FLUBROMAZEPAM

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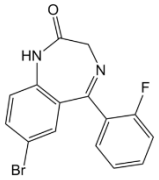

Manufacturer: A "designer" drug. First described in 1962 by Sternbach (*J*. *Org*. *Chem*, 1962, **27**, 3788 and 1962, **27**, 3781).

Chemical Name: 7-Bromo-5-(2-fluorophenyl)-1,3-dihydro-2*H*-1,4-benzodiazepin-2-one

Mol. Formula: $C_{15}H_{10}BrFN_2O$ **Molecular Weight:** 333.16 g/mol

CAS#: 2647-50-9

FDA: Not a prescription drug anywhere in the world.

Dosage: NA

Mechanism of action: Expected to be the same as other benzodiazepines.

Pharmakokinetics: Study by author who ingested 4 mg (n = 1).[1] Urine and serum analyzed.
$T^{1/2}$: Very long (>100 h); **T_{max}** ~ 6 h and **C_{max}** ~ 78 ng/mL. Serum samples at 24, 31, 51, and 76 hours post intake showed similar drug concentrations in concordance with the long effects felt by the author (experimenter). The 4 mg dose of parent drug could be detected by LC-MSMS for 23 days.

Symptoms self-reported by author: fatigue and enhanced need for sleep for 3 consecutive days.

Metabolism: analogous to other benzodiazepines-mono and dihydroxylation, dehalogenation, methoxylation and formation of an aminobenzophenone or quinazolin-2-one and combinations of these reactions.[1]

Toxicology analysis: **C**haracterized by LC-MSMS (quantification), GC-MS, NMR, LC-QToF-MS.[1] This reference contains an EI GCMS spectrum. Our laboratory identified the drug in a case after a standard SB LLE clean-up step and EI GCMS analysis (Fig. 1, RRT = 1.46, mepivacaine I.S., elutes after methadone and before diazepam, DB-5 column: 30 m X 0.25 mm (i.d.), 0.25 µm).

Research Supplier: Flubromazepam is available as a solid from Cayman Chemical (www.caymanchem.com)

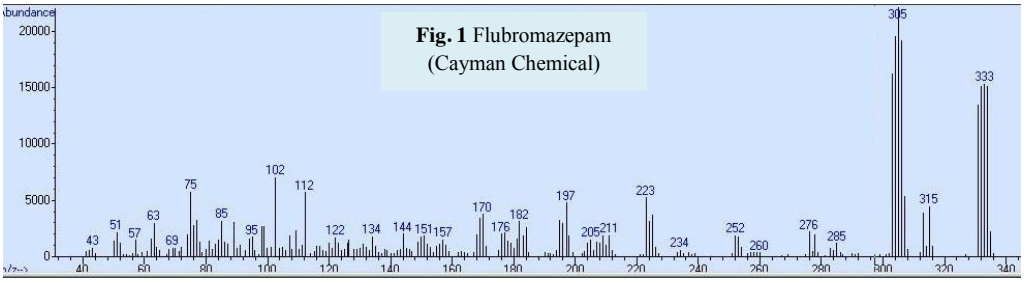

Fig. 1 Flubromazepam (Cayman Chemical)

References:

1. Moosmann, B., Huppertz, L.M., *et*. *al*. Detection and identification of the designer benzodiazepine flubromazepam and preliminary data on its metabolism and pharmacokinetics. *J*. *Mass Spectrum*. 2013, **48**, 1150-1159.