

I-TREND Substance briefing: 6-APB

This technical folder provides information on 6-APB. The information provided is based on a number of existing data sources and work undertaken as part of the I-TREND project. Research informing the folder includes an analysis of user discussions on popular Dutch drug forums (Workstream 1), an analysis of marketing on popular Dutch speaking web shops selling the substance (Workstream 2), and scientific laboratory analysis of the compound through test purchasing of the substance from Dutch web shops (Workstream 3).

1.	Substance name(s).....	3
1.1.	Chemical name.....	3
1.2.	Other names (e.g. popular/street/slang name(s): Benzofury)	3
1.3.	Branded products:	3
2.	Classification and effect	3
2.1.	EMCDDA substance group classification.....	3
2.2.	Substance analysis results.....	3
2.3.	Dutch drug forum monitoring.....	3
2.4.	Dutch web shops marketing	3
3.	Legal status and identification of the substance	3
3.1.	Legal status/acts/laws in the Dutch.....	3
3.2.	EMCDDA Notifications of 6-APB	4
4.	Photographs of the substance	4
4.1.	Images used in the marketing of the product on the web shops the compound was purchased	4
4.2.	Photograph of the substance purchased for laboratory analysis:.....	4
5.	Chemistry	5
5.1.	Chemical Abstracts Service (CAS) registry number.....	5
5.2.	Chemical information: other chemical names or variants.....	5
5.3.	Structure (picture of structural formula)	5
5.4.	Molecular formula	5
5.5.	Molecular Weight	5
5.6.	Structural comparison with a related substance:.....	5
6.	Analytical composition: results of substance analysis carried out on samples purchased online	6
6.1.	Details of laboratory analysis technique used	6
7.	Price and marketing strategies on Dutch web shops selling 6-APB:.....	6
8.	Law enforcement and health data.....	7
8.1.	Number of law enforcement seizures in the Netherlands in 2013/2014	7
8.2.	EMCDDA health alerts in the Netherlands	7

8.3.	Confirmed deaths and acute cases reported in the Netherlands.....	7
9.	User experiences of the substance: results from an analysis of discussions in 4 Dutch Drug Forums.....	7
9.1.	Dosage specified by drug forum users.....	7
9.1.1.	Initial Dosing.....	7
9.1.2.	Boosting	7
9.1.3.	Threshold	8
9.1.4.	Light.....	8
9.1.5.	Common.....	8
9.1.6.	Strong.....	8
9.2.	Duration of 6-APB reported by forum users.....	8
9.2.1.	Onset	8
9.2.2.	Coming up	8
9.2.3.	Plateau	8
9.2.4.	Coming down	8
9.2.5.	After effects (n =)	8
9.2.6.	Hangover/Day after	9
9.3.	Effects of 4-FA reported by forum users.....	9
9.3.1.	physical effects.....	9
9.3.2.	psychological effects	9
9.3.3.	sought	9
9.3.4.	desired.....	9
9.3.5.	undesired	9
9.3.6.	Tolerance.....	10
9.4.	Route of administration (ROA)	10
9.4.1.	Ingestion.....	10
9.4.2.	Inhalation	10
9.4.3.	Injection	10
9.4.4.	Rectal.....	10
9.4.5.	Snorting.....	10
9.4.6.	Sublingual.....	10
9.5.	Other substances referred to when discussing 6-APB.....	10
9.5.1.	Referred to in comparing the effects.....	10
9.5.2.	Referred to as increasing the effects	10
9.5.3.	Referred to in managing come down	10
9.5.4.	Other substance discussed in the same episode/combo	11
9.5.5.	Referred to as an agonist/ antagonist	11
9.6.	Appearance and preparation	11
9.7.	Context of consumption use.....	11
9.8.	User's views and experiences on the online market use.....	11
9.8.1.	Accessibility	11
9.8.2.	Legality	11
9.8.3.	Price	11
9.8.4.	Quality purchase	11
9.8.5.	Quantity purchase.....	12
9.9.	Advice provided by online peers.....	12
9.9.1.	Advice.....	12

