
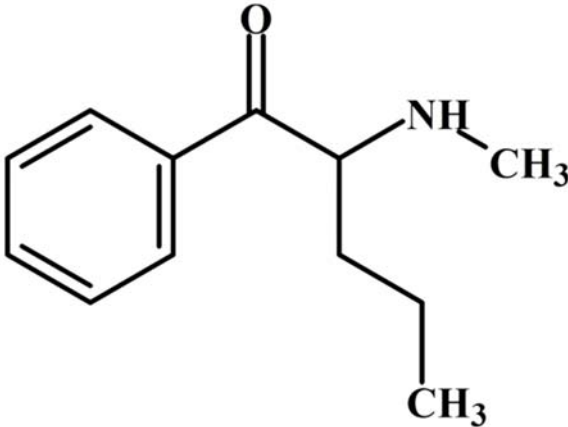


	Substance briefing: Pentedrone
	This technical folder provides information on Pentedrone . The information provided is based on a number of existing data sources and work undertaken as part of the I-TREND project. Research informing the folder includes an analysis of user discussions on popular Czech drug forums, an analysis of marketing on popular Czech, e.g. English speaking web shops selling the substance, and scientific laboratory analysis of the compound through test purchasing of the substance from Czech web shops.
1	Substance name(s)
1.1	Chemical name: 1-phenyl-2-(methylamino)pentan-1-one 2-methylamino-1-phenyl-1-pentanone
1.2	Popular/street/slangname(s): Pentedrone, pentedron
1.3	Other name(s): 2-(methylamino)-1-phenylpentan-1-one, methylamino-valerophenone, fenylacetopropylmethylamine, β -ethyl-methcathinone
1.4	Branded products in which the substance was found following analysis:
1.5	Branded products advertised as containing the substance on web shops: Czech web shop analysis found no web shop advertised branded products as containing <i>Pentedrone</i> substance.
1.6	Branded products discussed as containing the substance on drug forums: No branded products were discussed as containing Pentedrone.
2.	Classification and effect

2.1	<p>Classification and effect confirmed through substance analysis</p> <ul style="list-style-type: none"> • Cathinones
2.2	<p>Classification and effect referred to by users of drug forums</p> <ul style="list-style-type: none"> • Cathinones
2.3	<p>Classification and effect used in the marketing of the product on web shops</p> <p>The <i>Pentedrone</i> was classified as a research chemical according to an analysis of Czech web shops in three web shops. The web shops' analysis found two web shops selling <i>Pentedrone</i> under a 'stimulant' category. In addition three web shops classified <i>Pentedrone</i> more specifically as a substance of cathinone class.</p> <p>Direct Information about effects was provided by no web shop. Two web shops used indirect information about effects and described <i>Pentedrone</i> as a substance 'similar to Methcathinone.' One web shop described <i>Pentedrone</i> as a substance 'similar to Mephedrone.'</p> <p>NB: See reference list for sources related to classification (e.g. pharmacological studies, case studies, etc...)</p>
3	<p>Potential risks associated with use of the substance</p>
3.1	<p>General risks associated with the substance: described effects similar to MDPV + cocaine; presumed rather high risk of addiction (because of structure resemblance with MDPV); risky combination with inhibitors of MAO; increased risks in people with cardiovascular diseases</p> <p>Unpleasant psychological effects:</p> <ul style="list-style-type: none"> • Worsening of concentration and short term memory, anxiety and depression • Risk of panic reactions or paranoia. <p>Unpleasant physical effects:</p> <ul style="list-style-type: none"> • When combined with other stimulants toxicity for cardiovascular system is higher • Rarely a blue discolouration of fingers can appear • Frequently irritation of mucous membrane at site of administration appears (nose burn and tingling analogous to cocaine use) • Toxicity data is not available • Combination with monoaminoxidase inhibitors could be risky/dangerous (IMAO) <p>Assumed risks due to similarity to other substances:</p>

