FACT SHEET

6-APB

November 2013

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This part of the website is not accessible for the general public.
A login can be requested by contacting bewsd@wiv-isp.be.

A. General information

Recent collected sample in Belgium

Substance: 6-APB
Date of analysis: First week of November, 2013
Product type: powder
Color: white
Region: Brussels
Sample origin: Modus Vivendi collected the sample from a user in the Brussels region

Created
June 2011

Updated
November 2013

Type
Psychotropic substances

Group
Others

Name
6-APB

Systematic chemical name
6-(2-aminopropyl)benzofuran

Other names
“Benzo Fury”

Nature of substance
6-APB is an aminoalkylbenzofuran which acts as a serotonin (5-HT(2c)) agonist. Like other APB compounds, it is a unsaturated benzofuran derivative of APDB compounds, and a deoxygenated derivative of MDA (a scheduled drug in the 1971 UN Convention on Psychotropic Substances).
APB compounds share structural features with phenethylamines, but the conjugation of the unsaturated bond in the furan ring with the phenyl ring grants distinctive properties.
There are four possible positional isomers of APB (i.e. 4-, 5-, 6- and 7-APB), and each of them can exist in two enantiomers (R and S) because of the chiral alpha-carbon atom.

B. Alerts

Alerts

United Kingdom: Two fatal intoxications following the ingestion of “Benzo Fury” have been reported in the UK on 7 september 2012. It concerned two males (age 19 and 33). In the first case, [[5-APB]] (0.016 mg/L), [[6-APB]] (0.057 mg/L) and [[5-IT]] (0.379 mg/L) were found in blood.
In the second case, MDMA (0.502 mg/L), MDA (0.046 mg/L), [[6-APB]] (0.005 mg/L) and [[5-IT]] (0.3 mg/L) were found. These substances were also identified in urine.
Considering the presence of [[5-IT]], it seems unlikely that the cause of death can be solely attributed to the consumption of 6-APB.

Reports to EMCDDA
Belgium: On 8 November 2013, the BEWSD reported the analysis of a powder containing 6-APB in Brussels. The powder was tested in the framework of a pill-testing project (Modus Vivendi).

Italy: Intoxications with and seizures of 6-APB have been reported in 2013.

Denmark: On 7 February 2013 the NFP reported a seizure of 2 plastic bags containing each 0,5g beige powder, seized on 02/04/12 by the police at Odense.

Croatia: On 16 November 2012 the NFP reported a seizure of 53,25g (0,05g powder and 380 transparent capsules containing 53,20g powder) seized on 31/08/2012 by the Police.

Germany: On 16 August 2012 the NFP reported a seizure of 1,04g beige powder seized on 14/05/2012 by the Customs authority at Frankfurt. On 17 February 2012 the NFP reported a seizure of 47,5g seized on 31/10/2011 by the police at Heidi.

Norway: On 12 January 2012 the NFP reported a seizure of 0,35g beige powder seized on 01/10/2011 by the Police at Molde.

Sweden: On 22 December 2011 the NFP reported a seizure of 2 pink tablets seized on 21/10/2011 by the Swedish Police at Orebro.

Hungary: On 27 June 2011 the NFP reported a seizure of 0,13g blue-white capsule with light brown powder seized in May 2011 by the Police at Tolna county.

C. Pictures
/

D. Clinical information

Usage
Modes and scope of the established or expected use
6-APB, like 5-APB, acts like a stimulant with mild hallucinogenic properties. It has been compared to MDMA in terms of its effects in party-going consumers.

Mixtures of several APB's (for example [[5-APB]] and 6-APB) have been sold as legal highs, and were mostly branded "Benzo Fury". After the banning/scheduling of these substances, similar substances appeared (for example, 5/6-MAPB).

Health risks

Very little is known about the specific toxicity of 6-APB, or the X-APB-series as a whole.
In case of overdose, stimulant intoxications might be observed (paranoia, anxiety, tachycardia, hypertension, hallucinations, palpations, psychosis, …).
Since no specific antidote is available, treatment is mostly supportive and symptomatic.
Diazepam is frequently used (as in most stimulant intoxications).
Abuse potential seems comparable to that of MDMA and other related phenethylamines, and seems rather low.

Other uses

None known.

E. Legal status

Belgium: non-controlled. It's isomer [[5-APB]] however is scheduled.

Denmark: controlled

Germany: controlled

Hungary: controlled
As of 3 April 2012, generic definitions for 4 groups of substances (certain synthetic cannabinoid receptor agonists, cathinones, tryptamines and piperazines) have been included in the new Schedule C list.

Italy: controlled

Lithuania: non-controlled

Portugal: controlled

Slovenia: controlled

Sweden: controlled

United Kingdom: controlled
Temporary class drug order (TCDO) on two groups of new psychoactive substances (NPS) – the 'NBOMe' and 'Benzofuran' substances ([[25I-NBOMe]] and 5- and 6-APB respectively, including other related substances) – under the Misuse of Drugs Act 1971, came into force on Monday 10 June 2013 for up to 12 months.

F. Chemistry

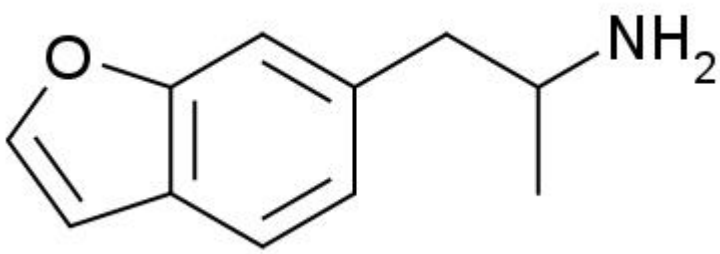
Systematic chemical name
6-(2-aminopropyl)benzofuran

Other chemical names and variants
1-benzofuran-6-ylpropan-2-amine

Chemical Abstracts Service (CAS) registry number
286834-85-3

Molecular information

Molecular structure:



Molecular formula: $C_{11}H_{13}NO$

Molecular weight: 175.23 g/mol

Synthesis, manufacture and precursors
No data available.