9.9.2.	Fridge	12
9.9.3.	Warning.....	12
10.	Information gets from the Dutch on line survey conducted under the workstream3	12
10.1.	Unpleasant feelings.....	12
10.2.	Intended effects	13
10.3.	Route of administration	13
10.4.	Setting of use	14

1. Substance name(s)

1.1. Chemical name

6-(2-aminopropyl) benzofuran or 1-benzofuran-6-ylpropan-2-amine

1.2. Other names (e.g. popular/street/slang name(s): Benzofury

- The EMCDDA's EDND (2014) also refers to this substance as 6-(2-aminopropyl)benzofuran
- Dutch forum activity suggests users also referred to 6-APB.
- Compound sold as 6-APB in Dutch based web shops.

1.3. Branded products:

Dutch drug forum analysis found that users purchased a number of brands which contained 6-APB.

2. Classification and effect

2.1. EMCDDA substance group classification

Arylalkylamine

2.2. Substance analysis results

All 6-APB samples were confirmed through the analysis of the compound test obtained through our regular testing system at DIMS.

2.3. Dutch drug forum monitoring

Dutch drug forum monitoring suggests that from 2013 onwards, 1022 forum posts in 4 selected fora covered this substance.

2.4. Dutch web shops marketing

The Dutch web shops analysed within the I-TREND project advertised 6-APB as 6-APB or Benzo Fury.

3. Legal status and identification of the substance

3.1. Legal status/acts/laws in the Dutch

Presently 6-APB is not under any law. 6-APB was under the Medicine Act, but it was decided by the High Court that NPS can no longer be addressed under this law, hence 6-APB is presently free to use, sell or manufacture in Dutch.

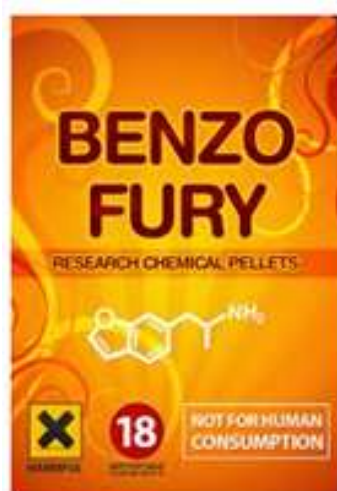
3.2.EMCDDA Notifications of 6-APB

- 6-APB was first reported at the European level by Hungarian authorities and notified by the EMCDDA in 2011
- 6-APB was first reported by the Dutch National Focal Point in 2012
- 6-APB has been reported to the EMCDDA by the following European countries:

Country	Dates
Hungary	27-6-2011
Sweden	27-6-2011
Norway	12-1-2012
Germany	17-2-2012
Croatia	16-11-2012
Denmark	7-2-2013
Italy	12-8-2013

4. Photographs of the substance

4.1.Images used in the marketing of the product on the web shops the compound was purchased



4.2.Photograph of the substance purchased for laboratory analysis:



5. Chemistry

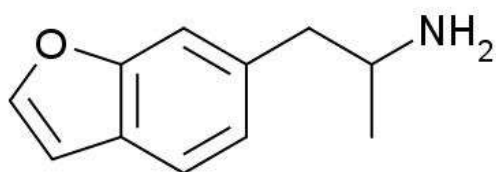
5.1. Chemical Abstracts Service (CAS) registry number

286834-85-3

5.2. Chemical information: other chemical names or variants

6-APB is a white powder. It bears close resemblance to 5-APB and both substances are in fact often found in Dutch samples obtained from the internet.