	<ul style="list-style-type: none"> • Similarity to MDPV can be assumed, therefore unpleasant effects can involve: thirst, massive sweating, dehydration, palpitation, toxic psychosis, after effect (fatigue) • Dependence potential relatively high (considering similarity to MDPV) 								
3.2	<p>Users point of view on the substance and risk perception</p> <p>Pentedrone was rarely discussed on Czech forums, therefore risk perception of users could not be assumed from this source.</p>								
4	Legal status and identification of the substance								
4.1	Legal status/acts/laws in Czech Republic. There is no control according to Czech law however there is ongoing legislative process actually.								
4.2	<p>List of first identification and reporting to the EMCDDA by a national Reitox Focal Points</p> <table border="1"> <thead> <tr> <th>Country</th> <th>Dates</th> </tr> </thead> <tbody> <tr> <td>Czech Republic in 2010</td> <td>12 kg seizure</td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </tbody> </table>	Country	Dates	Czech Republic in 2010	12 kg seizure				
Country	Dates								
Czech Republic in 2010	12 kg seizure								
5	Photographs of the substance								
5.1	<p>Photograph of the substances purchased for laboratory analysis:</p> 								
5.2	Photo/Printscreen of the product from the webshop:								
6	Chemistry								
6.1	Chemical Abstracts Service (CAS) registry number: CAS 879669-95-1								
6.2	Chemical information:								

	Structural isomer of 4-methylethcathinone.																														
6.2	Structure (picture of structural formula) 																														
6.3	Molecular mass 191,27 g/mol																														
6.4	Structural comparison with a related substance synthetic cathinon; structure resemblance with MDPV																														
6.5	(Insert pictures of developed formula of this original substance)																														
7	Analytical composition: results of substance analysis carried out from the sample purchased online.																														
7.1	<p>Details of laboratory analysis technique used:</p> <p>Mean (%) = (sd.= .) (N sample analysed)</p> <table border="1"> <thead> <tr> <th>Webshop</th> <th>Country (IP address)</th> <th>Country (package origin)</th> <th>Form</th> <th>Substance named on package/webshop</th> <th>Confirmed substances</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td></td> <td></td> <td>Benzofury</td> <td>6 APB</td> </tr> <tr> <td>1</td> <td></td> <td></td> <td></td> <td>Mephedrone</td> <td>Mephedrone</td> </tr> <tr> <td>2</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Webshop	Country (IP address)	Country (package origin)	Form	Substance named on package/webshop	Confirmed substances	1				Benzofury	6 APB	1				Mephedrone	Mephedrone	2						2					
Webshop	Country (IP address)	Country (package origin)	Form	Substance named on package/webshop	Confirmed substances																										
1				Benzofury	6 APB																										
1				Mephedrone	Mephedrone																										
2																															
2																															
7.2	Details of laboratory analysis technique used:																														
7.3	<p>Substance marketing details</p> <table border="1"> <tr> <td>Powder/Crystal</td> <td>Euros</td> </tr> </table>	Powder/Crystal	Euros																												
Powder/Crystal	Euros																														

	<table border="1"> <tr> <td>minimum price per gram</td> <td>€12.7</td> </tr> <tr> <td>maximum price per gram</td> <td>€20</td> </tr> <tr> <td>mode price per gram</td> <td>€20</td> </tr> <tr> <td>mean price per gram</td> <td>€17.14</td> </tr> </table> <p>The price marketing for <i>Pentedrone</i> substance was provided by one web shop. The discount on offer was applicable only for some sizes of <i>Pentedrone</i>.</p>	minimum price per gram	€12.7	maximum price per gram	€20	mode price per gram	€20	mean price per gram	€17.14
minimum price per gram	€12.7								
maximum price per gram	€20								
mode price per gram	€20								
mean price per gram	€17.14								
8	Price and marketing strategies on Czech web shops selling the substance								
8.1									
8.2	<p>Description of availability and marketing strategies on Czech web shops selling the substance: The <i>Pentedrone</i> was available to purchase (28.5.2015) in 5 web shops of 5 web shops where substance was found¹.</p> <p>Czech web shop marketing analysis indicated one shop which offered discount for orders. The shop offered two discounts. First discount was for new customers only. The average level of first discount was 25%. Second discount was for all customers and all orders. The average level of first discount was 20%.</p> <p>Free gift was not promoted by any web shop.</p> <p>Free shipping was offering on one web shop for orders over €100. The guarantee of “free reship” for orders was provided by three web shops. The same day dispatch was supported by two web shops.</p> <p>Information about ‘new’ products was mentioned on four web shops.</p> <p>Loyalty program or Reward Point program for customers was available on one web shop.</p>								

¹ The total number of web shops selling new synthetic drugs for CZ (16.3.2015) was 33. (For detail information about methodology of monitoring and selecting the web shops see methodology on <http://www.i-trend.eu/>).