Physical description
White powder

Identification and analytical profile were kindly provided by the Hungarian National Focal Point and can be found at the end of this document.

G. References

Chan W. L. et al., Acute Psychosis Associated with Recreational Use of Benzofuran 6-(2-Aminopropyl)Benzofuran (6-APB) and Cannabis, J. Med. Toxicol. (2013) DOI 10.1007/s13181-013-0306-y.

Information sheet: Benzo Fury, DrugWatch, June 2012.

K. Briner *et al.,* Aminoalkylbenzofurans as serotonin (5-HT(2C)) agonists, US Patent 7,045,545 B1 to Eli Lilly and Co., 16 May 2006.

Full references in PDF format are available on the BEWSD website after login: http://ewsd.wiv-isp.be/New%20psychoactive%20substances%20in%20Europe/6-APB.aspx.
Spectral library data can also be downloaded from the website.

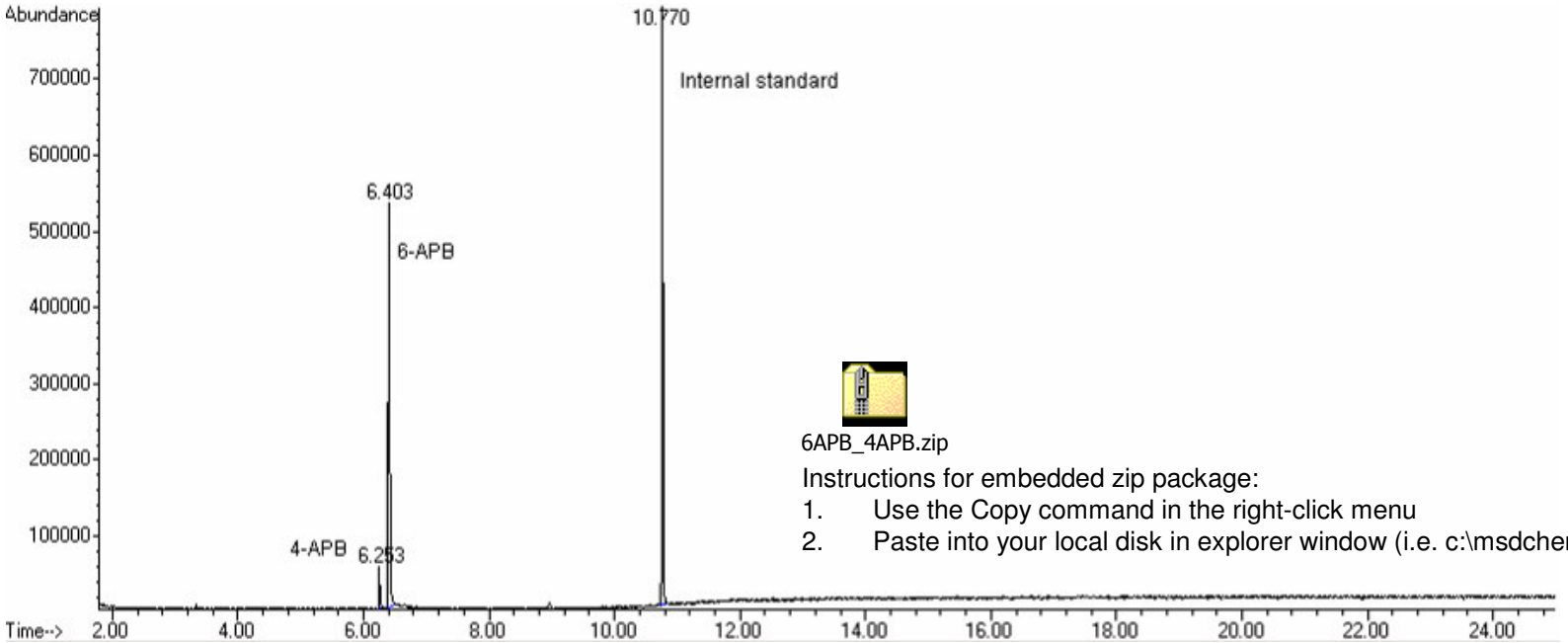
Identification of 6-APB and 4-APB in seized material

- GC/MS
  - 2 peaks (major and minor) with similar spectra
  - spectra similar to MS of 5-APB reported by Simon Hudson HFL Sport Science Ltd

- NMR results
  - Signals assigned by 2D technique (not included in this summary)
  - Major component: 6-APB
  - Minor component: 4-APB

GC

- 0.5 mg sample dissolved in MeOH
- GC separation
  - Column: HP5-MS 30m×0,25mm×0,25µm
  - Injector: 250°C
  - Carrier gas: He, 1.2 ml/min, constant flow
  - Temperature: 100°C for 2min; 20°C/min to 280°C; 280°C for 14 min