5.3. Structure (picture of structural formula)



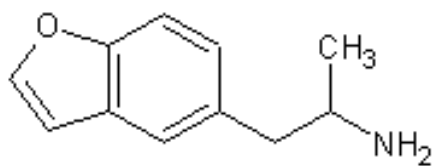
5.4. Molecular formula

$C_{11}H_{13}NO$

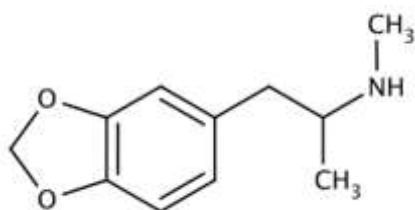
5.5. Molecular Weight

175.23 g/mol

5.6. Structural comparison with a related substance:



5-APB



6. Analytical composition: results of substance analysis carried out on samples purchased online

6.1. Details of laboratory analysis technique used

According to the I-TREND methodology used for the workstream 2 (See dedicated online reports), a list of web shops was set up. Among them, at least 4 with the best ranking on the Internet were selected for further investigation. Their content was scanned.

For the Netherlands, 6 samples were handed in at the DIMS that were bought as 6-APB. One sample was handed in that was bought as 5-APB and one sample that was bought as 5-EAPB.

The techniques used for analysis were: LC-DAD /GC-MS /Calibration curve (9 points) for quantification.

Webshop	Country (package origin)	Form	Substance named on package/webshop	Confirmed substances
Research chemical shop 1	NL	powder	6-APB	6 APB/ 5-APB
Research chemical shop 2	NL	powder	6-APB	5-APB
Research chemical shop 3	UK	powder	Benzofury/ 5-APB	6-APB
Research chemical shop 4	NL	powder	6-APB	6-APB/ 5-APB
Commercial shop 1	NL	powder	6-APB	6-APB/ 5-APB
Commercial shop 2	NL	Powder	6-APB	6-APB/ 5-APB
Darkweb market place	NL	Powder	6-APB	MDPV
Research chemical shop 3	UK	Powder	5-EAPB	5-APB

Analysis results confirm that 6-APB was present in 4 samples obtained as 6-APB. In the other two, something else was present. In one sample obtained as 5-APB, 6-APB was present instead. And in the one sample obtained as 5-EAPB it was 5-APB instead. Mean concentration 6-APB was 36.5% (sd.= 6.) (5 samples analysed)

7. Price and marketing strategies on Dutch web shops selling 6-APB:

Euro	Quantity

Minimum price	15	1 gr
Maximum price	30	1 gr

8. Law enforcement and health data

8.1. Number of law enforcement seizures in the Netherlands in 2013/2014

6-APB has been seized 5 times in 2014. No seizures have been reported in 2013.

8.2. EMCDDA health alerts in the Netherlands

There have been no EMCDDA Alerts for 6-APB in the Netherlands.

8.3. Confirmed deaths and acute cases reported in the Netherlands

In the UK, two fatalities have been reported in 2012.

In the Netherlands, no fatalities have been reported. The national poisoning information centre has reported some casualties with 6-APB in 2013, in most cases 6-APB was one of many substances reported and only one mono-intoxication was reported with 5-APB/6-APB¹

9. User experiences of the substance: results from an analysis of discussions in 4 Dutch Drug Forums

The information below is based on the analysis of 4 Dutch drug forums containing 1022 posts on 6-APB since January 2013 in 4 selected fora.

9.1. Dosage specified by drug forum users

(4 sources, 52 references)

6-APB is available in pellets (125 mg) and in powder form

9.1.1. Initial Dosing

(4 sources, 12 references)

Many forum member report an initial dose between 100 and 140 mg 6APB. A pellet consists of 125 mg , and this is often used as staring dose, after which some may redoes around 50 mg after 3-4 hours.

9.1.2. Boosting

(4 sources, 19 references)

Users redose, but usually they take an appropriate initial dose, afte which they may redose after 3-5 hours, but a lower dose than the initial one, e.g. 130 + 50. The effects of the redose are often very strong, and the effects endure for another 4-5 hours. Sleeping after redosing is considered very difficult, if not impossible.

