

Emerging Designer Drug Monograph

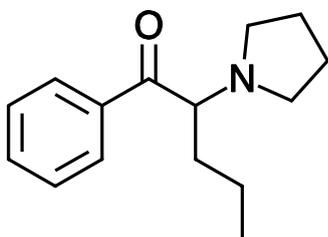
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Drug Name: Alpha-PVP

Synonyms: alpha-pyrrolidinopentiophenone; alpha-pyrrolidinovalerophenone; (RS)-1-phenyl-2-(1-pyrrolidinyl)-1-pentanone; all above as hydrochloride

Structure:



Formula: C₁₅H₂₁NO

Molecular Weight: 231.3

Pharmacological Drug Class: Stimulant, monoamine reuptake inhibitor (Meltzer et al, 2006).
Pharmacology of related drugs reviewed in Maurer et al, 2004.

Metabolism: hydroxyalkyl-PVP, hydroxyphenyl-PVP, di-hydroxyphenyl-PVP.

Blood Concentrations: Three cases of drug related deaths are reported by Richards-Waugh et al, (2013), with concentrations of 0.1, 0.5 and 0.29mg/L in three deaths where the drug was found to be the cause or a significant contributory cause.

Effects and Toxicity: Alpha-PVP is a stimulant drug chemically related to MDPV (both are pyrovalerones). No first-hand accounts of effects in peer reviewed literature. User reports indicate that it can be swallowed, insufflated, administered sublingually, and vaporized (see www.erowid.org). Presence (no concentrations) is reported in suicides, polydrug overdoses, and suicides (Marinetti and Antonides, 2013). Three cases of drug related deaths are reported by Richards-Waugh et al, (2013), with concentrations of 0.1, 0.5 and 0.29mg/L in three deaths where the drug was found to be the cause or a significant contributory cause. One case includes history of violent aggressive behaviour.

Analysis: This is a simple basic drug, with a low molecular weight and appears to extract along with amphetamines and other basic drugs, and chromatographs well by GCMS without derivatization. Analytical data are available in the references cited in the Forendex database and on SWGDRUG monographs. Methodological approach (GCMS) is described in Marinetti and Antonides, 2013.

References:

1. Maurer, H. H., Kraemer, T., Springer, D., Staack, R. F. (2004) Chemistry, pharmacology, toxicology, and hepatic metabolism of designer drugs of the amphetamine (ecstasy), piperazine, and pyrrolidinophenone types: a synopsis. *Therapeutic Drug Monitoring*, 26(2), 127 - 131.
2. Meltzer, P. C., Butler, D., Deschamps, J. R., Madras, B. K. (2006) 1-(4-Methylphenyl)-2-pyrrolidin-1-yl-pentan-1-one (Pyrovalerone) analogues: a promising class of monoamine uptake inhibitors. *Journal of Medical Chemistry*, 49(4), 1420 - 1432.
3. Marinetti, L. J. (2013) Antonides HM. Analysis of synthetic cathinones commonly found in bath salts in human performance and postmortem toxicology: method development, drug distribution and interpretation of results. *Journal of Analytical Toxicology*, 37(3), 135 - 146.
4. Richards-Waugh et al (2013) *AAFS Proceedings*, Abstract K16, Deaths Involving the Recreational Use of α -PVP (α -pyrrolidinopentiophenone). Washington, D.C.
<http://www.aafs.org/sites/default/files/pdf/ProceedingsWashingtonDC2013.pdf>

SWGDRUG Monograph:

<http://www.swgdrug.org/Monographs/a-PVP.pdf>

Forendex Database:

<http://forendex.southernforensic.org/index.php/detail/index/1137>