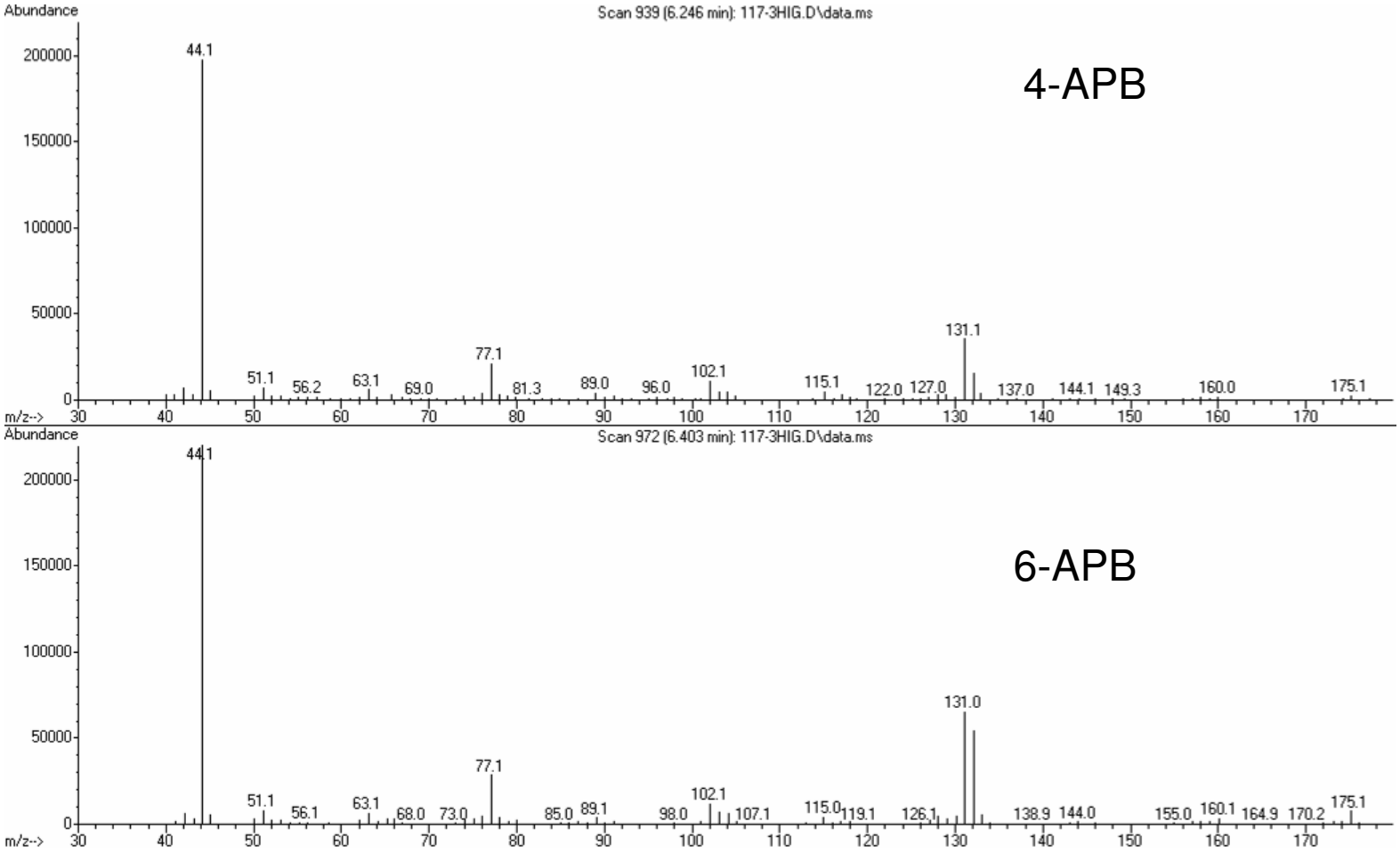


6APB_4APB.zip

Instructions for embedded zip package:

1. Use the Copy command in the right-click menu
2. Paste into your local disk in explorer window (i.e. c:\msdchem\1\data)

