

## Drug Status Report

**Drug:** Benzodiazepine related substances

### Drug Name Status:

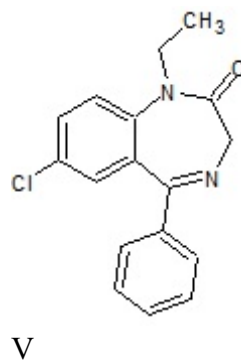
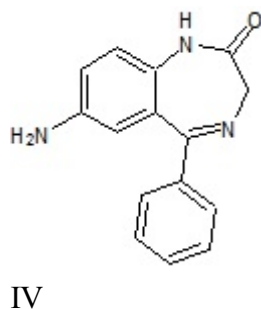
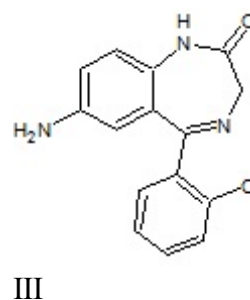
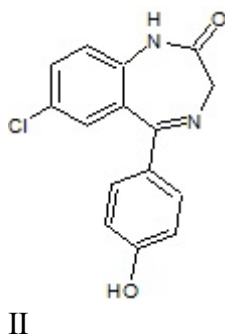
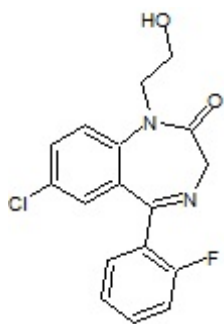
- (I) 2-Hydroxyethylflurazepam
- (II) 4'-Hydroxynordiazepam
- (III) 7-Aminoclonazepam
- (IV) 7-Aminonitrazepam
- (V) n-Ethyl nordiazepam

The above names are all common names.

### Chemical Name:

- (I) 7-Chloro-1-[2-hydroxyethyl]-5-(o-fluorophenyl)-1,3-dihydro-2H-1,4-benzodiazepin-2-one
- (II) 7-Chloro-1,3-dihydro-5-(4-hydroxyphenyl)-2H-1,4-benzodiazepin-2-one
- (III) 7-Amino-5-(o-chlorophenyl)-1,3-dihydro-2H-1,4-benzodiazepin-2-one
- (IV) 7-Amino-1,3-dihydro-5-phenyl-2H-1,4-benzodiazepin-2-one
- (V) 7-Chloro-1,3-dihydro-1-ethyl-5-phenyl-2H-1,4-benzodiazepin-2-one

### Chemical structure:



**Molecular Formula:** (I)  $C_{17}H_{14}ClFN_2O_2$

(II)  $C_{15}H_{11}ClN_2O_2$

(III)  $C_{15}H_{12}ClN_3O$

(IV)  $C_{15}H_{13}N_3O$

(V)  $C_{17}H_{15}ClN_2O_2$

**Pharmacological class / Application:** pharmaceutical related substance

**International status:**

US: The substances are not currently listed on the US Controlled Substances Act and are not mentioned on the DEA website.

United Nations: The substances are not listed on the Yellow List - List of Narcotic Drugs under International Control nor the Green List - List of Psychotropic Substances under International Control.

Canadian Status: The substances are not currently listed specifically on the CDSA. Item 18 of Schedule IV to the CDSA is, "Benzodiazepines, their salts and derivatives". With the exception of brotizolam, the benzodiazepines have a characteristic core structural feature. Two variations of the characteristic feature are shown below.



Based on the molecular structure of the five benzodiazepine related substances, they are benzodiazepines and therefore included in item 18 of Schedule IV.

This rationale was previously used in recommending that two alprazolam analogues (report - Alprazolam analogues, August 22, 2007), three triazolam related substances (Triazolam related substances, September 23, 2007) and another series of benzodiazepine related compounds (report - 5-Phenyl-7-chloro-1,3-dihydro-1,4-benzodiazepine-2H-2-one N, July 28, 2005) be considered to be included in item 18 of Schedule IV.

Recommendation: Substances 1-V are included in item 18 of Schedule IV to the CDSA and are controlled substances.

May 5, 2008