For the marketing analysis we chose 15% of the most popular web shops from CZ list of shops. The shops without prices for products and shops which provide just bulk/wholesale order were removed from our selection. In addition another 6 web shops, previously chosen for the purchase of substances, were added to the marketing analysis. The final number of web shops used for analysis was 11. For latter analysis, we use only shops where product was available.

	Customer reviews was supported on four web shops.								
8.3	Type of Czech websites selling the product <table border="1"> <thead> <tr> <th></th> <th>No of shops (28.5.2015)</th> </tr> </thead> <tbody> <tr> <td>RC shops</td> <td>5</td> </tr> <tr> <td>Commercial shops</td> <td>0</td> </tr> <tr> <td>Other</td> <td>0</td> </tr> </tbody> </table>		No of shops (28.5.2015)	RC shops	5	Commercial shops	0	Other	0
	No of shops (28.5.2015)								
RC shops	5								
Commercial shops	0								
Other	0								
8.4	Number of webshops available for Czech Republic with supposed country of origin in the EU selling the products <table border="1"> <thead> <tr> <th></th> <th>No of web shops</th> </tr> </thead> <tbody> <tr> <td>CZ address or phone number on web sites</td> <td>1</td> </tr> <tr> <td>Web shops with CZ IP code</td> <td>0</td> </tr> <tr> <td>Web shops <i>with supposed country of origin in the EU²</i></td> <td>5</td> </tr> </tbody> </table>		No of web shops	CZ address or phone number on web sites	1	Web shops with CZ IP code	0	Web shops <i>with supposed country of origin in the EU²</i>	5
	No of web shops								
CZ address or phone number on web sites	1								
Web shops with CZ IP code	0								
Web shops <i>with supposed country of origin in the EU²</i>	5								
9	Law enforcement and health data								
9.1	Number of law enforcement seizures in Czech Republic in 2013/2014. Seizure 2/10,63 g in 2013 and none reported in 2014 from Czech Republic.								
9.2	EMCDDA health alerts in Czech Republic. EMCDDA health alerts in Czech Republic were not even once.								
9.2	Confirmed deaths and acute cases reported in Czech Republic. No death and no acute cases reported from Czech Republic.								
10	<u>User experiences of the substance: results from an analysis of discussions Czech Drug Forums</u> Methodological comment: The information below is based on an analysis of 2 drug forums, 6 forum posts and 4 forum users.								
10.1	Dosage specified by drug forum users (n = number of quotations)								