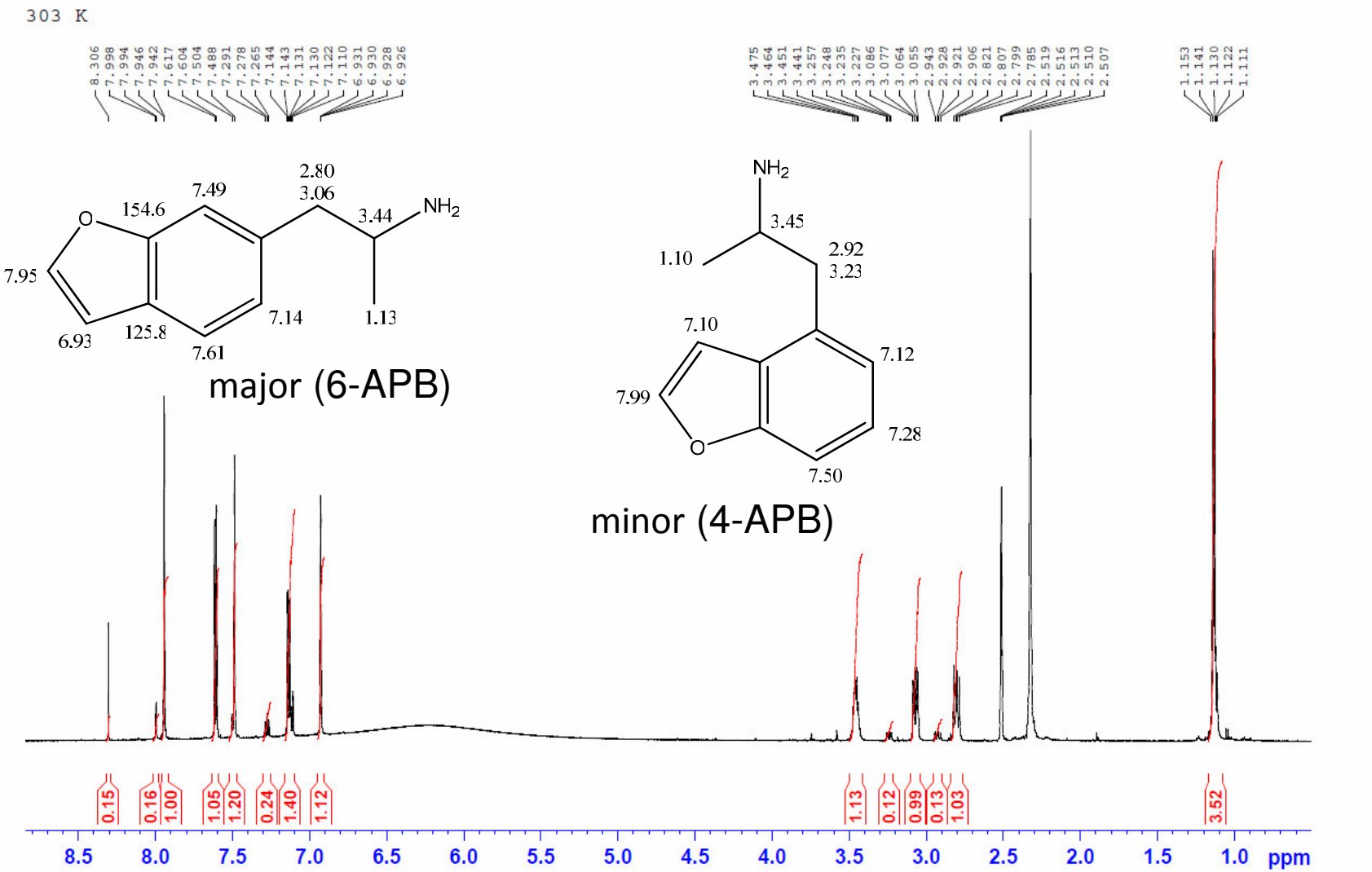
MS



Scaled to equal abundance

^{1}H NMR

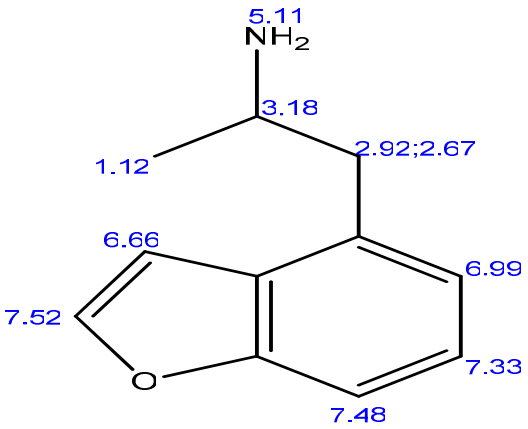
APB

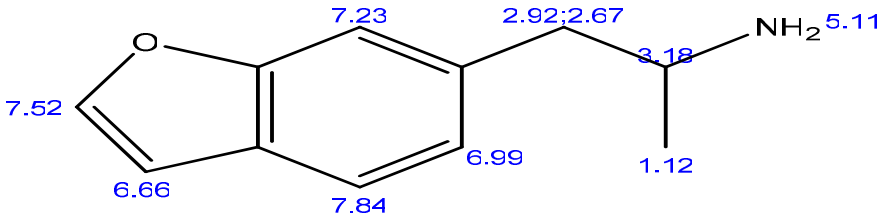


(Impurity peak at 8.306 ppm)

APB

ChemNMR ^{1}H Estimation





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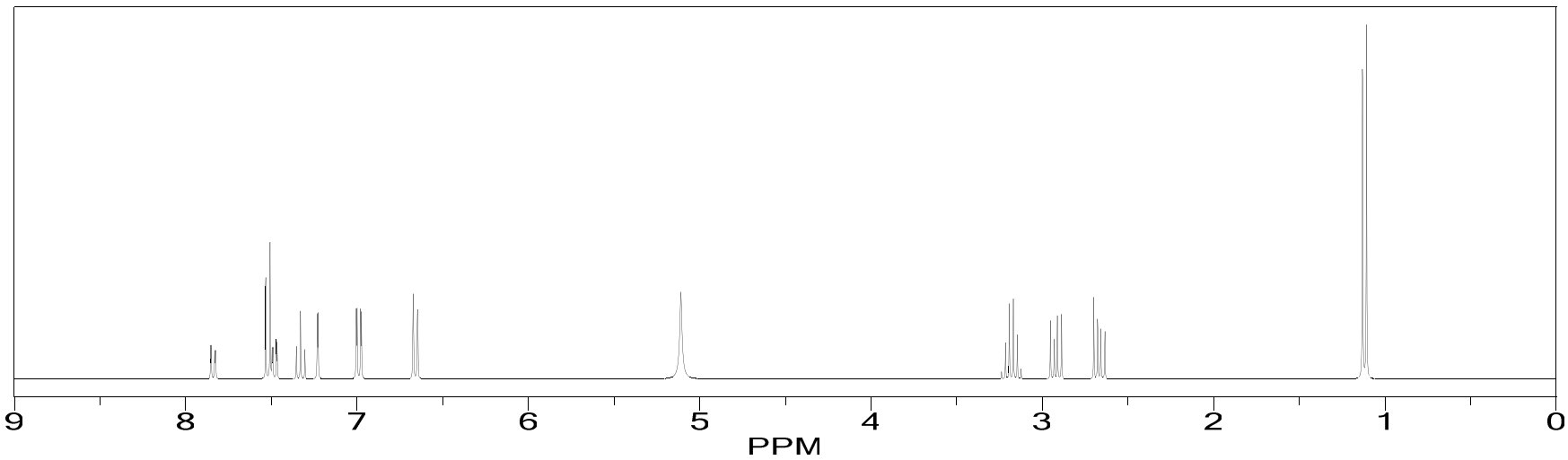
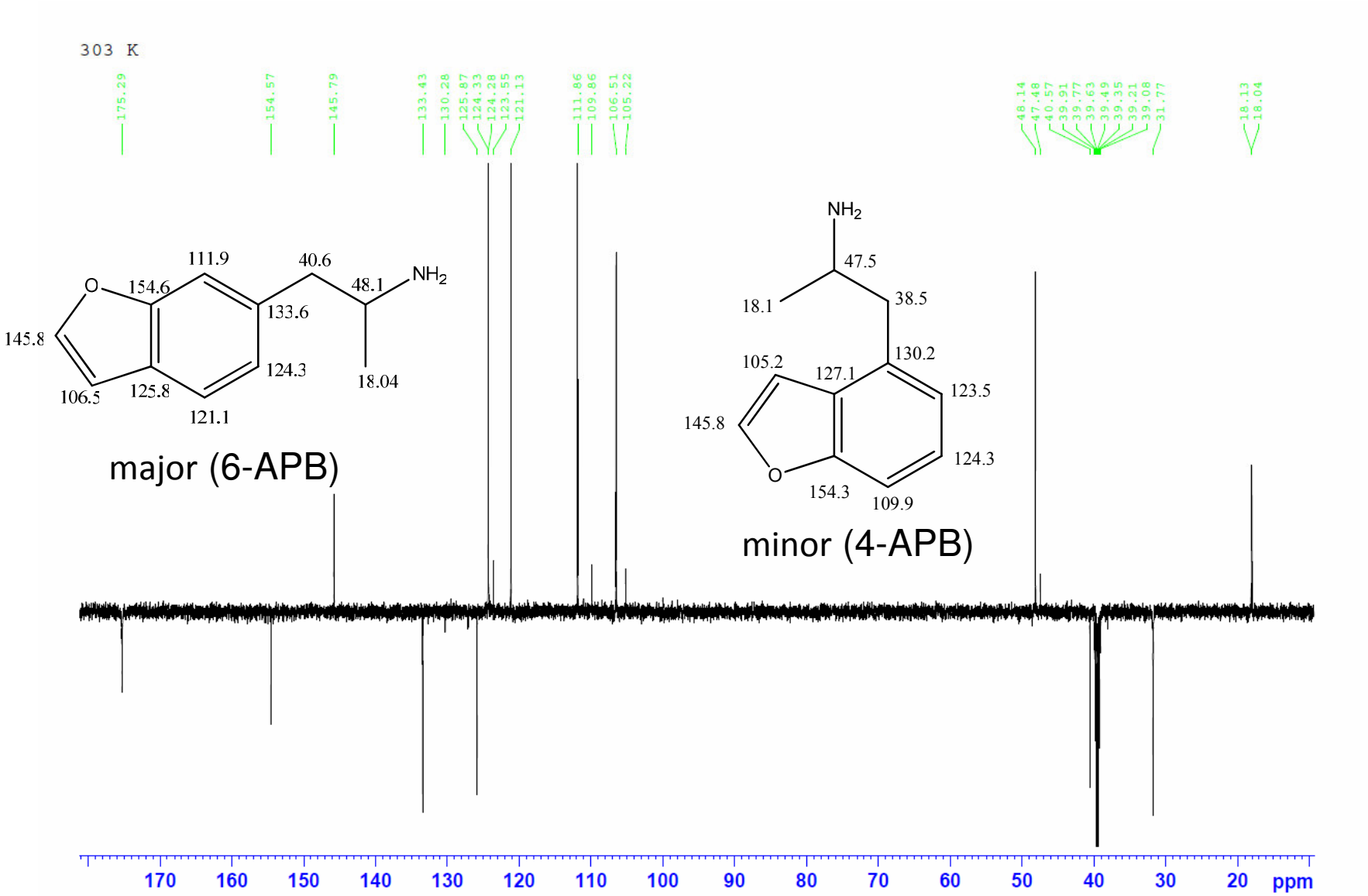


