3M		✓								
ZBBZBZ		✓								NMR
ZPQ4TP		✓	✓	✓	✓					
ZQ27EN	✓							✓		
ZWQHFC										✓

Response Summary										Total Participants: 127
	GC	GC/MS	Color	FTIR	UV	TLC	LC	LC/MS	Micro	
Participants	13	122	71	65	15	6	5	5	2	
Percent	10%	96%	56%	51%	12%	5%	4%	4%	2%	

Additional Comments

TABLE 3

WebCode	Additional Comments
2L44QE	In item 1 lidocaine and pentylone were detected
42RXDP	Lidocaine also detected in sample 1
4WVAWH	Item 1 : Also found to contain lidocaine
69MF67	Item 1 also contains lidocaine. Item 2 contains cornstarch.
8FVTZ8	Starch identified for item 2
9BEKC8	Sample 1 also contains lidocaine
9FBATE	Item 1: Analysis confirms the presence of a compound structurally derived from 2-aminopropan-1-one in the sample tested, Schedule I. The compound is 1-(1,3-benzodioxol-5-yl)-2-(methylamino)-1-pentanone (pentylone) or an isomer of pentylone. This compound is structurally derived from 2-aminopropan-1-one by substitution at the 1-position with a phenyl ring. The compound is further modified in the following way(s): i) Substitution in the ring system with alkylendioxy substitution; ii) Substitution at the 3-position with an acyclic alkyl substitution; iii) Substitution at the 2-amino nitrogen atom with an alkyl group.
9P3JLH	Lidocaine was found in Item 1.
A632MD	Lidocaine was also confirmed in Item 1.
AJNAP7	Another substance found in item 1: Lidocaine
ANVHKA	Lidocaine most abundant in GC/MS and FTIR sample. Eutylone with Marquis reagent is yellow, same as Lidocaine.
B4ANGZ	I analyzed other known cathinone standards that had similar MS and compared their retention times to my samples from item 1. I narrowed the field down to pentylone and 3,4-methylenedioxy-N-propylcathinone. Then I compared the fragmentation patterns of the two compounds and came to the conclusion of item 1 containing pentylone.
B8TMUU	Wheat starch was detected in Item 2 and it is not listed in the schedules of [State Legislation].
BHRDDG	Lidocaine was present in item 1 too.
BLPWHZ	Item 1 also contains lidocaine. In the sample corresponding to item 1, a cathinone was detected, preliminarily identified through mass spectrum library matching as Pentylone. However, the laboratory does not have a certified reference material to experimentally confirm the retention time and mass spectrum of the sample under the same conditions. It is important to note that Pentylone has a structural isomer known as Eutylone, whose mass spectrum is notably similar. Therefore the possibility of misidentification must be considered in the absence of certified reference material. Nevertheless, according to the scientific literature, there is a differentiating ion with an m/z value of 58, which is characteristic of Eutylone and appears with high intensity in its spectrum, while in Pentylone this ion is low intensity. Based on this criterion and the data obtained, it is concluded that the substance present in the item 1 corresponds to Pentylone.
BQJRHM	Lidocaine was also identified in Item 1.
C8PHVC	Lidocaine was also detected in Item 1.
CBMWH2	Item 1: Pentylone and lidocaine were identified. Item 2: No synthetic substance are detected and on analysis found to contain starch.
CL6HLB	Item 1 contains also Lidocaine. Item 2 contains starch.
D39A8C	Lidocaine detected but not confirmed in item 1.