² Including web shops with CZ address or phone number on web sites

	<ul style="list-style-type: none"> • <i>Initial Dosing: As initial “weak” dosing amount of 50-70mg was mentioned on drug forums. Perceived as relatively potent. (n= 1)</i> • <i>Boosting: There was no discussion on boosting dose (n= 0)</i> • <i>Threshold: There was no discussion on threshold dose (n= 0)</i> • <i>Light: There was no discussion on light dose (n= 0)</i> • <i>Common: As common dose that should deliver desired effects 100mg was mentioned. Overall described as relatively potent, 50 mgs also mentioned by another user as sufficient dose to “get high”. Amounts could vary due to different tolerance of users or different quality of the product. (n= 2)</i> • <i>Strong: There was no discussion on strong dose (n= 0)</i>
<p>10.2</p>	<p>Duration</p> <ul style="list-style-type: none"> • <i>Onset: There was no discussion on onset time (n =0)</i> • <i>Coming up: 1-1,5 hours were estimated as time when effects were coming up until they reached the plateau(n =1)</i> • <i>Plateau: There was no discussion on plateau (n =0)</i> • <i>Coming down: There was no discussion on coming down (n =0)</i> • <i>After effects: After effects can be perceived individually. One user described that fatigue and depression could be lasting up to two days, another user was pleased by absence of unpleasant after effects. (n =2)</i> • <i>Hangover/Day after : Fatigue and depression lasting for one or two days (n =1)</i>
<p>10.3</p>	<p>Effects reported by forum users (n = 4)</p> <p><i>Physical effects</i></p> <ul style="list-style-type: none"> ○ <i>Cardiovascular problems</i> ○ <i>Stimulation</i> ○ <i>Sweating of palms</i> <p><i>Psychological effects</i></p> <ul style="list-style-type: none"> ○ <i>Stimulation without much euphoria</i> ○ <i>Depressions</i> ○ <i>Talkativeness</i> ○ <i>Better space orientation</i> ○ <i>Better music appreciation</i> <p><i>Sought/expected</i></p> <ul style="list-style-type: none"> ○ <i>Not discussed in Czech forums</i> <p><i>Desired</i></p> <ul style="list-style-type: none"> ○ <i>Stimulation, talkativeness</i> <p><i>Undesired</i></p> <ul style="list-style-type: none"> ○ <i>Cardiovascular problems</i>

	<ul style="list-style-type: none"> ○ <i>Depressions</i>
10.4	<p>Tolerance <i>Tolerance was not discussed in Czech drug forums.</i></p>
10.5	<p>Route of administration (n =2)</p> <ul style="list-style-type: none"> • <i>Ingestion: One user describes ingestion of substance (n =1)</i> • <i>Snorting: One user describes snorting of substance (n =1)</i> • <i>Rectal: This ROA of pentedrone was not mentioned in Czech drug forums (n =0)</i> • <i>Inhalation or insufflation: This ROA of pentedrone was not mentioned in Czech drug forums (n =0)</i>
10.6	<p>Others substances referred to in discussion about pentedrone:</p> <ul style="list-style-type: none"> • <i>Referred to in comparing the effects : Pentedrone effects compared to Ethylphenidate, potency compared to methamphetamine, described as hardly recognisable form effects of MPA (n =3)</i> • <i>Referred to as increasing the effects: Not mentioned on Czech drug forums (n =0)</i> • <i>Referred to in managing come down: Not mentioned on Czech drug forums (n =0)</i> • <i>Other substance discussed in the same episode/combo: One user reports use of Ethylphenidate and Pentedrone combo (3:1 ratio) with euphoric effects (n =1)</i> • <i>Referred to as an agonist/ antagonist : Not mentioned on Czech drug forums (n =0)</i>
10.7	<p>Appearance and preparation (n =0) Not mentioned on Czech drug forums (n =0)</p>
10.8	<p>Patterns of use/Frequency of use</p> <ul style="list-style-type: none"> • <i>100 mgs twice a week use reported by one of users (n=1)</i> • <i>Other reports did not give evidence about frequency of use</i>

10.9	Context of consumption <ul style="list-style-type: none"> used alone at home(n=1)
10.10	User's views and experiences on the online market <i>Forum members mostly discuss reliability of shops and quality of pentedrone they offer. Particular one Czech online shop is seen as selling better quality products (incl. pentedrone) than one particular polish online shop with Czech interface. The user claims that content of the polish shop's products is not stable and products do not contain what they promote to contain. User is satisfied with quality of the Czech shop.</i>
10.11	Harm reduction Message Not mentioned on Czech drug forums (n =0)
10.12	User profile <i>Forum users discussing pentedrone were mostly looking for a reliable supplier of this substance and their trip reports were very short. The reports mostly served as confirmation whether it is a good choice to buy this particular chemical. Effects, experiences and dosages were discussed very briefly.</i>
11	Useful resources and literature <ul style="list-style-type: none"> http://cs.wikipedia.org/ http://en.wikipedia.org/ http://www.emcdda.europa.eu/ NSD zaostreno200404_syntdrogy_web.pdf http://www.drogy-info.cz/