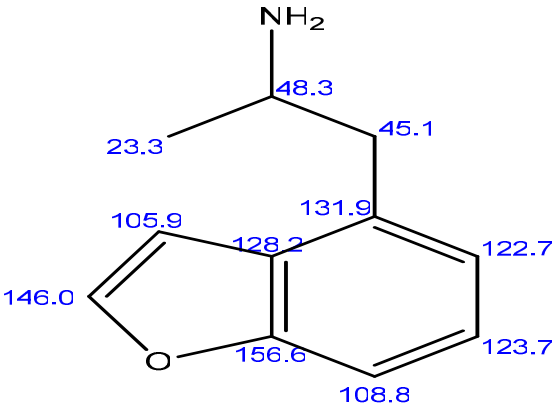
^{13}C NMR

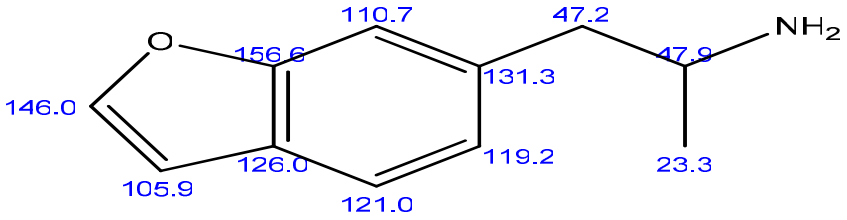
APB


303 K
175.29
154.57
145.79
133.43
130.28
125.87
124.33
124.28
123.55
121.13
111.86
109.86
106.51
105.22
48.14
47.48
40.57
39.91
39.77
39.63
39.49
39.35
39.21
39.08
31.77
18.13
18.04
O
111.9
40.6
48.1
NH2
154.6
133.6
145.8
124.3
106.5
125.8
18.04
121.1
major (6-APB)
NH2
47.5
18.1
38.5
130.2
105.2
127.1
123.5
145.8
124.3
O
154.3
109.9
minor (4-APB)
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
ppm

APB

ChemNMR ^{13}C Estimation





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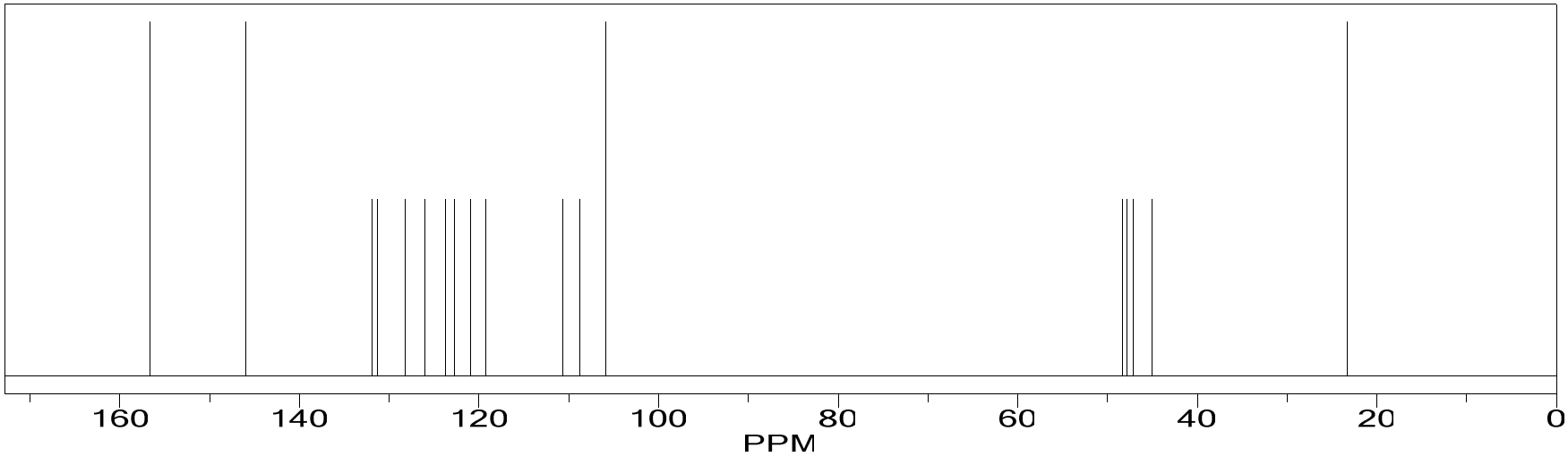