TABLE 3

WebCode	Additional Comments
DE6F3W	Analysis of Item 1A confirmed the presence of Pentylone or one of its positional isomers, schedule 1. The interpretation of the data and authorization of the results was performed by the undersigned forensic analyst. Other staff members may have performed laboratory activities concerning evidence associated with this report. For a complete listing of all staff members who performed laboratory activities in this case, please contact the laboratory via the telephone number above.
DYMRPR	Wheat starch was detected in Item 2 and it is not listed in the schedules of [State Legislation].
ED37LJ	Lidocaine was also confirmed in Item 1.
FQ9HE4	[From Table 1a: Item 1 Results - Synthetic Drug Detected: "Analysis confirms the presence of a compound structurally derived from 2-aminopropan-1-one in the sample tested, Schedule I. The compound is 1-(1,3-benzodioxol-5-yl)-2-(methylamino)-1-pentanone (pentylone) or an isomer of pentylone. This compound is structurally derived from 2-aminopropan-1-one by substitution at the 1-position with a phenyl ring. The compound is further modified in the following way(s): i) Substitution in the ring system with alkylendioxy substitution; ii) Substitution at the 3-position with an acyclic alkyl substitution; iii) Substitution at the 2-amino nitrogen atom with an alkyl group."]
GDGBWT	Item #1 also contains lidocaine. Item #2 contains starch.
H6ENHY	Item 1 also contains lidocaine
JUCMHZ	Lidocaine was detected in item 1 Cornflour was detected in item 2
K37XL4	Wheat starch was detected in Item 2 and it is not listed in the schedules of [State Legislation].
KA4KJU	In Item 1, presence of Lidocaine was detected.
KKNWTL	Detection of lidocaine in sample Item 1. Detection of starch in sample Item 2.
LJ4RCZ	For item 1 - After structural analysis of all current isomers of pentylone listed on Cayman Chemical site was performed, it was determined that one of the isomers is not controlled. No schedule will be reported on this report.
LUPYBP	In sample 1 also lidocaine was detected, and it was the major compound in the sample.
LXP8FY	Lidocaine was also detected in Item One Starch was identified as a component in Item Two
MENJNZ	For Item 1: Analysis confirms the presence of lidocaine in the sample tested, a Dangerous Drug. Analysis also confirms the presence of a compound structurally derived from 2-aminopropan-1-one in the sample tested, Schedule I. The compound is 1-(1,3-benzodioxol-5-yl)-2-(methylamino)-1-pentanone (pentylone) or an isomer of pentylone. This compound is structurally derived from 2-aminopropan-1-one by substitution at the 1-position with a phenyl ring. The compound is further modified in the following way(s): i) Substitution in the ring system with alkylendioxy substitution; ii) Substitution at the 3-position with an acyclic alkyl substitution; iii) Substitution at the 2-amino nitrogen atom with an alkyl group.
MYXEKD	In item 1, lidocaine was also identified.
N4LJN2	Lidocaine was also identified in item 1.
N7DH3Y	Item 1: Analysis confirms the presence of a compound structurally derived from 2-aminopropan-1-one in the sample tested, Schedule I. The compound is 1-(1,3-benzodioxol-5-yl)-2-(methylamino)-1-pentanone (pentylone) or an isomer of pentylone. This compound is structurally derived from 2-aminopropan-1-one by substitution at the 1-position with a phenyl ring. The compound is further modified in the following way(s): i) Substitution in the ring system with alkylendioxy substitution; ii) Substitution at the 3-position with an acyclic alkyl substitution; iii) Substitution at the 2-amino nitrogen atom with an alkyl group.
NWMYNQ	Item 1 - Lignocaine also present. Item 2 - Starch present.
QBYEFF	Item1 contain pentylone and lidocaine
QDLVXZ	[Laboratory Identifier] indicated Lidocaine but was not confirmed.
QTEMH2	Item 1 also contained lidocaine. Item 2 was consistent with starch.

TABLE 3

WebCode	Additional Comments
QY4ZKP	Item 1 analyzed contains Pentylone and lidocaine. Item 2 corresponds to corn flour and does not contain controlled substances.
R8GE3K	Lidocaine also confirmed in Item 1. Item 1 isomer not determined.
RFND92	Lidocaine (not CS) identified in item 1, not reported.
RJ93TD	Wheat starch was detected in Item 2 and it is not listed in the schedules of [State Legislation].
T66WGU	Lidocaine was also confirmed in Item 1.
T89URM	Additional substance in item 1: Lidocaine
TBAVRJ	Item 1A: Analysis of Item 1A confirmed the presence of pentylone, or one of its isomers. Pentylone and its isomers are controlled, Schedule 1.
U6H8AJ	We find lidocaine in Item 1, and starch in item 2.
UA8PLA	item 1 had a (lidocaine)
UEPMFR	Lidocaine was detected in Item 1. Starch was indicated in Item 2.
UMJV2H	Lidocaine was also detected in Item 1.
V8MZ2W	Item 1 also contained lidocaine.
VG88ZL	Pentylone with lidocaine was identified in Item No.1
VW86NH	Item 1: Pentylone is a Class B controlled drug under the [State Legislation] (as amended). We also detected the presence of Lignocaine. Lignocaine is not controlled under the [State Legislation] (as amended). Item 2: No controlled drugs were detected in the powder of Item 2, however Starch was detected. Starch is not controlled under the [State Legislation] (as amended).
XFQU9U	Item 1 also contained lidocaine base. Item 2 contained a substance consistent with starch.
XKKQXL	Lidocaine was also identified in Item 1.
XWBK9U	Lidocaine also identified in Item 1
XYKPLH	Also, Lidocaine present in item 1, which is not a controlled substance.
Y666PF	1) Item 1 contained 151 milligrams of white powder, which contained 2-METHYLAMINO-1-(3,4-METHYLENEDIOXYPHENYL)PENTAN-1-ONE (PENTYLONE). Pentylone is a Class B controlled drug under the provisions of the [State Legislation] (as amended). Lignocaine was also detected in the white powder, which is not a controlled drug under the provisions of the [State Legislation] (as amended). 2) Item 2 contained 153 milligrams of white powder. No controlled drugs were detected in the white powder, which was found to contain starch. Starch is not controlled under the provisions of the [State Legislation] (as amended).
YFNLHL	Item 1 contains pentylone, propylone and/or one of their isomers
YJLZ6C	Item 1 consisted of Pentylone and lidocaine. Item 2 consisted of Corn flour.
YU8842	In sample No. 1, lidocaine was identified.
YVGD3M	Lidocaine was also confirmed in Item 1.
ZBBZBZ	Lidocaine was also detected in Item 1.
ZPQ4TP	Lidocaine also detected in item 1.

