Drug Enforcement Administration
Diversion Control Division
Drug & Chemical Evaluation Section

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FLUALPRAZOLAM
(Street Name: Flualp)

Introduction:

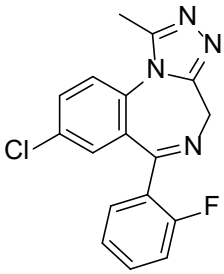
Flualprazolam is structurally related to the triazolo-benzodiazepine, alprazolam. As a class of drugs, benzodiazepines produce central nervous system (CNS) depression and are commonly used to treat, panic disorders, anxiety, and insomnia. The United States Food and Drug Administration has not approved flualprazolam for therapeutic use.

Licit Uses:

Flualprazolam does not currently have an accepted medical use in the United States.

Chemistry:

Flualprazolam (8-chloro-6-(2-fluorophenyl)-1-methyl-4*H*-[1,2,4]triazolo[4,3-*a*][1,4]benzodiazepine) is a triazolobenzo-diazepine and is structurally similar to alprazolam. Flualprazolam is composed of a benzene ring fused to a seven-membered 1,4-diazepine ring. Flualprazolam also contains a fused triazolo ring. A methyl (-CH_3) group is attached at the 1-position, a 2-fluorophenyl ring is attached at the 6-position, and a chlorine is attached at the 8-position of the triazolobenzodiazepine structure. Flualprazolam has a molecular formula of $C_{17}H_{12}ClFN_4$ and a molecular weight of 326.76 g/mol. The structure of flualprazolam is shown below:



Pharmacology:

There is limited information regarding the pharmacology of flualprazolam in published literatures. However, recent *in vitro* data obtained by DEA indicate that in the presence and absence of GABA, flualprazolam binds to GABA receptors with a greater affinity than diazepam (GABA receptor agonist) and flumazenil (nonspecific GABA receptor antagonist). Additionally, in drug discrimination studies, flualprazolam fully substituted for the discriminative stimulus effects of midazolam. Flualprazolam shares structural similarities with alprazolam and other Schedule IV benzodiazepines. Although there are no studies regarding the effects of flualprazolam in humans, anecdotal online reports describe sedation and physical impairment following oral ingestion, which suggests, prolonged, severe sedation associated with coma. The onset of action of flualprazolam following oral administration is reported to be 10-30 minutes. Flualprazolam has a long duration of action (6-14 hour) compared to the relatively short acting alprazolam. According to the United Nations Office on Drugs and Crime (UNODC) Early Warning Advisory on NPS Toxicology Portal (Tox-Portal), an online tool utilized to collect toxicological data and harm associated with the use of novel psychoactive substances, out of 1,400 analyzed toxicology cases, 67 percent of DUID cases and 47 percent of post-mortem cases involved benzodiazepine-type NPS. Flualprazolam was reported as one of the most commonly identified benzodiazepine-type NPS and accounted for 107 positive identifications.

Illicit Uses:

Flualprazolam is generally abused for its sedative/hypnotic effects. Reports from online drug user forums describe it to be similar to clonazepam and alprazolam. According to the United Nations Office on Drugs and Crime (UNODC Current NPS Threats, 2022), benzodiazepine-type novel psychoactive substances (NPS) continue to constitute the greatest number of NPS reported to the Tox-Portal, accounting for 47% of all NPS cases associated with postmortem investigations, and 67% of all DUID cases. Of the substances reported, flualprazolam was the third most common, accounting for 107 reported cases. The Centers for Disease Control and Prevention recently released "The Fentalog Study", which utilizes data collected from ten geographically diverse hospitals in 9 states across the United States. As of March 2023, out of 733 samples tested between February, 2020 and December 2022, 9% of blood specimens from suspected opioid-involved overdoses also tested positive for illicit benzodiazepines.

User Population:

Flualprazolam is used as a recreational substance in the United States. It is generally abused by young adults, especially males.

Illicit Distribution:

Flualprazolam can be purchased via the internet as a research chemical. It is generally encountered in pill form and the external markings have been found to mimic that of Xanax™ and Klonopin™. The National Forensic Laboratory Information System (NFLIS) is a DEA database that collects scientifically verified data on drug items and cases submitted to and analyzed by state, local, and federal forensic laboratories. According to NFLIS, the number of flualprazolam drug reports increased from one in 2017, rose to a peak of 4,804 in 2020, and is currently associated with 2,114 drug reports in 2021.

The National Poison Data System (NPDS) of the American Association of Poison Control Centers (AAPCC) utilized by members of the public and health care providers reported no flualprazolam single substance exposures in 2014 and 2015, 2 exposures in 2018 and 11 in 2019.

Control Status:

Flualprazolam is currently controlled under Schedule I of the Controlled Substances Act. At the 2020 Commission on Narcotic Drugs Sixty-third session, the Commission decided to include flualprazolam in Schedule IV of the 1971 Convention on Psychotropic Substance.

Comments and additional information are welcomed by the Drug and Chemical Evaluation Section; Fax 571-362-4250, Telephone 571-362-3249, or email: DPE@usdoj.gov.