J. Med. Toxicol.
DOI 10.1007/s13181-013-0306-y

TOXICOLOGY OBSERVATION

Acute Psychosis Associated with Recreational Use of Benzofuran 6-(2-Aminopropyl)Benzofuran (6-APB) and Cannabis

Wui Ling Chan · David M Wood · Simon Hudson · Paul I Dargan

Abstract
Introduction There is evidence from around Europe of the availability and use of 6-(2-aminopropyl)benzofuran (6-APB) as a recreational drug. However, there is currently limited information on the acute toxicity of this compound. We describe here a case of acute toxicity associated with recreational use of legal high (6-APB) and cannabis, in which the comprehensive toxicological analysis confirmed the presence of a significant amount of 6-APB together with metabolites of both tetrahydrocannabinol and the synthetic cannabinoid receptor agonist (JWH-122).
Case Report A 21-year-old gentleman with no previous medical and psychiatric history was brought to the emergency department (ED) after he had developed agitation and paranoid behaviour following the use of 6-APB purchased over the Internet. There was no obvious medical cause for his acute psychosis. He required diazepam to control his agitation and was subsequently transferred to a psychiatric hospital for ongoing management of his psychosis. Toxicological screening of a urine sample collected after presentation to the ED detected 6-APB, with an estimated urinary concentration of 2,000 ng/ml; other drugs were also detected, but at lower concentrations including metabolites of the synthetic cannabinoid receptor agonist JWH-122 and tetrahydrocannabinol.
Conclusion This is the first case of analytically confirmed acute toxicity associated with the detection of 6-APB which will provide some information on acute toxicity of this drug to help clinicians with the management of such patients and legislative authorities in their consideration for the need of its control.

Keywords Benzofuran · 6-APB · 6-(2-Aminopropyl) benzofuran · Legal high · Toxicity · Benzo Fury

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Introduction

There has been increasing availability and use of a range of novel psychoactive substances (NPS, commonly known as 'legal highs') in the UK and Continental Europe, North America and elsewhere in the world over the last few years [1]. Often, there is limited information available on the pharmacology and toxicology of these drugs, and triangulation of data from a variety of sources is necessary to describe the risks associated with their use [2]. One of the key components of this data triangulation is case reports of acute toxicity with confirmation of the NPS in biological samples.

One class of NPS that has emerged is the benzofurans, including 5-(2-aminopropyl)benzofuran (5-APB) and 6-(2-aminopropyl)benzofuran (6-APB) (Figs. 1 and 2) [3]. 5-APB and 6-APB are benzofuran analogues of 3,4-methylenedioxyamphetamine (MDA) that were originally synthesised in 1993 [4]. They have been reported in seized samples in the UK and elsewhere in Europe since 2010, and more recently, 5-APB has been detected in pooled urine

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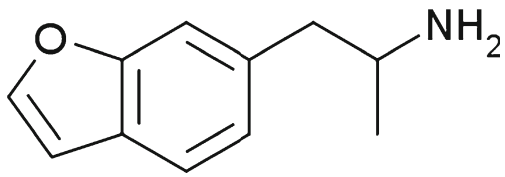

Fig. 1 Chemical Structure of 6-APB

samples in both city centre and festival urine collections confirming its use in the UK [5–7]

Recent studies have shown that 6-APB is a triple monoamine reuptake inhibitor and a potent agonist for the $5HT_{2B}$ and $5HT_{2C}$ receptors [8]. There are, however, no published data on the acute toxicity related to cases of analytically confirmed use of 6-APB. We describe here the first case of acute toxicity associated with recreational use of legal high (6-APB) and cannabis, in which the urinary analysis confirmed the presence of a significant amount of 6-APB together with other metabolites of the synthetic cannabinoid receptor agonist JWH-122 and tetrahydrocannabinol.

Case Report

A 21-year-old gentleman with no previous medical or psychiatric history was brought to the emergency department (ED) by his friends as he developed agitation and paranoid thoughts and started cutting his forearms with a razor blade. He admitted to have ingested 0.4 g of 6-APB and smoking cannabis over a 2-day period. He was unable to recall the exact time of use of these drugs but could remember that he last took them on the day of admission. He stated that he had bought 6-APB from an Internet supplier and that this was the first time that he had experimented with 6-APB. He had been using cannabis regularly over the weekend for the last 2 to 3 years but did not report any previous complications related to his use of cannabis.

On arrival in the ED, he was noted to be agitated and insisted that one of his friends whom he had not met for a long while might be dead. He also complained that everyone in the ED was 'trying to read his mind' and were 'looking at him in a funny way'. He became more agitated when he was asked to recall the incidents that led to his presentation and was unable to remember much detail, except having taken 6-APB. He had sustained multiple lacerations over both his forearms. He had a normal temperature (36.5 °C), heart rate (84 beats per min) and blood pressure (120/64 mmHg). The rest of his physical examination was unremarkable; in particular, there were no clinical features of serotonin toxicity (nystagmus, hypertonia, hyper-reflexia and clonus) on neurological examination.

