

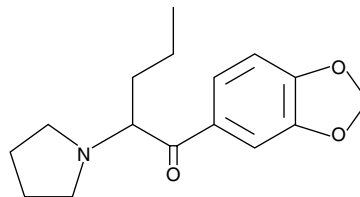
Product Information



3,4-Methylenedioxy Pyrovalerone

Item No. 10624

CAS Registry No.: 687603-66-3
Formal Name: 1-(1,3-benzodioxol-5-yl)-2-(1-pyrrolidinyl)-1-pentanone
Synonym: 3,4-MDPV
MF: C₁₆H₂₁NO₃
FW: 275.3
Purity: ≥98%
Stability: ≥1 year at -20°C
Supplied as: A solution in methanol
UV/Vis.: λ_{max}: 275, 231, 311 nm



Laboratory Procedures

For long term storage, we suggest that 3,4-methylenedioxy pyrovalerone (3,4-MDPV) be stored as supplied at -20°C. It should be stable for at least one year.

3,4-MDPV is supplied as a solution in methanol. To change the solvent, simply evaporate the methanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of 3,4-MDPV in these solvents is approximately 30 mg/ml.

3,4-MDPV is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methanol solution of 3,4-MDPV should be diluted with the aqueous buffer of choice. 3,4-MDPV has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Pyrovalerone (Item No. 10817) and its analogs are inhibitors of the transporters for certain monoamine neurotransmitters, including dopamine and norepinephrine, preventing their uptake.^{1,2} 3,4-MDPV is an analog of pyrovalerone which includes the 3,4-methylenedioxy moiety found on 3,4-methylenedioxymethamphetamine, a DEA Schedule I controlled substance. While its physiological, neurological, and toxicological actions have not been characterized, 3,4-MDPV has been reported by the DEA to be abused as a central nervous system stimulant.³ Its effective dose and chemical interactions are unknown, but it has been used alone and in combination with other stimulating compounds. Products containing 3,4-MDPV have been marketed in Europe and Australia; they have also been seized by law enforcement in several states.³ 3,4-MDPV and some of its metabolites have recently been characterized by spectroscopic analysis.⁴⁻⁷ 3,4-MDPV is to be used in the forensic analysis of samples that may contain this compound. This product, the free base of 3,4-MDPV, has superior solubility in organic solvents, compared to the hydrochloride salt (Item No. 10684).

References

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2. Meltzer, P.C., Butler, D., Deschamps, J.R., *et al. J. Med. Chem.* **49**(4), 1420-1432 (2006).
3. Drug Enforcement Admin. Office of Diversion Control Retrieved 2010, from http://www.deadiversion.usdoj.gov/drugs_concern/mdpv.pdf.
4. Westphal, F., Junge, T., Rosner, P., *et al. Forensic Sci. Int.* **190**, 1-8 (2009).
5. Meyer, M.R., Du, P., Schuster, F., *et al. [In Press] J. Mass Spectrom.* (2010).
6. Yohannan, J.C. and Bozenko, J.S. *Microgram Journal* **7** (1), 12-15 (2010).
7. Strano-Rossi, S., Cadwallader, A.B., de la Torre, X., *et al. Rapid Commun. Mass Spectrom.* **24**, 2706-2714 (2010).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/10624

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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