¹ Hondebrink, L.; Nugteren-van Lonkhuyzen, J.J.; Gouwe, D. van der; Brunt, T.M. (2015). Monitoring new psychoactive substances (NPS) in The Netherlands: Data from the drug market and the Poisons Information Centre. Drug and Alcohol Dependence. 147: 109-115

9.1.3. Threshold

(0 sources, 0 references)
Some initial effects appear after taking 30-50 mg of 6-APB.

9.1.4. Light

(3 sources, 5 references)
A dose <100 mg, especially below 75 mg can be considered a light dose.

9.1.5. Common

(4 sources, 32 references)
pellets: 125 mg
powder: 100- 140 mg

9.1.6. Strong

(1 source, 18 references)
A dose above 175-200 mg can be considered a high dose.

9.2. Duration of 6-APB reported by forum users

(4 sources, 40 references)
Total effects endure for 6-8 hours, the peak lasts 3-4 hours.
1 pellet is good enough for a whole night of partying (6-8 hours). In case of redosing, the effects endure many hours longer.

9.2.1. Onset

(3 sources, 10 references)
The first effects are usually felt between 30-60 minutes, shivers are felt.

9.2.2. Coming up

(3 sources, 18 references)
After 60 min the effects really are noticeable, they come very slowly in waves that endure longer and longer. Euphoric feeling similar to (first time ecstasy/MDMA) is coming up, and this takes another hour to be in full effect. After 2 hours one still has the ability to manage between complete 'craziness' and next minute being able to talk sensible while remaining euphoric. You can be in charge of what and how you feel and act. Symptoms: trembling yars, rolling eyes, strong bodyload. The come up is reported sometimes to be very uneasy, awkward and unsettling, a mental confusion including shivers.

9.2.3. Plateau

(3 sources, 15 references)
The plateau is reported to last very long, if compared to ecstasy or other substances. It may take 3-5 hours, in which you remain in control over the substance: no bruxism, not looking very druggy.

9.2.4. Coming down

(3 sources, 14 references)
After 4-5 hours of peaks, the effects slowly diminish and effects come and go in waves. Very gradually the substance loses its effects. The coming down may also take several hour (2-3 hours).

9.2.5. After effects (n =)

(4 sources, 13 references)

The after effects includes: tiredness, headaches are reported, as well as feverish feeling, general uncomfortable feeling, nausea. it is not clear how long they last, but usually in this period people fall asleep, or make efforts to do so.

9.2.6. Hangover/Day after

(3 sources, 10 references) Many user report feelings of hangover, and especially headaches the day after and this may endure several days.

9.3. Effects of 4-FA reported by forum users

(4 sources, 54 references)

9.3.1. physical effects

(49 sources, 249 references)

(4 sources, 35 references)

warm feeling, alertness, energetic.

9.3.2. psychological effects

(49 sources, 247 references)

4 sources, 36 references)

Euphoric state of mind that lasts many hours, general feeling of wellbeing

9.3.3. sought

(19 sources, 49 references)

(3 sources, 10 references)

9.3.4. desired

(38 sources, 201 references)

(4 sources, 29 references)

Euphoric feeling, stimulant effect, people become very talkative/ social, remain clear in the head and the gradual coming down is also appreciated (no sudden crash as is the case with ecstasy). Typical for 6-APB may be that it is not an autonomous stimulant: effects change according to your behaviour: while dancing you feel waves of stimulation across your body, but when you sit down and relax the effects are felt more subtle.

9.3.5. undesired

(42 sources, 257 references)

(3 sources, 35 references)

Strong headaches, especially the day(s) following the 6-APB intake; loss of ability to sleep (after intake of a single dose it may takes up to 10 hours before you are able to sleep); Some persons mention the unpleasant hallucinations at the end of the trip; strong hangover the day after (stronger than e.g. MDMA); long time before the substance starts to work; day after problem with yar/ bruxism are reported as well as eye flashes. Empty head, no energy, no appetite, mixed emotions headaches are often reported, general weakness, problems with bright light, vagueness, visual problems, dizziness in the day or days after intake.