-End of Report-
(Appendix may follow)

Test No. 24-5041: Synthetic Drug Analysis

DATA MUST BE SUBMITTED BY **Dec. 02, 2024, 11:59 p.m. EST** TO BE INCLUDED IN THE REPORT

Participant Code: U1234A

WebCode: C87P3E

The Accreditation Release section can be accessed by using the "Continue to Final Submission" button above. This information can be entered at any time prior to submitting to CTS.

Scenario:

An investigator has submitted two questioned samples for analysis, both of which appear to be a powdered substance. Please examine the samples and determine if any synthetic drugs are present.

Items Submitted (Sample Pack SDA):

Item 1: First powdered substance

Item 2: Second powdered substance

1a.) Is a synthetic substance present in Item 1? If yes, report the substance.

No synthetic substance detected/identified

Synthetic Substance(s) detected/identified (please list below).

Following your lab's protocols, list the synthetic drug group and/or synthetic drug present in the sample.

Synthetic drug group
(e.g. cathinones)

Synthetic drug
(e.g. dibutylone)

1b.) What methods were used to examine Item 1?

(If color and/or crystal tests are used, please simply check the appropriate method below. Specific color and crystal tests will not be listed in the summary report.)

GC Color Tests UV LC Microscopic
GC/MS FTIR TLC LC/MS

Other (specify):

2a.) Is a synthetic substance present in Item 2? If yes, report the substance.

- No synthetic substance detected/identified
- Synthetic Substance(s) detected/identified (please list below).
Following your lab's protocols, list the synthetic drug group and/or synthetic drug present in the sample.

Synthetic drug group
(e.g. cathinones)

Synthetic drug
(e.g. dibutylone)

2b.) What methods were used to examine Item 2?

(If color and/or crystal tests are used, please simply check the appropriate method below. Specific color and crystal tests will not be listed in the summary report.)

- GC Color Tests UV LC Microscopic
GC/MS FTIR TLC LC/MS

Other (specify):

3.) Additional Comments

Please note: Any additional formatting applied in the free form space below will not transfer to the Summary Report and may cause your information to be illegible. This includes additional spacing and returns that present your responses in lists and tabular formats.

RELEASE OF DATA TO ACCREDITATION BODIES

The Accreditation Release is accessed by pressing the "Continue to Final Submission" button online and can be completed at any time prior to submission to CTS.

CTS submits external proficiency test data directly to ANAB and/or A2LA. Please select one of the following statements to ensure your data is handled appropriately.

- This participant's data is intended for submission to ANAB and/or A2LA. (Accreditation Release section below must be completed.)
- This participant's data is not intended for submission to ANAB and/or A2LA.

Have the laboratory's designated individual complete the following steps only if your laboratory is accredited in this testing/calibration discipline by one or more of the following Accreditation Bodies.

Step 1: Provide the applicable Accreditation Certificate Number(s) for your laboratory.

ANAB Certificate No.

A2LA Certificate No.

Step 2: Complete the Laboratory Identifying Information in its entirety.

Authorized Contact Person and Title

Laboratory Name

Location (City/State)