Product Information

3,4-Methylenedioxy Pyrovalerone-d₈ (hydrochloride)
Item No. 10679

CAS Registry No.: 1246820-09-6
Formal Name: 1-(1,3-benzodioxol-5-yl)-2-(1-pyrrolidinyl-d₈)-1-pentanone, monohydrochloride
Synonym: 3,4-MDPV-d₈
MF: C₁₆H₁₃D₈NO₃ • HCl
FW: 319.9
Chemical Purity: ≥98% 3,4-Methylenedioxy Pyrovalerone (hydrochloride)

Deuteration
Incorporation: ≥99% deuterated forms (d₁- d₈); ≤1% d₀
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_max: 236, 283, 322 nm

Laboratory Procedures

3,4-Methylenedioxy pyrovalerone-d₈ (hydrochloride) (3,4-MDPV-d₈ (hydrochloride)) contains eight deuterium atoms at the 1-pyrrolidinyl position. It is intended for use as an internal standard for the quantification of 3,4-MDPV by GC- or LC-mass spectrometry (MS). For long term storage, we suggest that 3,4-MDPV-d₈ (hydrochloride) be stored as supplied at -20°C. It should be stable for at least two years.

3,4-MDPV-d₈ (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the 3,4-MDPV-d₈ (hydrochloride) in the solvent of choice. 3,4-MDPV-d₈ (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of 3,4-MDPV-d₈ (hydrochloride) in these solvents is approximately 1, 0.1, and 0.25 mg/ml in ethanol, DMSO and DMF, respectively.

3,4-MDPV-d₈ (hydrochloride) is used as an internal standard for the quantification of 3,4-MDPV by stable isotope dilution 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-methylenedioxyamphetamine, 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. The hydrochloride salt of 3,4-MDPV, has superior solubility in aqueous solvents, compared to the free base (Item No. 10624).

References

Related Products
For a list of related products please visit: www.caymanchem.com/catalog/10679

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. Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have any obligation or liability, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence. This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees. Buyer’s exclusive remedy and Cayman’s sole liability hereunder shall be limited to a refund of the purchase price, or at Cayman’s option, the replacement, at no cost to Buyer, of all material that does not meet our specifications.

For further details, please refer to our Warranty and Limitation of Remedy located on our website and in our catalog.