See also workstream 3 online report and dedicated section below.

9.3.6. Tolerance

(1 source, 3 references) No specific tolerance to the effects of 6-apb is mentioned.

9.4.Route of administration (ROA)

(2 sources, 3 references)

The pellets are swallowed, the powder can be snorted but this is a very harsh experience (because of its texture, it goes straight to the lungs, thereby causing coughing) and so many take it in a capsule or in a cigarette paper, or occasionally mix it in a drink and thus ingest. Capsules are directly bought, or prepared by users themselves.

9.4.1. Ingestion

(24 sources, 56 references) (2 sources, 3 references)

9.4.2. Inhalation

(8 sources, 19 references) (0 sources, 0 references)

9.4.3. Injection

(2 sources, 4 references)

9.4.4. Rectal

(0 sources, 0 references)

9.4.5. Snorting

(17 sources, 48 references)

9.4.6. Sublingual

(3 sources, 3 references)

See also workstream 3 online report and dedicated section below.

9.5.Other substances referred to when discussing 6-APB

9.5.1. Referred to in comparing the effects

(3 sources, 14 references)
ecstasy/MDMA, 2C-B/ magic mushrooms ('6-APB is speed+ magic mushrooms')
If compared to ecstasy the effect of 6-APB is slightly less euphoric, one is more sharp/ clear in the head , more focus, time goes more slowly and you have much more energy if compared to ecstasy.
If compared to 4-FA, the effects are less clear and sharp.

9.5.2. Referred to as increasing the effects

(3 sources, 17 references)
ecstasy/MDMA/ 5-APB/ cannabis
Taking ecstasy after 6-APB even 4-5 hours after intake, doubles the effects of ecstasy
people warm for taking strong doses of MDMA/ ecstasy after taking 6-APB: dizzy, very, very energetic/ no euphoria, problems keeping balance, hangover
ecstasy after 6-APB feels like first time ever ecstasy, very strong effect, and people warm for this.

9.5.3. Referred to in managing come down

(1 source, 3 references)
diazepam/ cannabis/ GHB

9.5.4. Other substance discussed in the same episode/combo

(3 sources, 11 references)
ecstasy/MDMA/ 5-APB/ 25I-NBOMe/ cannabis (it gives hallucinations)/ speed

9.5.5. Referred to as an agonist/ antagonist

9.6. Appearance and preparation

(3 sources, 13 references)

6-APB is available in pellets (125 mg) in various colours (blue, brown, pink) and in powder, capsules. The powder is fluffy and sticky.

No additional information found.

9.7. Context of consumption use

Because of its effects and its duration, 6-APB is a typical club drug and is taken of during parties and festivals.

See also appendix WS3 below

9.8. User's views and experiences on the online market use

Nothing specific to be mentioned here (check)

(3 sources, 30 references)

9.8.1. Accessibility

(10 sources, 29 references)

(2 sources, 13 references)
6-APB is not always available

9.8.2. Legality

(10 sources, 20 references)

(2 sources, 8 references)

users discuss the legal status of 6-APB and some know that if sold as research chemical not for human consumption it is buy and sell; users expect however 6-APB to become illegal soon.

9.8.3. Price

(11 sources, 14 references)
(1 source, 1 reference)

9.8.4. Quality purchase

(12 sources, 41 references)

(2 source, 19 references)

There are discussion about differences in effect between various pellets and between pellets and powder; often 5-APB sold as 6-APB or 6-APB contains both 5 and 6-APB; differences in effects between samples bought at the same vendor; other substances being sold under the name of 6-APB(e.g. MXE sold as 6-APB).

