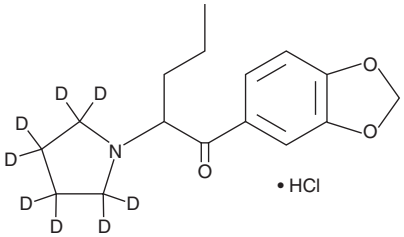
PRODUCT INFORMATION

3,4-Methylenedioxy Pyrovalerone-d_8 (hydrochloride)

Item No. 10679

CAS Registry No.: 1246820-09-6
Formal Name: 1-(1,3-benzodioxol-5-yl)-2-(1-pyrrolidinyl-d_8)-1-pentanone, monohydrochloride
Synonym: 3,4-MDPV-d_8
MF: $C_{16}H_{13}D_8NO_3$ • HCl
FW: 319.9
Chemical Purity: ≥98% (3,4-Methylenedioxy Pyrovalerone (hydrochloride))
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_8); ≤1% d_0
UV/Vis.: λ_{max}: 236, 283, 322 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥5 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Description

3,4-Methylenedioxy pyrovalerone-d_8 (3,4-MDPV-d_8) (hydrochloride) (Item No. 10679) is intended for use as an internal standard for the quantification of 3,4-MDPV (Item No. 10684) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

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 hydrochloride salt of 3,4-MDPV, has superior solubility in aqueous solvents, compared to the free base (Item No. 10624).

References

1. Heron, C., Costentin, J., and Bonnet, J.J. *Eur. J. Pharmacol.* **264(3)**, 391-398 (1994).
2. Meltzer, P.C., Butler, D., Deschamps, J.R., *et al. J. Med. Chem.* **49(4)**, 1420-1432 (2006).
3. Methylenedioxypyrovalerone (MDPV) (1-(1,3-Benzodioxol-5-yl)-2-(1-pyrrolidinyl)-1-pentanone]. Drug Enforcement Administration (2019).
4. Westphal, F., Junge, T., Rosner, P., *et al. Forensic Sci. Int.* **190(1-3)**, 1-8 (2009).
5. Meyer, M.R., Du, P., Schuster, F., *et al. J. Mass Spectrom.* **45(12)**, 1426-1442 (2010).
6. Yohannan, J.C. and Bozenko, J.S. *Microgram J.* **7(1)**, 12-15 (2010).
7. Strano-Rossi, S., Cadwallader, A.B., de la Torre, X., *et al. Rapid Commun. Mass Spectrom.* **24(18)**, 2706-2714 (2010).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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