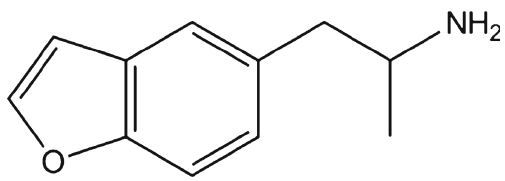

Fig. 2 Chemical Structure of 5-APB

Arterial blood gas analysis performed on room air (21 % oxygen) revealed no acid–base disturbance (pH 7.359, pCO_2 5.98 kPa, pO_2 10.78 kPa, bicarbonate 24.6 mmol/l, base excess −1.1 mmol/l), and further blood tests including renal and liver function tests, creatine kinase, full blood count and coagulation profile were normal.

He was seen by the clinical toxicologists, the plastic surgeons and the psychiatrists and was admitted to the emergency medical unit (observation ward). The working diagnosis at the time of presentation was drug-induced psychosis associated with self-harm.

He underwent a washout and repair of the lacerated tendons (palmaris longus and flexor carpi radialis tendon) of his left forearm and closure of the multiple forearm lacerations. His agitation and psychotic features worsened on the second day of his admission when he verbalised that he 'might have killed someone' and that he 'might be a terrorist'. He exhibited suicidal ideation when interviewed by a psychiatrist. He was found to be fluctuating between agitation and paranoia, to experiencing low mood and delusional thoughts throughout his 5-day stay in the hospital. He did not exhibit any signs of autonomic hyperactivity (e.g. sweating, hand tremors, tachycardia or seizures). He was not a chronic alcohol, benzodiazepine or sedative user, and therefore, it was unlikely that the deterioration of his mental state was due to a withdrawal state from alcohol and/or benzodiazepines. He required diazepam (4 to 10 mg daily) to control his symptoms and was placed under the Section 2 of the Mental Health Act 1983 (2007) [9]. He was subsequently transferred to a psychiatric hospital for further treatment of his psychotic symptoms. In the psychiatric hospital, his condition improved with no further display of psychotic features, and the Mental Health Act section was rescinded. He was discharged after 3 days with plans to return to his native country with his parents for further psychiatric monitoring to ensure that there was no recurrence of his psychotic symptoms.

Toxicological Screening

Written informed consent was obtained from the patient for toxicological analysis of his urine sample collected at the time of presentation to the ED. The urine sample was initially pretreated with β-glucuronidase to cleave any glucuronic acid conjugates and was then prepared for analysis using solid-phase extraction sample preparation techniques. The resulting

prepared sample was then analysed using a high-performance liquid chromatography interfaced to high-resolution accurate mass spectrometry operating in full-scan mode.

6-APB was detected in the urine, with an estimated urinary concentration of 2,000 ng/ml. In addition, metabolites of the synthetic cannabinoid receptor agonist JWH-122 and the 11-nor-9-carboxy-delta-9-tetrahydrocannabinol metabolite of tetrahydrocannabinol were detected. Oxazepam (20 ng/ml) and nordiazepam (150 ng/ml) detected are likely to reflect diazepam administered in the ED prior to the collection of the urine sample. Screening also detected 6-(2-methylaminopropane)benzofuran (30 ng/ml), amphetamine (90 ng/ml), chloroquine (5 ng/ml), ketamine metabolites (3 ng/ml) and ephedrine (800 ng/ml).

Discussion

We report here a patient with drug-induced psychosis and agitation with deliberate self-harm after oral consumption of 6-APB and smoking cannabis. This is the first case of acute toxicity related to analytically confirmed 6-APB use in adults. Other psychoactive substances were also detected, and so, it is not possible to be certain to what extent all of the features described were due to 6-APB; there is a potential that cannabis and/or the synthetic cannabinoid receptor agonists also detected may have played a role.

6-APB is one of a number of benzofurans that has emerged as a recreational drug since 2010 [1]. 6-APB is a structural analogue of MDA where the methylenedioxy ring has been replaced with a benzofuran ring, and this places 6-APB in the amphetamine class of phenethylamines [10, 11]. It is available from a number of 'legal high' websites and is sold both in tablet and powder form in quantities ranging from 100 mg to 100 g [12–14]. 6-APB is sold both under its own name, under other names such as Benzo Fury and as a 'research chemical that is not meant for human consumption'. However, analysis of Benzo Fury products has shown that these can contain a variety of different NPS; in one study, the Benzo Fury product was found to contain caffeine, 1-benzylpiperazine and 3-trifluoromethylphenylpiperazine with no benzofurans or benzodifurans [15].

There are limited data available on the prevalence of use of the 6-APB and other benzofurans as they are not included in population surveys of drugs use, and only one sub-population survey has included the benzofurans and/or related benzodifurans. In the 2012 Global Mixmag/Guardian Drugs Survey, 3.2 % of UK respondents indicated lifetime use of 'Benzo Fury' (2.4 % in the previous 12 months) [16]. Less than 0.5 % of US respondents reported Benzo Fury use in the previous 12 months [16]. The survey did not ask about the use of 5-APB, Bromo-DragonFLY or 2C-B-FLY [16]. 5-APB has been detected in the analysis of samples from portable urinals in both city centres and music festivals confirming use of benzofurans in the UK [5–7]. There are reports of 5-APB and 6-APB use on Internet discussion forums from the late 2010 [17–20]. Users report nasal insufflation of powder, ingestion of powder (these reports include direct ingestion of powder, powder dissolved in a liquid and powder wrapped in tissue paper) and rectal administration [17–20].

Recent in vitro human receptor binding assay studies using the US National Institute of Mental Health Psychoactive Drug Screening Program have shown that 6-APB is a triple monoamine reuptake inhibitor and a potent agonist for the $5HT_{2B}$ and $5HT_{2C}$ receptors [8]. The agonism for $5HT_{2B}$ could result in cardiotoxicity with long-term use of 6-APB, similar to side effects seen in chronic use of fenfluramine and 3,4-methylenedioxy-*N*-methylamphetamine (MDMA) [8], and its action on $5HT_{2C}$ receptors would result in appetite suppression [11].

However, there are limited data available on the acute toxicity associated with 6-APB use. There has been report in the UK media of a death in the UK potentially linked to Benzo Fury use; however, this report has not been substantiated, and we are not aware of analytical findings in this case [21]. 6-APB is not a controlled drug under the UK Misuse of Drugs Act 1971 and is marketed to users as a legal high with its purported desirable pharmacological effects such as mood-enhancing and stimulant properties [10, 22].