9.8.5. Quantity purchase

(5 sources, 6 references) (1 source, 2 references) Relationship with shop (14 sources, 33 references)
(2 sources, 16 references)

9.9. Advice provided by online peers

(3 sources, 11 references)

6-apb doesn't just contain 6-apb but quite often other substances such as 5-apb

9.9.1. Advice

(15 sources, 29 references)

(3 sources, 9 references)

9.9.2. Fridge

(14 sources, 32 references)

(3 sources, 8 references)

9.9.3. Warning

(11 sources, 24 references)

(1 source, 4 references)

Advice is to have 6-APB tested always before intake as often the product sold as 6-APB contains other substances.

to wait several hours before redosing as 6-apb needs a long time to kick in;
to be cautious when taking ecstasy after 6-APB as the effect of the ecstasy will be very heavy;
to take enough pause between intakes of 6-APB in order to let the brain recover fully;

APPENDIX

10. Information gets from the Dutch on line survey conducted under the workstream3

10.1. Unpleasant feelings

Q. 13b. Did you feel anything unpleasant after you used 6-APB? What were the unpleasant feelings after you used the substance? (*several answers are possible*)

	Frequency	Percent
No effect	2	8.0
unpleasant, intensive hallucinations, delusions	2	8.0
strong craving to use more	2	8.0
depression, dejection	1	4.0
strong paranoia, fear, anxiety	3	12.0
aggression	-	0.0
extreme agitation and excitement, sleeplessness	1	4.0

fatigue, exhaustion, sleepiness	2	8.0
muscle ache, cramps, jaw clenching	3	12.0
tremors	2	8.0
seizures	-	0.0
could not control my muscle, I have problems with moving	2	8.0
headache	3	12.0
nausea, vomiting	3	12.0
strongly increased heart rate, palpitation, chest pain	5	20.0
breathing difficulty, dyspnea	1	4.0
sweating	9	36.0
overheating	-	-
dehydration and/or diarrhea	-	-
problems of sight	2	8.0
itches , skin changes , changed colour, spots, blisters, rash etc.	-	0.0
other	-	-

Table 1 Description of unpleasant feeling after use of NPS

10.2. Intended effects

Q. 11b. What are the most important intended effects that you seek when you used 6-APB? (*several answers are possible*)

	Frequency	Percent
To bond with others, to socialize	6	24.0
To get high	11	44.0
To provides me with energy (sexual performances not included)	2	8.0
To improve sexual intercourse	-	-
To increase the positive effects of another drug	2	8.0
To reduce the negative effects of another drug	1	4.0
To modify perception	15	60.0
To soothe pain	-	-
To escape reality	2	8.0
To allay or alleviate anxiety	1	4.0
To fight sleeplessness	-	-
To fight tiredness	2	8.0
To relax	10	40.0
To stimulate the brain activity for learning or work	-	-
others	2	8.0

Table 2 Indented effects

10.3. Route of administration

Q. 10b. Last time when using 6-APB, what were the typical ways of administration for you? (*several answers are possible*)

	Frequency	Percent
Smoking	-	0.0

Waterpipe	-	0.0
Bong	-	0.0
Vaporizer	-	0.0
Chasing the dragon	-	0.0
Sublingual	-	0.0
Ingestion	22	88.0
Snorting	6	24.0
Rectal	1	4.0
Injection	-	0.0
Sublingual	-	-

Table 3 The typical way of administration

10.4. Setting of use

Q. 9b. Last time when using 6-APB, what were circumstances? (*several answers are possible*)

	Frequency	Percent
Alone at home	3	12.5
With friends at your or their home	6	25.0
Alone in a club, pub or at a party	-	-
With friends in a club, pub or at a party	15	62.5
Alone outside/in the countryside	-	-
With friends outside/in the countryside	-	-
At school/work	-	-
Other circumstances	-	-

Table 4 The circumstances of last NPS used