Drug Status Report

**Drug:** Ketamine related substances

**Drug Name Status:** EP impurity A; EP impurity B; and EP impurity C

**Chemical Name:** (A) 1-[(2-chlorophenyl)(methylimino)methyl]cyclopentanol  
(B) (2RS)-2-(2-chlorophenyl)-2-hydroxycyclohexanone  
(C) (2-chlorophenyl)(1-hydroxycyclopentyl)methanone

**Chemical structure:**

![Chemical structure images of EP impurities A, B, and C]

**Molecular Formula:** (A) C_{13}H_{16}ClNO; (B) C_{12}H_{13}ClO_2; (C) C_{12}H_{13}ClO_2

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

**International status:**

US: The substances are not 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: Ketamine is subitem 14(1) of Schedule I to the CDSA. It’s addition in 2005 was made as an analogue of phencyclidine. The structures of the two substances are shown below.

![Chemical structures of phencyclidine and ketamine]
As ketamine is the only analogue of phencyclidine, there is only one structure on which to base a rationale to explain the meaning of an analogue of phencyclidine. However, in comparison to other substances such as rolicyclidine, PCE, TCP etc., which are closely related, it is essential that a nitrogen be attached to the cyclohexyl moiety. None of the ketamine related substances has this feature. They should not therefore be considered analogues of phencyclidine.


March 20, 2007