There are reports from nine 6-APB users on Erowid, who report palpitations, hot flushes, headache, paranoia, anxiety and visual and auditory hallucinations; seven report lone 6-APB use, and two report use of 6-APB in combination with cannabis and 4-hydroxy-*N*-methyl-*N*-ethyltryptamine and 2-ethyl-2,5,dimethoxyphemethylamine [17, 18]. Some users also report an unpleasant 'comedown' from 6-APB lasting for a few days [17–19]. Other users report that 6-APB creates a similar desired effect to MDMA but is associated with a feeling of anxiety that can last up to 5 days after use [17–20].

These anecdotal data from Internet discussion forums, taken together with our case, confirm the potential for significant acute toxicity including severe and prolonged neuropsychiatric symptoms (acute psychosis and agitation leading to self-harm) associated with 6-APB use. We feel that consideration should be given to the control of 6-APB and related benzofurans. It is also important that emergency physicians and clinical toxicologists managing patients with benzofuran use consider an extended period of observation if neuropsychiatric features are present.

References

1. European Monitoring Centre for Drugs and Drug Addiction (2012) The state of the drugs problem in Europe. http://www.emcdda.europa.eu/attachements.cfm/att_190854_EN_TDAC12001ENC_.pdf. Accessed 30 Apr 2013

2. Wood DM, Dargan PI (2012) Understanding how data triangulation identifies acute toxicity of novel psychoactive drugs. J Med Toxicol 8:300–303
3. Mustafa A (1974) The benzofurans—chemistry of heterocyclic compounds: a series of monographs, 29th edn. Wiley, New York, pp 1–2
4. Monte AP, Marona-Lewicka D, Cozzi NV, Nichols DE (1993) Synthesis and pharmacological examination of benzofuran, indan, and tetralin analogues of 3,4-methylenedioxyamphetamine. J Med Chem 36:3700–3706
5. Advisory Council on the Misuse of Drugs (2011) Consideration of the novel psychoactive substances ('legal highs'). http://www.homeoffice.gov.uk/publications/agencies-public-bodies/acmd1/acmdnps2011?view=Binary. Accessed 30 Apr 2013
6. Archer JR, Dargan PI, Chan WL, Hudson S, Wood DM (2013) Variability in recreational drugs and novel psychoactive substances detected in anonymous pooled urine samples from street pissoirs (street urinals) over time: a technique to monitor trends in drugs use. Clin Tox (Phila) (in press)
7. Wood DM, Archer JR, Measham F, Hudson S, Dargan PI (2013) Detection of use of novel psychoactive substances by attendees at a music festival in the North West of England. Clin Tox (Phila) (in press)
8. Iversen L, Gibbons S, Treble R, Setola V, Huang XP, Roth BL (2013) Neurochemical profiles of some novel psychoactive substances. Eur J Pharmacol 700:147–151
9. Mental Health Act (1983) 2007. http://www.legislation.gov.uk/ukpga/2007/12/pdfs/ukpga_20070012_en.pdf. Accessed 30 Apr 2013
10. ToxBase (2013) Benzo Fury. http://www.toxbase.org/Poisons-Index-A-Z/6-Products/6-APB/. Accessed 30 Apr 2013
11. Briner K, Burkhart JP, Burkholder TP, Fisher MJ, Gritton WH, Kohlman DT, Liang SX, Miller SC, Mullaney JT, XU Y-C, XU Y (2006) Aminoalkylbenzofurans as serotonin (5-HT(2c)) agonists. United States Patent US 7045545 B1. http://worldwide.espacenet.com/publicationDetails/biblio?CC=US&NR=7045545B1&KC=B1&FT=D&date=20060516&DB=&&locale=en_EP. Accessed 30 Apr 2013
12. Buy Research Chemicals UK (2013) 6-APB Pellets. https://www.buyresearchchemicals.co.uk/buy-6-apb/6-apb-pellets.html. Accessed 30 Apr 2013
13. Purechemicals.net (2013) Buy 6-APB powder. http://www.purechemicals.net/buy-6-apb-powder-71-c.asp. Accessed 30 Apr 2013
14. Official Benzo Fury™ (2013) Benzo Fury Pellets. http://www.officialbenzofury.com/products/Benzo-Fury-Pellets.html. Accessed 30 Apr 2013
15. Baron M, Elie M, Elie L (2011) An analysis of legal highs: do they contain what it says on the tin? Drug Testing Analysis 3:576–581
16. Global Drug Survey (2013) 2012 Global Drug Survey. http://globaldrugsurvey.com/run-my-survey/2012-global-drug-survey. Accessed 30 Apr 2013
17. Erowid (2013) Erowid experience vaults: 5-APB reports (also 5-(2-aminopropyl)benzofuran, 1-(1-benzofuran-5-yl)propan-2-amine). http://www.erowid.org/experiences/subs/exp_5APB.shtml. Accessed 30 Apr 2013
18. Erowid (2013) Erowid experience vaults: 6-APB reports (also 6-(2-aminopropyl)benzofuran, Benzo Fury). http://www.erowid.org/experiences/subs/exp_6APB.shtml. Accessed 30 Apr 2013
19. Blue Light (2013) Forum: 6-APB report from an ickle noob. http://www.bluelight.ru/vb/threads/525471-6-APB-report-from-an-ickle-noob. Accessed 30 Apr 2013
20. Drugs Forum: 6-APB. http://www.drugs-forum.com/forum/showwiki.php?title=6-APB. Accessed 30 Apr 2013
21. BBC News Jersey (2012) Matthew Wing inquest: legal high caused Jersey man's death (17th October 2012). http://www.bbc.co.uk/news/world-europe-jersey-19964309. Accessed 30 Apr 2013
22. FRANK (2013) Talk to Frank: APB (related terms: White Pearl, Benzo Fury, 6-APDB, 6-APB, 5-APDB, 5-APB). http://www.talktofrank.com/drug/apb. Accessed 30 Apr 2013